

# PROSIDING

International Seminar

*“Midwifery Education Reform”*

Midwifery Education Association  
of Indonesia



Jakarta,  
October 6<sup>th</sup> - 7<sup>th</sup>, 2016

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**Midwifery Education Association of Indonesia**

Jakarta

2016

# PROCEEDINGS

## INTERNATIONAL SEMINAR “MIDWIFERY EDUCATION REFORM”

### Midwifery Education Association of Indonesia

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## **THE PREFACE**

Our praise to God Almighty for all His grace and guidance that have been given to us so that the proceedings of International Seminar on the theme "Midwifery Education Reform" can be realized. These proceedings contain the results of research and oral presentation with different midwifery topics presented in the oral presentation of the event.

We as the Committee should really hope that the publication of these proceedings can add references for observers and midwives to further increase research activities on the issues related to the improvement of the quality of Midwives in Indonesia. On this occasion, we deliver profuse gratitude to researchers, sponsors, invited guests, other participants, and especially Prof Helen Spiby, Dr Louis Walker, Dr. Brigitte Lynch J.M. Metha, M. Med. Ed, Directorate General of Research Strengthening and Development, Ministry of Research, Technology and Higher Education, Agency of Health Human Resources Development and Empowerment, Ministry of Health of the Republic of Indonesia , The President of Indonesian Midwives Association, and The Chairman of Midwifery Education Association of Indonesia who have contributed to the success of this activity.

## **EDITORIAL TEAM**



## OPENING SPEECH

*Assalamualaikum Warohmatullohi Wabarokatuh*  
(May peace, mercy and blessings of Allah be upon you)  
Best wishes for all of us

Let our praise be upon the presence of God Almighty, for His Grace and His gift, these proceedings of the International Seminar and Call for Paper II under the theme 'Midwifery Education Reform' can be published. The board of management of Midwifery Education Association of Indonesia (AIPKIND) delivers the deepest gratitude to the Research and Development Division because, with each member's hard work and enthusiasm, these proceedings have successfully been published.

Regarding the theme that falls into 'education reform', AIPKIND projects its hope that a fundamental change in the system and implementation of midwifery education in Indonesia shall come to reality. As the ultimate goals of the projection, all of us hope that midwifery services and practice can transform into a better state where security, safety, and satisfaction as the whole package for midwifery service users are no longer a dream. We have been showing our best efforts to facilitate the implementation of this call for paper or other forms of academic activities in order to realize the ideals of reform in both midwifery education and services. For that, we invite the right resources in the related fields in the hope that this call for paper is not only useful for getting academic value or 'Cum', but also beneficial for the improvement of midwifery services and education.

These proceedings contain the results of research and oral presentations on various midwifery topics expected to be useful in order to strengthen midwifery practice/service and development. With the publication of these proceedings, we look forward to knowing that these proceedings can become invaluable references for all midwifery actors and observers. Furthermore, our series of activities, consisting of international seminar, oral presentation, and publication of proceedings, can indeed enhance the activity of research on issues related to improving the quality of Midwives in Indonesia.

We are grateful for your participation in this international seminar and oral presentation. We also put big hope into the upcoming research publication in both/either SEAJOM and/or AIPKIND's next call for paper; therefore, your participation is highly expected. Lastly, this work can hopefully be used by those who need and useful for the profession and the entire community as the users of midwifery services, regarding the wellbeing of women, mothers, infants, toddlers and their families, and ultimately our beloved homeland.

*Wassalamualaikum Warohmatullohi Wabarokatuh.*

**Jakarta, October 5, 2016**

**Midwifery Education Association of Indonesia (AIPKIND)  
Chairman,**

**Jumiarni Ilyas, Dra., Kes.**

## **THE PROFILE OF MIDWIFERY EDUCATION ASSOCIATION OF INDONESIA (AIPKIND)**

Midwifery Education Association of Indonesia (AIPKIND) was born on October 28, 2008, together with Indonesian Midwifery Association (IBI), wishes together with educational institutions in improving the quality of education in Indonesia. At the beginning of the formation of AIPKIND was appointed caretaker 3 persons consisting of the Chairman, the Secretary and the Treasurer based in Jakarta.

In line with the high development activities and educational activities involving AIPKIND, Coordinator of the territory (Korwil) in accordance with 13 districts Kopertis DiktiKemendikbud RI that aims to facilitate the coordination of both to Trustees AIPKIND and Stakeholder Education. Korwil is supported by 42 sub Korwil to further facilitate communication. In accordance with the results of the coordination meeting of Korwil in December 2012, the proposed development Korwil be appropriate 33 province in Indonesia given the number of affordable educational institutions in every region Kopertis. Thus the number of sub-korwil also increased according to the needs of the Association.

With the rapid development of Midwifery Education Association of Indonesia, it is time for this Association to come with good governance and implement its quality. The quality of organization of education is marked by the compliance institution meet the elements set out in the standards of higher education.

### **LEGAL ENTITIES**

Since its inception, AIPKIND has been recorded in the Office of notary public Trsimorini Asmawel, SH No. 19 dated June 17, 2010, with TAX ID 13-022.226.9-024.000, is registered in the Registrar of State/Commerce/Ham Central Jakarta, Central Jakarta District Court with number 45/PMH/2010 dated August 12, 2010.

AIPKIND and legal entities have been listed on November 12, 2012 at the notary office Goddess Tenty Septi Artiany M.Kn, SH, no. 21/12, authorized and registered in the Ministry of Justice and human rights REPUBLIC of INDONESIA No. AHU – 232. AH. 3 January 2012 in 2012.

**LIST OF KEY SPEAKER ON SCIENTIFIC SEMINAR AND CALL FOR PAPER II ON 6-7 OCTOBER 2016**

1. Prof Helen Spiby
2. Dr Louis Walker
3. Dr. Brigitte Lynch
4. J.M. Metha, M. Med. Ed
5. Directorate General of Research Strengthening and Development, Ministry of Research, Technology and Higher Education
6. Agency of Health Human Resources Development and Empowerment, Ministry of Health of the Republic of Indonesia
7. The President of Indonesian Midwives Association
8. The Chairman of Midwifery Education Association of Indonesia

# RUNDOWN

INTERNATIONAL SEMINAR “MIDWIFERY EDUCATION REFORMATION”  
MERCURE HOTEL, ANCOL JAKARTA PUSAT  
Oct, 6<sup>th</sup> – 7<sup>th</sup> 2016

Thursday, Oct 6 <sup>th</sup> 2016		
08.00 – 10.00	Re-registration	Committee
10.00 – 10.15	Welcome dance “Medley Nusantara	MC : Mardiana Sari adam, SST
10.15 – 10.45	1. Opening  2. Welcome speech from Chief of AIPKIND “Midwifery Education Association of Indonesia  3. Welcome speech from “Indonesian midwives Association”	Ita Syafrani, SSiT. Mkes  Dra. Jumiarni Ilyas, Mkes  Dr. Nurjasmi, MKes
10.45 – 11.00	<b>Coffee Break</b>	Committee
11.00 – 11.10	Welcome speech and opening ceremony from Welcome speech and Official Opening by : Directorate General of Research Strengthening and Development, Ministry of Research, Technology and Higher Education	Dr. Mohammad Dimiyati
11.10 – 11.40	<b>Keynote Speaker</b>  1. Ministry of Research, technology and higher education of The Republic of Indonesia  Topic : The government policy and support in research development at higher education of midwifery  2. Agency of Health Human Resources Development and Empowerment, Ministry of Health of the Republic of Indonesia  Topic : The Role BPPSDM-Health in the utilization of midwifery education graduates”	Dr. Mohammad Dimiyati          Drg. Usman Sumantri, MARS
11.40 – 11.45	Souvenir handover	Dra. Jumiarni Ilyas, Mkes
<b>TOPIC I</b>		
11.45 – 12.30	“Young Leadership Midwives”	Dr. Bridget Lynch



<b>Thursday, Oct 6<sup>th</sup> 2016</b>		
12.30 – 13.00	Discussion	Moderator: Yetty L. Irawan, MSc
13.00 - 13.05	Souvenir handover	Dra. Tati Rostati, Mkes
13.05 – 14.05	Lunch break	
<b>TOPIC II</b>		
14.05 – 14.50	<b>“Art And Science in Midwifery Practice”</b>	<b>Prof. Helen Spiby</b>
14.50 – 15.20	Discussion	Moderator: Dizza Budiono, MSc
15.20 – 15.25	Souvenir handover	Yetty L. Irawan, MSc
15.25 – 15.40	Coffee Break	
15.40 – 18.00	Oral Presentation 1: Panel I to Panel VI	Committee
18.00 – 19.00	Break	
19.00 – 22.00	Oral Presentation 2: Panel IV to VII	Committee

<b>Friday, Oct 7<sup>th</sup> 2016</b>		
<b>TOPIC III</b>		
08.00 – 08.45	<b>“Respectful Midwifery Care and Services”</b>	<b>Louis Walker</b>
08.45 – 09.15	Discussion	Moderator: Dewi Purnamawati
09.15 – 09.20	Souvenir handover	Committee
09.20 – 09.35	Coffee Break	
<b>TOPIC IV</b>		
09.35 – 10.20	<b>“Creating A Low-cost and Efficient Skills-lab Teaching/Learning Aid “</b>	<b>JM Metha, M.ed</b>
10.20 – 10.50	Discussion	Moderator : Yulizawati
10.50 – 10.55	Souvenir handover	Committee
10.55 – 11.00	Closing	Master of Ceremony
<b>10.45 - finish</b>	<b>Collecting certificate and proceedings (Registration Room)+Lunch</b>	

## DAFTAR ISI

1	MIDWIFE-TBA PARTNERSHIP AT “C” HEALTH CENTER OF LEBAK REGENCY OF BANTEN PROVINCE IN 2011	1
	Yaneu Nuraineu <sup>1</sup>	
2	THE INCIDENCE OF OSTEOPOROSIS ON PREMENOPAUSAL WOMEN	13
	Bina Aquari <sup>1</sup>	
3	BEHAVIOR ANALYSIS ON MOTHERS WITH HIV AIDS IN PREVENTING PERINATAL TRANSMISSION RISK IN TANGERANG, BANTEN	18
	Ika Oktaviani <sup>1</sup> , Yudhia Fratidhina <sup>2</sup> , Atnesia Ajeng <sup>3</sup>	
4	FACTORS ASSOCIATED WITH FREQUENCY OF ANC VISITS IN 2016	24
	Juliana Widyastuti Wahyuningsih <sup>1</sup>	
5	THE EFFECT OF TURMERIC ( <i>CURCUMA LONGA</i> ) ON DYSMENORRHEA	30
	Adriana Palimbo <sup>1</sup> , Ika Mardiatul Ulfa <sup>2</sup> , Fazar Kumaladewi <sup>3</sup>	
6	RELATIONSHIP BETWEEN THE QUALITY OF SERVICE IN MIDWIFERY WITH PATIENT SATISFACTION IN INDEPENDENT PRACTICE MIDWIFE SUGIATI SURABAYA	35
	Retno Setyo Iswati <sup>1</sup>	
7	THE RELATIONSHIP BETWEEN KNOWLEDGE WITH THE FREQUENCY OF SEXUAL TOWARDS PREGNANT WOMEN OF 3RD TRIMESTER I WORKING AREA OF CIMAH TENGGAH ON JULY 2016	40
	Mu'tarifah Billah <sup>1</sup> , Dini Marlina <sup>2</sup>	
8	IMPACTS OF EXCLUSIVE BREASTFEEDING OF DEVELOPMENT OF BABY AGED 6 – 12 MONTHS	44
	Ayi Diah Damayani <sup>1</sup> , Rosni Lubis <sup>2</sup> , Debbyantina <sup>3</sup>	
9	RELATIONSHIP OF THE MIDWIFE BEHAVIOR ABOUT KIE EXCLUSIVE BREASTFEEDING WITH BREASTFEEDING EXCLUSIVE SUCCES IN BPM VINCENT ISMIJATI SURABAYA	51
	Indria Nuraini <sup>1</sup> , Yefi Marliandiani <sup>2</sup>	
10	FACTORS RELATED TO POSTPARTUM HEMORRHAGE IN INDONESIA	56
	Fitria Siswi Utami <sup>1</sup> , Febti Kuswanti <sup>2</sup>	

- 11 **PERSONAL HYGIENE AND KNOWLEDGE OF YOUNG WOMEN IN MAINTAINING THE CLEANLINES OF THE GENETALIA TOOL WITH THE INCIDENCE OF VAGINAL DISCHARGE** 60  
Joyce Angela Yunica<sup>1</sup>, Vera Agustina<sup>2</sup>
- 12 **MOTIVATION TO LEARNING OF PARTOGRAPH RECORDING IN CASE STUDY METHOD ON SOPHOMORE OF DIPLOMA III PROGRAM OF SARI MULIA MIDWIFERY ACADEMY BANJARMASIN** 66  
YP Rahayu<sup>1</sup>, Novita Dewi Iswandari<sup>2</sup>, Wina Helena Aprilawati<sup>3</sup>
- 13 **DELIVERY ASSISTANCE ON IMPROVED SKILLS-LAB AMONG STUDENTS AT MIDWIFERY ACADEMY** 74  
Estu Lovita Pembayun
- 14 **EFFECT OF HEAT THERAPY TO DECREASE THE INTENSITY OF LABOUR PAIN ON FIRST STAGE ACTIVE PHASE** 79  
Evi Rinata<sup>1\*</sup>, Rafhani Rosyidah<sup>2</sup>, Restu Fatmawati<sup>3</sup>
- 15 **DESCRIPTION OF PREMARRIAGE PREGNANCY PREPARATION IN DISTRICT SEDAYU** 85  
Siti Nurunniah<sup>1</sup>
- 16 **NONPHARMACOLOGICAL THERAPY OF ENDORPHIN MASSAGE TO REDUCE BACK PAIN ON THE FINAL TRIMESTER OF PREGNANCY** 94  
Faizatul Ummah
- 17 **STUDY OF CROSS CULTURE OPTIMISM AMONG MIDWIFERY STUDENTS** 100  
Eko Aditiya Meinarno<sup>1</sup>, Sugiarti A. Musabiq<sup>2</sup>
- 18 **FACTORS AFBESICTING COMPLIANCE WOMEN IN PREGNANT TO CONSUME IRON TABLETS YEAR OF 2016**  
Dewi Agustin<sup>1</sup>, Sofie Handajany<sup>2</sup>, Intan Tirtasari<sup>3</sup>
- 19 **HYPNOBIRTHING EFFECT ON THE LEVEL OF ANXIETY RIMIGRAVIDAE THIRD TRIMESTER IN SURABAYA** 110  
Nur Masruroh<sup>1</sup>, Ratna Ariesta Dwi Andriani<sup>2</sup>

20	<b>CONTINUUM OF CARE TO REDUCE MATERNAL AND CHILD MORTALITY</b>	114
	Marliana Rahma <sup>1</sup>	
21	<b>THE PAST, PRESENT, AND FUTURE OF MIDWIFERY EDUCATION IN INDONESIA</b>	120
	Qorinah Estiningtyas Sakilah Adnani, PhD candidate, M.Keb, SST, RM1, Judith McAra-Couper, PhD, BA, RM, RGON2, Andrea Gilkison, PhD, M.Ed, BA, RM, RCompN3	
22	<b>EFFECT OF YOGA DYSMENORHEA ON THE DIII MIDWIFERY STUDENTS HEALTH SCIENCE INSTITUTE OF KUNINGAN IN 2013</b>	131
	Mala Tri Marliana <sup>1</sup>	
23	<b>DIFFERENCES MUROTAL THERAPY AND MUSIC THERAPY CLASSIC MOZART TO THE DURATION OF THE FIRST STAGE OF LABOR IN ACTIVE PHASE AT PKU MUHAMADIYAH HOSPITAL OF YOGYAKARTA</b>	138
	Endang Koni Suryaningsih <sup>1</sup>	
24	<b>ANTENATAL CARE SATISFACTION ANALYSIS BY USING <i>CUSTOMER SATISFACTION INDEX</i> AND <i>IMPORTANCE PERFORMANCE ANALYSIS</i> IN BIDAN DELIMA RANTING JAGAKARSA SOUTH JAKARTA 2016</b>	142
	Rini Kundaryati	
25	<b>THE ANTIFUNGAL ACTIVITY OF <i>Candida albicans</i> THE CORIANDER SEEDS FRACTION(<i>Coriandrum sativum</i> Linn)</b>	146
	Rohani <sup>1*</sup> , Irsan pious <sup>2</sup> , Theodorus <sup>3</sup> , Salni <sup>4</sup>	
26	<b>FACTORS INFLUENCING CADRE BEING ACTIVE IN PROVIDING HEALTH EDUCATION / TABLE 4 AT GRIYA ASRI ABAHAGIA IHC BAHAGIA VILLAGE, BABELAN SUB-DISTRICT BEKASI</b>	156
	Irma Handayani <sup>1</sup>	
27	<b>STUDY OF CROSS CULTURE OPTIMISM AMONG MIDWIFERY STUDENTS</b>	162
	Eko Aditiya Meinarno, S. Psi <sup>1</sup> ., M. Si*, Dra. Sugiarti A. Musabiq, M. Kes <sup>2</sup>	
28	<b>EFFECTIVENESS OF WARM COMPRESS TO DECREASE THE SPINAIPAIN IN SECOND TRIMESTER OF PREGNANCY AT BPM LATIFATUSZAHRO IN BETAK VILLAGE</b>	168
	Susanti Pratamaningtyas <sup>1</sup> , Herawati Mansur <sup>2</sup> , Binti Malikhah <sup>3</sup>	



- 29 **EARLY BREASTFEEDING INITIATION AND POSTPARTUM BLUES** 176  
Ika Yudianti<sup>1\*</sup>, Dian Arifin<sup>2</sup>, Budi Suharno<sup>3</sup>
- 30 **RELATION ABOUT VIOLENCE IN HOUSEHOLD WITH ANXIETY TO WOMAN IN UPT INTERGRATED SERVICE CENTER EMPOWERWOMEN A /PUSAT PELAYANAN TERPADU PEMBERDAYAAN PEREMPUAN (P2TP2 A) IN BANDUNG CITY 2014** 181  
Rika Nurhasanah, Mery Janiasti Pratiwi, Dewi Puspasari
- 31 **BARRIERS AND IMPLEMENTATION OF EARLY BREASTFEEDING INITIATION IN MIDWIFE'S PRACTICE, BULELENG REGENCY BALI** 185  
Putu Dian Prima Kusuma Dewi<sup>1</sup>, Putu Sukma Megaputri<sup>2</sup>
- 32 **THE EFFECTIVENESS OF IMPLEMENTATION IMD (EARLY INITIATION OF BREASTFEEDING) THROUGH THE IMPROVEMENT OF SUCKLE SKILLS IN NEWBORN AND PRIMIPAROUS BREASTFEEDING SUCCESS AT MUHAMMADIYAH SURABAYA HOSPITAL** 189  
Umi Ma'rifah<sup>1\*</sup>, Aryunani<sup>2</sup>
- 33 **THE INFLUENCE OF JIGSAW COOPERATIVE LEARNING METHODS TO THE LEARNING OUTCOMES OF LABOR AND DELIVERY CARE OF MIDWIFERY ACADEMY STUDENTS** 195  
Anggrita Sari<sup>1\*</sup>, Ramalida Daulay<sup>2</sup>, Rizqy Amelia<sup>3</sup>
- 34 **DETERMINAN OF ELECTION BIRTH ATTENDANT IN SERUYAN REGENCY, PROVINCE OF CENTRAL KALIMANTAN** 199  
Noordiaty<sup>1\*</sup>, Erina Eka Hatini<sup>2</sup>, Legawati<sup>3</sup>
- 35 **ANALYSIS OF FACTORS RELATED TO THE DETERMINANTS OF POSTPARTUM BLUES** 204  
Deby Utami Siska Ariani<sup>1</sup>
- 36 **THE PERSPECTIVE OF PATRIARCHAL CULTURE ON DECISION MAKING DONE BY CHILDBEARING-AGED COUPLES TO BE LTRM ACCEPTORS IN NAGA TIMBUL VILLAGE, DELI SERDANG DISTRICT, IN 2015** 209  
Nurhamida Fithri<sup>1</sup>, Heru Santosa<sup>2</sup>, Tukiman<sup>3</sup>
- 37 **DURATION IN SECOND STAGE OF LABOR BETWEEN MOTHERS USING HALFSITTING PUSHING POSITION AND THOSE USING LEFT-SIDE LYING POSITION** 215  
Meta Rosdiana<sup>1</sup>, Rahmalia Afriyani<sup>2</sup>, Lia Mei Ritha<sup>3</sup>

- 38 **RELATIONSHIP OF BMI TO MENSTRUAL CYCLE AT KEPUH PHC OF CIREBON REGENCY** 220  
Ghea sugiharti<sup>1</sup>
- 39 **INDUCTION OF LABOR RELATIONS WITH MILD-MODERATE ASPHYXIA NEONATAL AT REGIONAL GENERAL HOSPITAL DR. SOEDARSO PONTIANAK, INDONESIA** 223  
Tessa Siswina<sup>1\*</sup>, Utin Siti Candra Sari<sup>2</sup>, , Yenita Humami<sup>3</sup>
- 40 **MOTHER'S AGE AND PARITY RELATIONSHIP WITH PLACENTA PREVIA INCIDENCE IN DR SUDARSO HOSPITAL PONTIANAK, INDONESIA** 229  
Utin Siti Candra Sari, <sup>1\*</sup>, Tessa Siswina,<sup>2</sup>
- 41 **THE UTILIZATION OF HEALTH CENTER SERVICES BY MOTHERS WITH EXPERIENCE OF PREGNANCY COMPLICATIONS IN INDONESIA** 234  
Maryati<sup>1</sup>
- 42 **DETERMINANTS OF THE USE OF CONTRACEPTIVE INTRA UTERINE DEVICE (IUD) AT COMMUNITY HEALTH CENTRE IN PALEMBANG 2014** 240  
Murdiningsih<sup>1\*</sup>, Yunetra Franciska<sup>2\*</sup>
- 43 **THE FACTORS AFFECTING THE HEALTH WORKERS WHO WORK IN REMOTE AREAS, BORDER, AND THE ISLANDS TO SURVIVE WORKING IN SANGAU REGENCY WEST KALIMANTAN, 2014.** 246  
Ai Yeyeh Rukiyah, Lilik Susilowati, Ieli Purnamawati
- 44 **THE EFFECT OF FERRO SULFATE PROVISION ON PREGNANT RATTUS NORVEGICUS TO THE WEIGHT OF THE FETUS** 251  
Mustika Pramestiyani
- 45 **THE FACTORS AFFECTING WOMEN BECAME PROSTITUTES IN THE TRADITIONAL MASSAGE BROTHELS "KT" PALEMBANG** 254  
Turyani<sup>1\*</sup>, Eprila<sup>2</sup>, Diah Sukarni<sup>3</sup>
- 46 **ANALYSIS OF THE NIPPLE SHAPE FACTORS AND THE MOTHERS KNOWLEDGE WITH THE MOTHER'S CONFIDENCE IN BREASTFEEDING** 259  
Lestariningsih<sup>1\*</sup>, Mustak. MR<sup>2</sup>
- 47 **NEW BORN LENGTH AND STUNTING CASES ON TODDLER (24-59 MONTHS) AT KARANGREJEK WONOSARI GUNUNGKIDUL** 263  
Citra Safira V<sup>1\*</sup>, Evi Nurhidayati<sup>2</sup>

<b>48</b>	<b>RELATIONSHIP OF DENTAL AND ORAL HEALTH OF THIRD TRIMESTER PREGANANT WOMEN TO BIRTH WEIGHT AT BAHU HEALTH CENTER OF MALALAYANG SUB-DISTRICT OF MANADO</b>	<b>267</b>
	Sandra Tombokan <sup>1</sup> , Atik Purwandari <sup>2</sup> , Jenny Mandang <sup>3</sup>	
<b>49</b>	<b>RELATIONSHIP VIOLENCE DURING PREGNANCY AND LOW BIRTH WEIGHT IN OGAN KOMERING ULU DISTRICT</b>	<b>272</b>
	Folendra Rosa	
<b>50</b>	<b>PREGNANT WOMEN RISK FACTORS AND INCIDENCE OF LOW BIRTH WEIGHT AT SITI FATIMA MATERNAL AND CHILD HOSPITAL OF MAKASSAR</b>	<b>278</b>
	Suriani <sup>1*</sup> , Agustina Ningsi <sup>2</sup>	
<b>51</b>	<b>RELATIONSHIP OF PARENTING AND PRE SCHOOL CHILDREN'S SELF-RELIANCE AT HASIRAH EARLY EDUCATION SCHOOL OF MAKASSAR</b>	<b>280</b>
	Zulaeha Amdadi <sup>1*</sup> , Andi Zulfaidawaty <sup>2</sup>	
<b>52</b>	<b>SUPPORT HEALTH PROFESSIONALS IN THE SUCCESS OF EXCLUSIVE BREASTFEEDING</b>	<b>282</b>
	Aning Subiyatin <sup>1</sup>	
<b>53</b>	<b>FACTORS ASSOCIATED WITH VISUAL INSPECTION ACETIC ACID (VIA) AMONG REPRODUCTIVE AGE WOMEN</b>	<b>288</b>
	Ernawati <sup>1</sup> , Erina Windiany <sup>2</sup>	
<b>54</b>	<b>FACTORS RELATED TO VISIT EXAMINATION OF PREGNANCY IN CLINICAL PRATAMA 'P' JAKARTA</b>	<b>293</b>
	Margaretha Kusmiyanti	
<b>55</b>	<b>VISUAL INSPECTION EXAMINATION BY ACETIC ACID TEST IN WOMEN OF REPRODUCTIVE AGE AS CERVICAL CANCER EARLY DETECTION IN KLAMPOK BARU, SENDANGTIRTO, BERBAH, SLEMAN</b>	<b>299</b>
	Sukmawati <sup>1</sup>	
<b>56</b>	<b>OVERVIEW OF CHARACTERISTICS OF CERVICAL CANCER PATIENT</b>	<b>302</b>
	Siti Masitoh <sup>1</sup> , Theresia Eugenie <sup>2</sup>	
<b>57</b>	<b>EFFECTIVENESS OF ACUPRESSURE METHOD AT MERIDIAN POINT BL 32 AND GB 21 TO DECREASE THE PAIN LEVEL DURING CONTRACTIONS IN THE FIRST STAGE OF LABOUR</b>	<b>307</b>
	Fritria Dwi Anggraini <sup>1</sup> , Annif Munjidah, <sup>2</sup>	

58	<b>THE CORRELATION OF NUTRITION PATTERN AND THE CONSUMPTION OF CALCIUM SUPPLEMENTS TOWARDS PREGNANT WOMEN WITH THE OCCURRENCE OF PREECLAMPSIA IN RSUD MAJALAYA AT BANDUNG REGENCY</b>	312
	Desi Trisiani <sup>1</sup> , Rika Pramaswari <sup>2</sup> , Meisyela Putri <sup>3</sup>	
59	<b>THE INFLUENCE OF IUD POST PLASENTA TO THE EXCRETION PERIOD OF LOCHEA'S</b>	316
	Istri Utami <sup>1*</sup> , Prof dr M.Anwar <sup>2</sup> , Herlin fitriana <sup>3</sup>	
60	<b>MOTHER OF ANXIETY LEVEL IN DEALING WITH LABOUR</b>	320
	Sugeng Triyani <sup>1*</sup> , Aisyah <sup>2</sup>	
61	<b>THE EFFECT OF SEFT (SPIRITUAL EMOTIONAL FREEDOM TECHNIQUE)THERAPY ON BLOOD GLUCOSE LEVEL AND ANXIETY ON GESTASTIONAL DIABETES MELLITUS</b>	323
	Elly Dwi Masita <sup>1</sup> , Ika Mardiyanti <sup>2</sup>	
62	<b>THE IMPACTS OF POST-PARTUM WOMEN'S EDUCATION ON THE LEVEL OF ANXIETY AND READINESS TO TAKE CARE FOR LOW BIRTH WEIGHT INFANTS AT HOME</b>	327
	Sri Rahayu, <sup>1</sup> Titi Suherni <sup>2</sup> , Ngadiyono <sup>3</sup>	
63	<b>ANALYSIS OF FACTORS RELATED TO THE IMPLEMENTATION OF EARLY INITIATION OF BREASTFEEDING AT DR. KARIADI GENERAL CENTRAL HOSPITAL SEMARANG</b>	332
	Daniati Kusumaningtyas <sup>1</sup> , Sri Sumarni <sup>2</sup> , Ngadiyono <sup>3</sup>	
64	<b>ANALYSIS OF FACTORS AFFECTING SEXUAL BEHAVIOR OF YOUTH</b>	338
	Juneris Aritonang <sup>1</sup> , Agnes Erna Taulina Purba <sup>2</sup>	
65	<b>SYZYGIUM CUMINI REDUCES VCAM-1 EXPRESSION IN ENDOTHELIAL CELLS FROM PREECLAMPTIC PATIENTS</b>	344
	Siswi Wulandari <sup>1*</sup> , Binti Qoniah <sup>2</sup>	
66	<b>FACTORS RELATED TO K4 DROP OUT</b>	347
	Azizatul Hamidiyah <sup>1</sup> , Anggi Apriliyasari <sup>2</sup>	
67	<b>MIDWIVES' SUPPORTS FOR THE PREVENTION OF MOTHER-TO-CHILD HIV TRANSMISSION (PMTCT) PROGRAMME : A QUALITATIVE STUDY</b>	354
	Sri Wahyuni <sup>1</sup> , Ova Emilia <sup>2</sup> , Asri Hidayat <sup>3</sup>	



- 68 **THE BRIDEGROOM CANDIDATES' PERCEPTION ON REPRODUCTIVE RIGHTS: A STUDY WITH GROUNDED THEORY IN SURABAYA** 359  
K. Kasiati<sup>1</sup>,Netti Herlina<sup>2</sup>
- 69 **CORRELATION BETWEEN EDUCATION AND EMPLOYMENT PREPARATION OF PREGNANT WOMEN WITH LABOR IN THE COASTAL MARINE DISTRICT NORTH INDRAMAYU YEAR 2016** 363  
Yati Nurhayati
- 70 **INFLUENCE OF WARM COMPRESS ON FLATUS TIME IN SC POSTOPERATIVE PATIENTS WITH SPINAL ANESTHESIA AT ARJAWINANGUN HOSPITAL** 369  
Yeni Fitrianiingsih<sup>1</sup> , Lia Nurcahyani<sup>2</sup> , Fadillah Mawaddah<sup>3</sup>
- 71 **INFLUENCE OF OYOG-BASED MODIFIED LEOPOLD PALPATION ON PREGNANT WOMEN'S ANXIETY LEVEL AND INCREASED COVERAGE OF CHILDBIRTH ASSISTED BY HEALH PROFESSIONAL** 375  
Elit Pebryatie<sup>1</sup>, Suratmi<sup>2</sup>, Yanti Susanti Harjanti<sup>3</sup>
- 72 **RELATIONSHIP OF ANTENATAL VISITS BY GESTATIONAL HYPERTENSION MOTHERS TO LOW BIRTH WEIGHT IN KUPANG CITY IN 2015** 379  
Ni Luh Made Diah Putri Anggaraeningsih
- 73 **RELATIONSHIP OF CORD CUTTING TIME TO THE LENGTH OF CORD SEPARATION AT MATERNITY CLINIC IN EAST JAKARTA** 384  
*Herlyssa<sup>1\*</sup> Sri Mulyati, 2\**
- 74 **THE CORRELATION BETWEEN FAMILIES ASSISTING ON PRIMIPARA'S WOMEN TOWARDS ANXIETY LEVEL IN SOREANG GENERAL HOSPITAL OF BANDUNG REGENCY** 388  
Lina Haryani<sup>1</sup>
- 75 **THE INFLUENCE OF EARLY BREASTFEEDING INITIATION ON THE STABILITY OF INFANTS' BODY TEMPERATURE IN JUMPANDANG BARU AND KASSI – KASSI PUBLIC HEALTH CENTERS OF MAKASSAR IN 2015** 393  
Ely Kurniati<sup>1</sup> , Nasrudin A.M<sup>2</sup> , Saidah Syamsuddin<sup>3</sup>
- 76 **RELATIONSHIP OF KNOWLEGDE AND POSTNATAL BREAST CARE TO BLOCKED DUCTS DURING BREASTFEEDING AT SUKADANA PHC OF LAMPUNG TIMUR IN 2015** 399  
Yoga Triwijayanti<sup>1\*</sup> , Sri Lestariningsih<sup>2</sup> , Martini<sup>3</sup>

- 77 **FACTORS RELATED TO ANEMIA IN PREGNANCY AND MAKING OF INTERVENTION MODEL OF MATERNAL PERCEPTION AND FAMILY SUPPORT (PSIDUGA) IN CIKEDAL SUB-DISTRICT OF PANDEGLANG DISTRICT OF BANTEN PROVINCE IN 2016** 405  
Rukmaini<sup>1\*</sup>, Milla Evelianti<sup>2</sup>, Aisyiah<sup>3</sup>
- 78 **USE OF HORMONAL CONTRACEPTION EFFECT WITH MYOMA UTERI IN RSU TANGERANG** 412  
Rusmartini
- 77 **THE CORRELATION BETWEEN THE PERIODS OF THE USE OF AKDR WITH MENSTRUAL PATTERN ON KB ACCEPTORS IN CIMANGGU VILLAGE OF BANDUNG BARAT REGENCY IN 2016** 417  
*Tri Setiowati 1\*, Ati Nurwita 3\*, Sely Aprilianti 2\**
- 78 **CORRELATION BETWEEN INDIRECT FACTORS AND PLACENTA PREVIA IN PREGNANCY THIRD TRIMESTER AT KOJA HOSPITAL, NORTH JAKARTA 2013-2015** 426  
Nuryaningsih<sup>1</sup>
- 79 **KNOWLEDGE AND ATTITUDES TOWARDS CONTRACEPTIVE ACCEPTORS DECISIONS IN THE USE OF TUBEKTOMI CONTRACEPTIVES IN 2016** 431  
Asri Novianti<sup>1</sup>, Firda Rospari<sup>2</sup>
- 80 **EFFECTIVENESS OF CUPPING THERAPY AND ABDOMINAL STRETCHING EXERCISE TO DECREASE MENSTRUAL PAIN IN ADOLESCENTS LIVING IN SEDATI SIDOARJO** 436  
Fauziyatun Nisa<sup>1</sup>, SST, M.Kes<sup>2</sup>, Yasi Anggasari, SST., M.Kes<sup>3</sup>
- 81 **FAMILY SUPPORT RELATIONSHIP WITH UMBILICAL CORD CARE PRACTICE IN REGIONAL HEALTH CENTER SEGIRI SAMARINDA** 445  
Herni Johan<sup>1\*</sup>, Siti Noorbaya<sup>2</sup>, Siti Saidah<sup>3</sup>
- 82 **CONSUME THE ARI AND PAPAWE FRUIT ESSENCE THE DEGREE KONSTIPASI OF PREGNANT MOTHER** 450  
Nita Dwi Astikasari
- 83 **EFFECTIVENESS OF GIVING RED GINGER AND TAMARIND TO DECREASE DYSMENORRHEA IN STUDENT** 457  
Retno Palupi Yonni Siwi

- 84 EVALUATION OF INTEGRATED ANTENATAL IMPLEMENTATION IN PEOPLE MEDICAL CENTERS OF PEKALONGAN REGENCY 464  
Risqi Dewi Aisyah<sup>1\*</sup> Fitriyani<sup>2</sup>
- 85 THE DIFFERENT OF TNF  $\alpha$  LEVELS IN HUVECS CULTUR EXPOSED TO PLASMA PREECLAMPSIA PATIENT WITH PLASMA OF NORMAL PREGNANT WOMEN 470  
Dewi Ambarwati<sup>1</sup>, Nurdiana<sup>2</sup>, Siti Candra Windu Baktiyani<sup>3</sup>
- 86 THE CORRELATION BETWEEN PREGNANCY HIATUS/BREAKS AS OPPOSED TO/AND ABORTION RATES/TRENDS/CASES 475  
Roichatul Djannah<sup>1</sup>, Nanik Setiowati<sup>2</sup>
- 87 ENGLISH COMPETENCY AND BARRIERS IN DOING SCIENTIFIC RESEARCH AMONG MIDWIFERY LECTURERS 480  
Jehanara<sup>1</sup>, J.M. Metha<sup>2</sup>
- 88 DIFFERENCES IN DEVELOPMENT OF CHILDREN AGES 4-5 YEARS BETWEEN NATURE KINDERGATEN (HALFDAY SCHOOL) WITH ISLAMIC INTEGRATED KINDERGATEN (FULLDAY SCHOOL) 483  
Nur Aini Rahmawati<sup>1</sup>, Sri Wahyuni<sup>2</sup>, Sri Wahyuni<sup>3</sup>
- 89 CHARACTERISTICS OF MOTHER AND EFFECT OF PRENATAL SERVICES TREATMENT OF OCCURRENCE OF LOW BIRTH WEIGHT BABIES 488  
Meriati Bunga Arta Purba<sup>1</sup>
- 90 ERCEPTION OF PREGNANT WOMEN TO HIV / AIDS IN CLINICAL VCT "SOBAT" 495  
Bringiwatty Batbual<sup>1</sup>, Dewa Putu Ayu Mariana Kencanawati<sup>2</sup>
- 91 INCIDENCE OF FETAL DISTRESS VIEWED FROM THEIR LABOR OLD PRIMIGRAVIDA 500  
Dewa Ayu Putu Mariana Kencana Wati<sup>1</sup>
- 92 POSTPARTUM MOTHERS' BEHAVIOR ON UMBILICAL CORD CARE OF NEWBORNS IN PUSKESMAS KAMPUNG BUGIS TANJUNGPINANG CITY 2016 503  
Nining Sulistyowati<sup>1</sup>, Asih Dwi Astuti<sup>2</sup>
- 93 DETERMINANT BEHAVIOUR OF CHILDBEARING AGE WOMAN IN EARLY DETECTION OF CERVIX CANCER WITH IVA METHOD AT THE AREA OF TANJUNGPURA PUBLIC HEALTH CENTER KARAWANG REGENCY 507  
Tati Herawati<sup>1</sup>, Nita Herawati<sup>2</sup>

- 94 THE MAKING OF A CLINICAL LEARNING/TEACHING AID FOR CONTRACEPTIVE IMPLANT INSTALLMENT: A LOW-COST MODEL 513  
J.M. Metha\*
- 95 THE EFFECT OF A MENTORING MOTHERS EDUCATION ON CADRES KNOWLEDGE OF OXYTOCIN MASSAGE AND EXCLUSIVE BREASTFEEDING: AN INTERVENTION STUDY AMONG CADRES IN SUMOWONO PHC AREA, SEMARANG DISTRICT, CENTRAL JAVA, INDONESIA 517  
Ike Johan<sup>1\*</sup>, Ninik Azizah<sup>2</sup>
- 96 WITH EXCLUSIVE BREASTFEEDING HISTORY AND NON-EXCLUSIVE IN KARANGMANGU VILLAGE KRAMATMULYA DISTRICT KUNINGAN REGENCY OF YEAR 2015 529  
Tita Ristiani<sup>1</sup>
- 97 MOTIVATION OF HEALTH PROVIDER AND BEHAVIOR PREGNANT WOMEN IN CONSUMPTION IRON TABLET WITH ANEMIA PREGNANCY IN KEDIRI CITY 534  
Erma Retnaningtyas<sup>1\*</sup>
- 98 THE EFFECT OF EFFLURAGE MASSAGE TECHNIQUES TO DECREASE PAIN IN THE ACTIVE PHASE OF THE FIRST STAGE PRIMIPARA 541  
Candra Wahyuni, Sst, M.Kes
- 99 FACTORS ASSOCIATED WITH INCIDENCE OF ANEMIA AMONG ADOLESCENT GIRLS AT MAN 8 JAKARTA TIMUR 546  
Elly Dwi Wahyuni<sup>1</sup>
- 100 THE RELATIONSHIP OF THE ABILITIES AND MOTIVATION OF HEALTH WORKERS WORK ON PERFORMANCE IN THE IMPLEMENTATION OF SICK TODDLER'S INTEGRATED MANAGEMENT PROGRAM 552  
Kursih Sulastriningsih<sup>1</sup>, Astrid Novita<sup>2</sup>, Ella Nurlelawati<sup>3</sup>
- 101 THE INFLUENCE OF ABDOMINAL BREATHING TECHNIQUE AGAINST A DECREASE IN LABOR PAIN KALA ACTIVE PHASE I 563  
Yeltra Armi<sup>1</sup>, Darnisa Humala<sup>2</sup>, Khairannisa<sup>3</sup>
- 102 THE EFFECT OF HOT AND COLD COMPRESS ON PAIN RELIEF DURING ACTIVE FIRST STAGE OF PHYSIOLOGIC LABOR IN PRIMIPAROUS WOMEN 568  
Mutia Felina<sup>1\*</sup>, Sari Rahma Fitri<sup>2</sup>, Siti Nurkhasanah<sup>3</sup>

- 103 **IMPORTANCE OF SIMULATED-BASED MIDWIFERY CLINICAL LEARNING: A REVIEW** 574  
Lisma Evareny<sup>1</sup>, J.M. Metha<sup>2</sup>
- 104 **RELATIONS BETWEEN GRADE-POINT AVERAGE WITH COMPETENCE TEST RESULTS ON THE GRADUATE MIDWIFE IN TANJUNGPONK HEALTH POLYTECHNIC 2014** 577  
Septi Widiyanti<sup>1</sup>, Martini Fairus<sup>2</sup>, Supriatiningsih<sup>3</sup>
- 105 **THE EFFECT OF AROMA THERAPY TO DECREASE ANXIETY THIRD TRIMESTER PRIMIGRAVIDA IN PREPARATION FOR CHILDBIRTH IN THE WORKING AREA BUKITTINGGI CITY GULAI BANCAH HOSPITAL CENTRE** 582  
Rulfia Desi Maria<sup>1</sup>, Tuti Oktriani<sup>2</sup>, Yunefit ulva<sup>3</sup>
- 106 **THE CORRELATION BETWEEN PERSONAL HYGIENE, FOOD INTAKE AND STRESS WITH FLUOR ALBUS RATES / EVENTS / CASES / INCIDENTS / TRENDS** 587  
Dewi Susanti<sup>1</sup>, Siti Maisaroh<sup>2</sup>
- 107 **EFFECT OF SCHOOL SUPPORT, HEALTH WORKERS SUPPORT, PEER GROUP SUPPORT AND KNOWLEDGE ABOUT UTILIZATION BEHAVIOR OF PIK-R IN 1 SENIOR HIGH SCHOOL PARONGPONG DISTRICT OF PARONGPONG 2015** 591  
Artha Kusumawardhani<sup>1</sup>
- 108 **EARLY DETECTION OF HIV BY MIDWIVES IN COMMUNITY: AN OPERATIONAL STUDY ON THE INCREASED ACCESS OF HIV PREVENTION FROM MOTHER TO CHILD IN KARAWANG REGENCY** 603  
Dewi Purnamawati<sup>1</sup>\*
- 109 **DECISION MAKING AND SUPPORT FAMILIES TO USE HEALTH FACILITIES AT CHILDBIRTH IN PUBLIC HEALTH WAIGETE DISTRICT SIKKA PROVINCE NTT 2015** 607  
Ignasensia D. Mirong<sup>1</sup>
- 110 **CORRELATION WITH HISTORY PREECLAMPSIA WITH EFFECTIVENESS EARLY OF POSTPARTUM WOMEN IN DR. H. ABDUL MOELOEK HOSPITAL LAMPUNG** 612  
Cynthia Puspariny<sup>1</sup>, Marlinda<sup>2</sup>, Ajeng Ina Aprisa<sup>3</sup>
- 111 **DETERMINANT FACTORS OF MATERNAL MORTALITY IN PASAMAN-WEST SUMATRA** 616  
Dewi Syarief<sup>1</sup>\*, Dian Furwasyih,<sup>2</sup>

**112 TRADITIONAL HEALTH BELIEF PRACTICES THAT HARM WOMEN'S AND CHILD'S HEALTH: A REVIEW ON DELAYED BREASTFEEDING AND POOR DIET IN PREGNANCY 621**

**Juli Oktalia<sup>1</sup>, J.M. Metha<sup>2</sup>**

**113 HUSBAND'S SUPPORT ON A SUCCESSFUL BREASTFEEDING : A REVIEW 625**

***Syafrani Ibrahim'***

## MIDWIFE-TBA PARTNERSHIP AT “C” HEALTH CENTER OF LEBAK REGENCY OF BANTEN PROVINCE IN 2011

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### ABSTRACT

“C” health is one of the health centers in Lebak. From the initial data obtained from Health Office, it is known in this health center until November 2010 that the rate of delivery by health personnel is still low at 30%, which is the lowest coverage in comparison with other health centers in Lebak regency. Socialization of the midwife-traditional birth attendant (TBA) partnership in Lebak regency has been implemented since 2007 in conjunction with the Program of Childbirth Planning and Complications Prevention.

The objective of this study was to determine the midwife-TBA partnership in “C” Health center. This was a qualitative study and the data were obtained from the results of in-depth interviews, focus group discussion (FGD) and observation. The key informants described all phenomena related to the behavior of the community in midwife-TBA partnership, with analysis of feedback systems ranging from aspects that included human resources, facilities, funding and methods, aspects of the process that included eight steps of the midwife-TBA partnership to the output aspects that included the number of midwives partnering with TBAs and MCH program coverage. The study was conducted in February 2011.

The results of the study described that the implementation of the partnership in the health center had not been in line with expectations. There had been no increase in the number of TBAs that partnered with midwives and had not been a significant increase of the MCH program coverage, especially in the delivery assistance by health personnel. The participation of people did not support the implementation of partnership. There was no written agreement regarding mutually agreed job descriptions and responsibilities between midwives and TBAs. Many people also still used the services of a TBA to perform labor and delivery. Thus, midwife-TBA partnership particularly in delivery assistance still needs to be improved in its management and its implementation should be performed more seriously and better, so as to achieve the expected goals

**Keywords:** Midwife, TBA, Partnership

### INTRODUCTION

Both maternal mortality and infant mortality are an important indicator of health in a region. The maternal mortality rate in Indonesia has been high, proven from its high rate, reaching 262 per 100,000 live births according to the Central Bureau of Statistics (2005) and 253 per 100,000 based on the Indonesia Demographic and Health Survey (2007). These figures are surely much higher than those in other developing countries. As with Vietnam, the newly independent state, the maternal mortality rate in 2000 was 160 per 100,000 live births.

In Banten, the number of maternal deaths in 2009 was 223 people and in the district of

Lebak in the same year, there were 33 deceased mothers out of 23,617 mothers giving birth (MCH Report Health Office, 2009). At “C” Health Center, the number of maternal deaths in 2009 was 1 women from 398 births.

The global causes of maternal mortality in general are bleeding by 25%, post-delivery infections by 15%, unsafe abortion by 13%, high blood pressure disorders by 12%, obstructed labor by 8% other direct obstetric causes by 85% and indirect causes by 19%. In Indonesia, the direct causes of maternal death have a similar pattern, where maternal mortality is mainly due to bleeding by 30%, eclampsia by 25%, infections by 12%, post-partum complication by 8%, abortion by 5%,



obstructed labor by 5%, embolism by 3%, and others by 12%. The direct causes of maternal deaths can be prevented, such as bleeding and anticipated with proper management during pregnancy, during delivery and postpartum, conducted by professional staff. In nearly throughout Indonesia, a lot of births are still attended by TBAs. In Banten delivery by TBAs stood at 31.5%. In the district of Lebak in 2010 the number of deliveries by TBAs reached 8575 people or 32%, and at "C" health center 98 people or 39.6% were recorded to be assisted by TBAs in labor.

Partnerships today are still within the meaning of the transfer of knowledge, in the form of coaching ways of hygienic delivery from midwife to TBA. This means that the partnerships are not in the form of each's duties and functions description and do not lead to hand over the role of delivery assistance optimally.

According to Michael Winkelman, there are three factors as the constraints in the implementation or application programs called the three delays, which are cultural barriers, social barriers, and psychological barriers.

Various attempts have been made in the context of reducing maternal mortality, such as Making Pregnancy Safer (MPS), Friendly Mother Movement (GSI), the placement of midwives in the villages, upgrading health centers to PONEC health center, and cooperation between health professionals and TBA.

Definition of Partnership between Midwives and TBAs is a form of cooperation mutually beneficial with the principles of openness, equality and trust in an attempt to save the mother and the baby, by placing midwives as birth attendants and swifiting TBAs from birth attendant to a partner in caring for mothers and babies in puerperal period according to the agreements made between midwives and TBAs and involving the whole elements of society. In practice, the development of

partnerships can be performed using a systems approach.

## RESEARCH METHODS

This was a qualitative study with a Rapid Assessment Procedure (RAP) design. This research was conducted at "C" health center of Lebak in February 2011. The informants in this study were determined based on the principle of sampling in qualitative research, namely the principle of appropriateness and adequacy.

The primary data collected were done with Focus Group Discussion (FGD) in the group of mothers who had ever given birth assisted by midwife/TBA and in-depth interviews to MCH workers in health office, MCH workers at health center, midwives, village heads, community leaders, religious leaders, and TBAs. The secondary data collection was done by collecting data on the midwife partnership with TBAs, especially regarding labor. For the secondary data, they were obtained by observation and viewing the profiles and monthly reports at "C" health center, as well as reports in Lebak regency health office.

The instruments used in data collection were the researchers themselves by using the guidelines of Focus Group Discussion (FGD), in-depth interviews and observation. Interview guidelines had been tested to other informants to develop a few questions to get the desired information.

Data processing went through some stages. The information gathered through focus group discussions and in-depth interviews was recorded by using a voice recorder by previously obtaining the consent of the informant. Data in the form of recordings were transferred into written form (transcript), in full version without changing anything (add, subtract) contained in the cassette. Data arrangement, summary and interpretation were then done using matrix and finally conclusions were draw. Data was analyzed using content analysis. To maintain the validity of the data, triangulation was done. This study used

source and method triangulation. Source triangulation was to obtain the same information from different informants, while method triangulation was to get the data in several ways, namely through in-depth interviews, focus group discussions and observation.

## RESULTS AND DISCUSSION

Human resource is the power that comes from a good human effort, thought and moral support. Often, it is referred to as Human Resource, energy or strength, as an important thing that can determine the success of an activity or program. Human resource quality and equitable is necessary to achieve health development goals.

Information obtained from a TBA who was not yet a partner in implementing delivery assistance was done by looking for signs to give birth (mucus). If the birth was easy, midwives were not required. When there is a midwife in the delivery assistance, the TBA only watched it. Within the guidelines of a partnership between a midwife and TBA, it is said that in carrying out delivery assistance that includes a TBA, the scope of the TBA is a non-medical aspect of health, including assisting midwives during the process of delivery.

Information obtained from the midwife revealed that in carrying out the partnership activities, especially in delivery assistance, the assistance should meet the standards and a midwife should approach and foster a TBA to implement the partnership. This is accordance with the tasks of village midwives in partnership with the TBA. one of which is to foster a TBA who is in the local region.

Some research suggests that many mothers in Indonesia do not want to ask for help from skilled birth attendants to provide delivery care and childbirth, arguing that skilled birth attendants do not really pay attention to the needs, culture, traditions and the personal desire of the mothers in delivery and birth. Another reason is other than young age that midwife is often viewed as having no experience in

childbirth and mostly unknown to society. Informant mothers who had given birth assisted by a midwife and or TBA in the research area provided the same reason.

The community leaders and village leaders expressed less obvious to the human resources in midwife-TBA partnership especially in implementing delivery assistance. Similarly, the village head stated that his role was only seeing it when there was labor. According to the MOH (2008), the agreement and support of the various elements of society is a factor that strengthens the program success of midwives and TBAs partnership.

Information from the MCH workers at health center showed that they were unclear with human resources in carrying out the midwife-TBA partnership in delivery assistance. According to Bruce (1990), Fromberg (1988), Gambone (1991), in Azwar (1996), if the HR and the means are not in accordance with the standards and funding does not match needs, it is difficult to expect good quality of service.

The results of observations conducted showed that the researchers did not get the book on the activities of the HR partnership between midwives and TBAs both in health centers and in midwives. According to MOH (2008), the duty of midwives at health center in partnership with TBA is to facilitate the midwife in the village in the implementation of the partnership. Based on observation of data, "C" health center working area covered 9 villages and the midwives working in those villages were only seven midwives, with the status of Non-permanent Employee (PTT). Of 7 midwives, only 4 people who lived in the villages and only one person had been trained Normal Delivery Care (APN). Midwives Ratio Per 100,000 population was 100 midwives. There is a gap of about 14-15 midwives who are still required by health centers and Normal Delivery Care (APN) to be able to improve the performance of the birth attendant.

Implementation midwife-TBA partnership requires public participation and related

sectors. The most important sector that directly contribute to the development of human resources quality in addition to the health is the education sector assuming more educated a person, the higher the awareness on health, political participation, and family planning.

### **Funding**

Financing is one of the necessary resources in development. Financing of public health services at the primary is the responsibility of the government together with the community. The government is obliged to finance public health services aimed at addressing public health issues to become a priority.

Funding is all forms of material that can be used as a source of financing of a process of activities, as important resources in the partnership. Based on Healthy Indonesia 2010, the ratio of funds to the health sector is 15% of the government budget funds.

The results obtained with in-depth interviews showed that funding for partnership activities in the health center was much spent for dissemination. This was in accordance with the information obtained from Health Office that funds were available for partnership in the years 2009-2010 for the health center level, while for up to village level, only a few health centers received the funds. Budget funds for Lebak District Health Office in 2008 was 43,456,081,368 (5.07%).

This study result in the area of “C” regarding financing in midwives-TBAs partnership, particularly in delivery assistance, showed that the fund was coming from the society itself or self-sufficient. There was no definite provision in the amount of costs to be incurred by the mother giving birth to both midwife and or TBA. While in the partnership, there is a revolving fund for the TBAs with the amount of money having been determined by the manager of the partnership program at the health center.

Information obtained from the midwife showed that to increase the scope of delivery assistance by health personnel began to apply free delivery; it is in accordance with one specific purpose, ie, Jampersal (delivery insurance) to increase the coverage of prenatal care, deliveries and postpartum care by skilled attendants. Community leaders, religious leaders and village leaders claimed not to know about the partnership fund, whereas according to the MOH (2008), the funds for these activities can be proposed through funding to improve health and education in the Village Fund Allocation (ADD) in accordance with Chapter 7 of the financial resources of PP 72 Year 2006 on the Implementation of the village government. During this time, for delivery assistance community must pay except for the people who have JAMKESMAS (community health insurance) and Askes (health insurance); however, the cost is still affordable by the community.

*“Sometimes I heard that now the service is with midwife... and it is also free of charge... but it depends on the woman that will deliver a baby... whether she wants to get help from a TBA, yes it is up to the woman” (KD, TOMA).*

*“I do not have any idea... when my children gave birth in Rangkas, she used Askes because she is a teacher in Rangkas)” (TOGA).*

The results of the research in “C” area showed that there was a lack of special funds for the implementation of the midwife-TBA partnership primarily in term of funding for delivery assistance.

### **Facility**

In the region of “C”, maternity usually took place at home either assisted by midwife or assisted by TBA. Based on the data obtained from health centers in 2010 recorded from 299 mothers who gave birth, 7 (2.3%) women gave birth in health facilities, namely four in health centers/sub health centers, two in clinic and one in a

midwife practice. The reason why the deliveries took place at home were not asked for more. According to the Ministry of National Development Planning (KPPN, 2007), although the health center is readily available in every district, the deliveries at home are still quite high at 60% and home deliveries for rural areas is 76.1%.

Based on the Health Center profile in 2010, village health posts in “C” health center consisted of 3 buildings, while based on the Healthy Indonesia Indicators in 2010, the ratio is that 1 village health post is for one village.

The basic equipment that must exist is, among others, the midwife kit. In the procurement of basic equipment or tools in “C” to help the labor although the midwives had not received any aid from the government (Health Office), the tool was provided because of the aid from health center or their own procurement. While for the TBAs, the tool used was a TBA kit, which was given by the health center.

In “C”, the facility to carry midwife-TBA partnership was still lacking and the utilization of existing facilities was not maximized. As mentioned previously, when the human resources and facilities are not in accordance with the standards and funding does not match needs, it is difficult to expect good quality of service.

## Method

The method in question in this case was the ways to conduct midwife-TBA partnership in particular in delivery assistance.

The results of the study, from the informants as the workers of MCH, showed that technical debriefing given in the form of socialization meetings on the midwife-TBA partnership was performed in sequential order from the district to sub district/health center and then to the midwife. This is in accordance with the steps in midwife-TBA partnership in district/city level that the implementation is as follows: Socialization to the cross-

sectors; Technical provisioning and monitoring. On District Level, the process is as follows: Socialization to cross-sector in sub-district and village level; and Monitoring and Evaluation.

According to the MOH (2008), midwife-TBA partnership activities in the village include the TBA apprentice at midwife home/village health post/health center, where the expected result of this activity is the creation of interpersonal relationships between midwives and TBA so that the TBA will agree to refer the childbirth cases to the local midwife. In this study, based on interviews with midwives and TBAs, the midwives had been approached by the TBAs to create interpersonal relationships, in which the activities were carried out during labor and the TBA implemented ways to help labor that included non-medical aspects.

In this study, the method used in midwife-TBA partnership for the district had been in accordance with the guidelines for midwife-TBA partnership and for health center and midwives had conducted but not yet in accordance with the guidelines.

## Process Component

### Inventory of all midwives and TBAs

Inventory intended here is about the number of midwives and TBAs in “C”. Inventory is a list of all the facilities available in all parts, including the building and its content. The results of research in “C” health center on the inventory of midwives and TBAs, derived from in-depth interviews with MCH workers, the number of midwives for the year 2010 amounted to 5 and the number of TBAs was 67 people, consisting of 14 partnered TBAs and 53 not partnered TBAs.

Based on the observation of the health center reports, the number of midwives was 7 people and of TBAs was 24 people. According to Fathoni (2006), the human resource planning begins with an inventory of activities concerning human resources that have been recorded within the organization. The results of research on the

inventory of the number of midwives and TBAs in “C” were not maximized.

### **Perception between Midwives and TBAs**

Perception meant here is the perception regarding the role at current times as a partner that is no less important than the previous role as a birth attendant.

According to Notoatmodjo (2007), the principles of partnership is equality, openness, and mutual benefit. Similarly, the midwife partnership with TBA uses these principles.

Perception means the same perspective in handling the problems encountered together. To realize the above definition, this perception will be realized through the joint efforts between the midwife, TBA, community leaders, religious leaders, health workers, and other elements that exist in society.

The results of this research on the notion of partnership between midwife and TBA showed that the activities, objectives, purposes and objectives of the partnership were obtained from the workers of MCH through in-depth interviews to know clearly the partnership about the notion, existing activities, objectives, intentions and its purpose. It is in accordance with the duties of the districts/municipalities and health centers in charge of midwife-TBA partnership activities to report it to the heads of Health Office. Similarly, the midwife on duty in the village, according to the duty midwife in charge of partnership activities reports to the head of health center.

The results of this study obtained that the mothers in average who had given birth assisted by the midwife and / TBA of the understanding and activities in midwives-TBA partnership knew simply that partnership entails cooperation and existing activities that they know among antenatal and childbirth.

Information gleaned from TBAs through in-depth interviews showed that more TBAs

did not know about the definition of midwife-TBA partnership. One of special purposes of this partnerships is increasing the role switch from birth attendant to a partner in caring for postpartum mothers and their babies. According to Notoatmodjo (2007), the awareness and knowledge is the early stages of the onset of ability, and ability is the result of the learning process.

### **Assigning roles and responsibilities of midwives with TBAs**

The roles and responsibilities of midwives in partnership with TBAs have been set in the guidelines for the implementation of partnership, that the midwife's role is covering the technical aspects of health, while the role of the TBA is covering non-technical aspects of health.

The results of research in “C” based on in-depth interviews with midwives and workers of MCH regarding assigning roles and responsibilities of midwives and TBAs in the implementation of the partnership, especially in delivery assistance showed that the midwife's role was as a birth attendant, in accordance with her duties in partnership that the midwife's activity covered the technical aspects of health and delivery assistance by skilled health personnel is one of the most effective ways in reducing maternal mortality.

According to the IBI/Indonesia Midwife Association (2006), competence of midwives provide care that is high quality, responsive to local culture during labor, and lead a clean and safe delivery to handle certain emergency situations to optimize the health of the woman and her newborn baby.

This information was confirmed by the opinion of TBAs who had partnered and not partnered, who became an informant, that duty in midwife-TBA partnership in particular in delivery assistance included non-technical aspects of health and assisting midwives, in accordance with her duties in the partnership that the activities of TBAs included a non-technical aspects of health. Similarly, the opinions of women giving birth by the midwife and/or TBA



said the same thing, as quoted in the following information:

*“Just follow the midwife, how midwives arrange us”.* (DBM2, DBM1, DTM1).

### **Making a written agreement about the roles and tasks between midwives and TBAs**

Written agreement of partnership is the handle for each partner as a dedication to the job; as well as the consistency or alignment between attitudes, speech, and action/as a promise to realize something or commit themselves to a relationship or a job in written.

The results of the midwives and workers of MCH at the health center about midwife-TBA partnership in “C” showed that there was no written agreement regarding the mechanism; this time the agreement was made only orally and created spontaneously during delivery occurred and who made the deal was the midwife by involving the woman, family and TBA. About the guidelines for midwife-TBA partnership, there are some important things that must be agreed upon and set forth in written agreement between midwives and TBAs, although the mechanism of each area is quite various. The agreement covers the role of the midwife and TBA, information referral mechanism of pregnant women from TBAs to midwives, childbirth case referral mechanisms, regular meeting schedule between midwives and TBAs, and labor cost sharing mechanism.

The results of the research by in-depth interviews with community leaders, village leaders and TBAs claimed there was no written agreement in the implementation of the partnership. The form of support from community leaders and village leaders was supporting the deal made by the midwives and TBAs in writing issued in a decree about the partnership between midwives and TBAs. The outcomes of the partnership are expected to increase the number of TBAs who wanted to be in the partnership and increased referrals.

From the observation results in the area of “C”, there was a written agreement of partnership activities between midwife TBA in accordance with the findings in the field that shows that the partnership between midwives and TBAs is not yet in the form of agreements on the description of each’s duties and functions.

### **Developing partnership activity plan**

The results of this research in the area of “C” regarding the preparation of partnership work plan between midwives, TBAs and workers of MCH at the health center showed that during this time there was no plan in partnership activities between midwife and TBA, while according to the MOH (2008), the activities in the framework of the partnership between midwife and TBA covers aspects of planning, implementation, monitoring and evaluation. According to Le Breton in Azwar (1988), work involves preparation of concepts and activities to be implemented to achieve the goals set for the sake of a better future.

### **Disseminating the agreement**

Socializing means helping people learn and adapt in partnership between midwife and TBA to know each role in the partnership. The results of the research in the area of “C” from interviews with midwives showed that disseminating the midwife-TBA partnership was done by explaining the importance of delivery by health personnel and by giving rewards to TBAs. The disseminating time was on neighborhood health post. It is appropriate with the socialization purposes at the village level to get an agreement on the implementation of the partnership between midwives and TBAs from the village officials, religious leaders, community leaders, and community.

The research information obtained from TBAs about the socialization of the partnership showed that in average TBAs disseminated when delivering mothers faced complications and upon agreement with the family they finally used the services of a midwife. This is not in

accordance with the role of TBAs in the period of labor in the midwife-TBA partnership, namely referring the women in labor to midwives.

Community leaders and religious leaders did not comment on this socialization. The village head only saw when there was one who was in delivery but not being disseminated. With dissemination held by community and religious leaders, this receives community's support, and the form of support is in favor of the agreement made by the midwives and TBAs in written form, issued in a decree.

The research results obtained from in-depth interviews with the workers of MCH showed that in disseminating the partnership, it used existing forum, that is, meeting in *majlis taklim* or islamic gathering, because to gather citizens was very difficult. According to Notoatmodjo (2007), the place is one of the components of social marketing.

#### **Implementing partnership activities**

Conducting the partnership is doing, running, and performing the partnership activities.

The main actors in partnership activities are midwives and TBAs themselves, where the duty should be in accordance with the provisions of agreements of role sharing that has been made and agreed upon, stated in a written agreement.

Implementing the activities in accordance with the agreement becomes difficult when there are no written form of the agreement as a reference for partnership actors. In this research, the implementation of the partnership ran based on the implementation of the activities as usually done in the region of "C", not based on a written agreement that had been made.

The results based on information from the workers of MCH at health office regarding the implementation of the midwife-TBA partnership during delivery assistancen stated that they doubted the new midwives

but they said that the implementation of the partnership could go well. The rocialization of midwife-TBA partnership in Lebak regency was held in conjunction with the Program of Planning and Prevention of Complications (P4K) in 2007.

The results of the depth interviews with the workers of MCH at health center that the implementation of the partnership is now starting to run. The factors that affected the implementation of the partnership according to the informants as the workers of MCH at health office and health center were the need for a lot of energy, money and time done continuously so that the implementation of the partnership could be as expected.

The results of the study obtained from the midwives on the implementation of the partnership showed that it was quite difficult because of the high public confidence in the TBA, although the midwives had to sacrifice and to inform that free labor and the factors that influenced were the high customs and beliefs of the TBAs. It was in accordance with the opinion by Prawirohardjo (2002) that 80% of mothers giving birth in Indonesia chose to TBAs than to modern facilities, because TBAs took the time to help patients from antenatal to postpartum.

In the opinion of the TBAs on the implementation of the midwife-TBA partnership, they had perception that midwives in implementing delivery assistance with the TBAs. People wanted to have a delivery assisted by a midwife and TBA because in addition to the cost It was at the will of the family. In this case, the TBAs felt just fine with that, as they could take the experience of the help given by the midwife to the birth mothers. According to some studies, many mothers in Indonesia do not want to ask for help from the skilled birth attendants to provide delivery care and childbirth, arguing that skilled birth attendants do not really pay attention to the needs, culture, traditions and the personal desire of the mother in birth her baby.



Information obtained from community leaders, village heads and religious leaders on the implementation of the midwife-TBA partnership revealed that it was still running with the support of figures. Meanwhile, according to MOH (2008), the agreement and support from the various of society is a factor that strengthens the success of midwives-TBAs partnership program.

The results of observation in the “C” health center against MCH report data on the implementation of the midwives-TBAs partnership in particular in childbirth assistance showed that data on the number of delivery assisted by midwives/health workers amounted to 163 of 225 mothers but there has been no special report on the partnership. In the Indicators of Healthy Indonesia 2010 the the percentage of women giving birth by skilled health personnel is 90%.

### **Monitoring and assessment the results of partnership activities**

Monitoring is watching, observing, controlling, checking carefully, especially for special purposes and assessment is ‘act or process to determining the value of something’ (Edwin Wandtdan Gerald W. Brown (1957: 1).

Monitoring and assessment of the activities are necessary to determine the success of a program to see if the program is in accordance with the predetermined plan. Monitoring can be done vertically from the top positions to the board at the bottom, or horizontally, ie, the correction and improvement from equal colleagues while assessment is a process to determine the value of something. Assessment is done on the administrative aspects such as registers, reports of activities, and the activities carried out by stages so that an assessment can be carried out thoroughly and objectively useful to facilitate efforts to improve and further improvement.

Information obtained from community leaders, village heads and religious leaders on monitoring and assessment that there

was an increase, although less understanding, just knowing at a glance, but occasionally heard solicitation of health care workers to have labor and delivery to be assisted by health care providers. To increase community participation in caring for monitoring and assessment in midwives-TBAs partnership, community was involved from the planning activities until the evaluation process and the results of those activities.

The results based on data obtained from interviews and observations about administrative things related to midwife-TBA partnership in the region of “C” showed that there had been no monitoring and assessment specifically about the midwife-TBA partnership program both from the Health Office to the health center and from health center to the village. This situation is not in accordance with the midwife-TBA partnership guidelines, that monitoring from the District to Public Health Center-village is done once in 3 months and evaluation is conducted 1 time in a year after the midwives-TBAs partnership in progress,

### **Output component Midwife-TBA partnership**

Based on the description, the existence of the midwife-TBA partnership to improving the achievement of MCH and the number of midwives and TBAs who partnered in the research site was used as indicators of output as well as the expectations and guidance for partnership activists to more actively participate an ongoing basis and a more consistent approach to midwife-TBA partnership.

The results based on information obtained from midwives regarding the change/increase in the number of women giving birth by a midwife in the delivery assistance with the partnership between midwife and TBA showed that there was a change in which previously people who had not asked midwives to help their labor and delivery could change after the program of the partnership that they eventually asked

midwives to assist their birth. According to the Ministry of Health (2008), the indicator of a successful midwife-TBA partnership is the increase in the number of TBAs partnering with midwives and increased coverage of MCH.

Results of research conducted in-depth interviews with workers of MCH at health office regarding midwives-TBAs partnership on the coverage of MCH program showed that there was an increase compared to the previous years and there was an increased number of midwives who partnered with TBAs. However, the information obtained from the workers of MCH at the health center on the number of TBAs that wanted to partner with midwives did not change in the number with reasons that socializing midwife-TBA partnership was performed only one time in 2007.

In 2010, the number of midwives was 5 people and in 2011 it became 10 people while the number of partnering TBAs was still 14 people from 67 existing TBAs. For MCH coverage particularly delivery by health personnel, in 2011 it reached about 80%. Indicators of Healthy Indonesia 2010 showed that the percentage of women giving birth by skilled health personnel was 90%. Midwives Ratio Per 100,000 population was 100 midwives. There was a gap of about 14-15 midwives who were still required by health center. The indicators of successful midwivesTBAs partnership are the increase in the number of TBAs partnering with the midwives and an increase in MCH coverage.

The results of the data obtained from the administration of the health center showed that the number of midwives in 2010 listed six people, meaning that on average one midwife took care of two villages and two midwives held the additional duties. The number of TBAs was 24 people and the trained ones were only six people, and the number of midwives in 2011 was recorded to be 7 midwives but only one had been trained normal delivery care (APN). Midwives Ratio Per 100,000 population was 100 midwives. There was a gap of

about 14-15 people midwives who were still required by the health center.

#### **CONCLUSION**

Midwife-TBA partnership in practice is not as easy as turning the palm of the hand, but it requires phases of activities which constitute a coherent whole, interrelated and influence each other so it is a cycle that requires continuity in its implementation. Midwife-TBA partnership is one of the efforts and strategies aimed at improving maternal and infant access to quality health care in the hope of delivery assistance by the TBAs turning to midwives so that delivery by health personnel can be increased and this can bring good impact on the MMR and IMR.

Implementation of the midwife-TBA partnership in the area of "C" is not optimal. There are many problems/obstacles encountered such as customs/beliefs in the region to deliver assisted by TBAs, with reasons that the average age of the TBAs is above 40 years, so they are believed to be more experienced in delivery compared with young midwives. In addition, the influence of cultures in the region of "C" is still strong, where community leaders / religious leaders hold enormous influence in decision-making. In addition to solving the health problems especially labor, things which have almost been forgotten are the lacking involvement of TBAs/community in health activities, particularly MCH in its territory, which all these times TBAs are the ones who always become the party to blame. Many more problems / obstacles are still encountered in the implementation of the midwife-TBA partnership.

Thus, midwife-TBA partnership particularly in delivery assistance still needs to be improved in its management and the implementation should be more serious and better, so as to achieve the expected goals.

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## THE INCIDENCE OF OSTEOPOROSIS ON PREMENOPAUSAL WOMEN

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### ABSTRACT

The risk of osteoporosis in Indonesia, relatively high due to low public knowledge and understanding about how to prevent osteoporosis. Initial research has been conducted on RS. TK II AK. GANI Palembang dated June 22 th to July 28 th in 20 premenopausal women. Found 80% had osteoporosis, the knowledge and precautions of osteoporosis remains low on average. Therefore, efforts to prevent and repair the incident of osteoporosis needs to be done. This study aims to association between knowledge and precautions factors with the incidence of osteoporosis in premenopausal women on the region of RS. TK II AK GANI Palembang Tahun 2016. This Cross Sectional study was conducted on June-July 2016 in premenopausal women region of PHC for elderly. Samples were taken by simple random sampling. That was counted 85 participants. Knowledge and precaution measures for osteoporosis were collected by questionnaire, where the results of bone mineral status of respondents using Densitometry. Data processed through the editing, coding, entry, and cleaning. Univariate analysis was done by the frequency distribution of each variable and bivariate analysis was done by Chi-square test. The result of research found incidence of osteoporosis was 60,0%, whereas 72,9% had less knowledge, and 42,4% had less precautions. There was no significant association between knowledge and the occurrence of osteoporosis ( $p < 0,00$ ), but there was a significant association between the incidence of osteoporosis with prevention measures ( $p < 0,000$ ). Based on this research, suggested that the health department of RS. TK II AK GANI Palembang develop osteoporosis precaution programs by disseminating information to premenopausal women about osteoporosis prevention, and check health of bone regularly. For other researchers to do further research about other factors related osteoporosis in premenopausal women.

**Key words:** Osteoporosis, Premenopausal women

### INTRODUCTION

Elderly and osteoporosis problem is getting more world's attention, including Indonesia. The reason is the age life expectancy is increasing. This situation causes the enhancement of aging illness, for example is osteoporosis (bone loss). Osteoporosis problem in Indonesia connected to hormone problem in menopause. Menopause period is faster to reach for the women in Indonesia in 48 years old than Western women in 60 years old. Starting to get less sunlight. Less of calcium. Transformation in lifestyle like smoking, consuming alcohol, and less of physical exercising. Drugs steroid using long term. And osteoporosis risk without symptom that following.

Since the reduction of bone mass that connected to fractures occurrence that will happen, so bone mass check up is the indicator to estimate the risk of fractures occurrence. In last decade, this fact caused a concern about bone densitometry to identify subject by reduction of bone mass, so it can prevent fractures occurrence that will happen, even to observe pharmacological therapy to keep the bone mass.

All this time, osteoporosis identical to the elderly. But the fact is that bone loss can attack everyone even the youth. Osteoporosis is one of degenerative diseases. Latest research from *International Osteoporosis Foundation* (IOF) said that 1 from 4 women in Indonesia around 50-80 years old have risk to have osteoporosis. And the osteoporosis risk for the women is 4 times bigger than the men. This bone loss disease usually attack premenopause



women. Osteoporosis doesn't show physical signs until loss and cracking of bones happen. Loss of estrogen hormone after menopause increases the osteoporosis risk. It can't be denied that estrogen hormone affects osteoporosis. But, the latest symptom after 50 years old, osteoporosis is not easy to be detected.

We can meet osteoporosis all around the world and until now still being a big problem for people mostly in developing countries. In America osteoporosis attacks 20-25 million population, 1 from 2-3 women post-menopause and more than 50% population above 75-80 years old. Quoted from WHO data showed that there are 200 million population that suffering from osteoporosis. In 2050, number of waist bone fracture will increase 2 times for women and 3 times for men. WHO report showed that 50% of fracture occurrence is upper leg bone fracture that can cause malformation for a lifetime and death. Compare to population in Africa, the bone density of British and Asia is less, so easily get osteoporosis.

White paper research result that held with Perhimpunan Osteoporosis Indonesia in 2007, reported that osteoporosis sufferers for population above 50 years old is 32,2% for women and 28,8% for men. While Sistem Informasi Rumah Sakit (SIRS, 2010) showed number of upper leg fractures number caused by osteoporosis is around 200 from 100.000 cases in ages 40. Early survey in RS TK II AK GANI Palembang 2015 to 54 menopause women with ages average 47 years old, found 21 people that suffer osteoporosis. From the interview, they have less of knowledge and precaution about osteoporosis.

## RESEARCH METHOD

Research design that used is *cross sectional study*, a research where independent and dependent variables are observed in the same time. This research was held in RS TK II AK. GANI Palembang with 85 population number.

Primary data that directly collected from interview using questionnaire consists of independent variables (knowledge and precaution level). The interview used door to door way. Bone mineral respondent checking status using densitometry from RS TK II AK GANI officer. Densitometry checking result can be seen using T-score. While secondary data collected from annual report of RS TK II AK GANI Palembang 2016, Dinas Kesehatan Palembang, BPS Palembang and access from internet. Analysis in this research is bivariate analysis with Chi Square statistical test for trust level.

## RESULT AND DISCUSSION

The respondent is the premenopausal women with ages average 44,45 years old (SD±2,846) with the youngest age is 40 and the oldest age is 49 years old. The weight average is 57,32 kg (SD ± 5,283), the lightest weight is 45 kg and the heaviest weight is 70 kg.

**Table 1. Respondent Distribution based on Osteoporosis Cases in RS TK II AK GANI Work Place Palembang 2016**

Osteoporosis Cases	F	%
Osteoporosis	51	60,0
Not Osteoporosis	34	40,0

From table 1 showed that almost half (50%) of respondent suffer osteoporosis. High prevalence of osteoporosis cases in this research is limited due to limitation to premenopausal women respondent that above 40 years old. In age of 40 the bone is depleting 2-3% bone mass every year that started since step in premenopausal age and keep occur until 5-10 years after menopause. This research result almost similar to research result

**Table 2. Respondent Distribution based on Osteoporosis Knowledges in RS TK II AK GANI Work Place Palembang 2016**

Osteoporosis Knowledge	F	%
Less	62	72,9
No	23	27,1

Based on Table 2 showed that most respondent (72,9%) have less knowledge about osteoporosis.

**Table 3. Respondent Distribution based on Osteoporosis Precaution in RS TK II AK GANI Work Place Palembang 2016**

Osteoporosis Precaution	F	%
Less	36	42,4
No	49	57,6

Based on Table 3 showed that small part of respondent (57,6%) have less osteoporosis precaution.

**Table 4 Relation Between Knowledge about Osteoporosis with Osteoporosis Cases in Premenopause Women in RS TK II AK GANI Palembang Work Place 2016**

Knowledge about Osteoporosis	Osteoporosis Cases				Total	
	Osteoporosis		Non Osteoporosis			
	F	%	f	%	F	%
Less	49	79,0	13	21,0	62	100
Well	2	8,7	21	91,3	23	100
Total	51	60	34	40	85	100

Based on table 4 showed that osteoporosis cases has higher presentages to respondent than with less of osteoporosis knowledge (79,0%) than well knowledge of osteoporosis (8,7%). Statistic test result between osteoporosis knowledge with osteoporosis cases get  $p > 0,000$  it means that there is a significant relation between osteoporosis knowledge with osteoporosis cases.

This research result found proportion until (72,9%) respondent that has less osteoporosis knowledge. This proportion almost similar to Nanda research (2010) to productive women in Kecamatan Banyumanik Semarang that found out (53,8%) less of osteoporosis knowledge.

This result showed that most of the respondent gave less precise answer to osteoporosis knowledge questions, like about bone loss, behaviour that quicken osteoporosis, how long to do sun bath to make bone stronger, drinks that caused osteoporosis, dan vitamint needed to form bone. Statistically there is a significant relation between osteoporosis knowledge with osteoporosis cases ( $p > 0,00$ ) it means that there is a significant relation between osteoporosis knowledge with osteoporosis cases.

Ashar (2008) in his research about the effect of knowledge and elderly precaution to osteoporosis showed that there is a significant relation between osteoporosis knowledge with osteoporosis precaution. The elderly that has less knowledge about osteoporosis and precaution to osteoporosis has higher risk to suffer osteoporosis, by increase the knowledge about osteoporosis also can prevent osteoporosis.

This research result match to the exist theory because high of knowledge also followed by highly attitude and behaviour. On the other words, can be conclude that osteoporosis precaution has a solid relation with osteoporosis case so well of knowledge about osteoporosis does not bring positive impact to osteoporosis case to premenopause women.



**Table 5 Relation Between Osteoporosis Precaution with Osteoporosis Cases in Premenopouse Women in RS TK II AK GANI Palembang Work Place 2016**

Osteoporosis Precaution	Osteoporosis Cases				Total	
	Osteoporosis		Non Osteoporosis		F	%
	f	%	f	%		
Less	36	100	0	0	36	100
Well	15	30,6	34	69,4	49	100
Total	51		34		85	100

Based on table 5 showed that osteoporosis cases has high presentage to the respondent with less (100%) osteoporosis precaution than with well of osteoporosis knowledge (30,6%). Statistic test result between osteoporosis precaution with osteoporosis cases get  $p > 0,000$  it means that there is a significant relation between osteoporosis precaution with osteoporosis cases.

This research result found proportion until (42,4%) respondent that has less osteoporosis precaution. This research result also showed that only half of respondent (15,2%) consume high calsiium milk and not consume calsiium supplement. This proportion has different result with Anas research (2010) that found (22,7%) respondent consume high calsiium milk and (13,2%) respondent consume calsiium supplement. This difference is caused by different sample charateristic, in this research with premenopouse women, and Karoline research with elderly as the sample.

Statically there is a significant relation between osteoporosis precaution with osteoporosis cases ( $p > 0,00$ ) it means that osteoporosis precaution has solid relation with osteoporosis cases.

Osteoporosis precaution better be applied since still in womb. Precaution is more important than medication. The most important thing is to consider that osteoporosis threatening mostly women. Some of osteoporosis precaution that we can do is consuming enough calsiium intake.

Defend or increase the bone mass density can be done by consuming calsiium everyday. Drink 2 glass of milk and additional vitamin D everyday, can increase women bone mass density that have not get enough calsiium. Consuming enough calsiium is effective, mostly before reach bone mass maximum ( around age 30). Daily food better contain calsiium, like anchovy, broccoli, tempe, tofu, cheese, and beans.

Sunlight especially UVB can help body to produce vitamin D that needed by body in the process forming bone mass density. 30 minutes of sun bathing under the sunlight before 9 AM and in evening after 4 PM. And then do exercises, avoid alcohol, smoking, coffee, soda drinks, and red meat can give significant effect in reducing osteoporosis risk.

**CONCLUSION**

Almost half of the respondent suffering osteoporosis. Mostly the respondent that has less osteoporosis knowledge. Little part of the respondent that has less osteoporosis precaution. There is a significant relation between osteoporosis knowledge with osteoporosis cases tp premenopouse women. There is a significant relation between osteoporosis precaution with osteoporosis cases to premenopouse women.

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# BEHAVIOR ANALYSIS ON MOTHERS WITH HIV AIDS IN PREVENTING PERINATAL TRANSMISSION RISK IN TANGERANG, BANTEN

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## ABSTRACT

HIV transmission from mothers to children can occur during gestation period, birthing, as well as breast feeding period. Transmissions are mostly occurred in perinatal period, reaching 50-60% cases. The aim of this research was to analyze mothers with HIV Aids' behavior in preventing perinatal transmission risk in Kotex Mandiri Foundation, Tangerang. This research was *mix method* with research design of *case control*. The research samples were 35 mothers with HIV Aids who joined PMTCT. The informants for qualitative research were pregnant mothers with HIV Aids, coordinator of Kotex Mandiri Foundation, the husbands, priests, and doctors. The data collection techniques were questionnaire and in-depth interview. Quantitative data analysis used statistical test of *Chi Square*. The qualitative data was processed by triangulation and analyzed by using content analysis. Research results showed that *Predisposing* factors: good behavior of mothers with HIV Aids reached 57,1%. Good knowledge of mothers with HIV Aids reached 68,6%. Good attitude of mothers with HIV Aids reached 60%. Based on *Reinforcing* factors of mothers with HIV Aids: Good support from family reached 88,6%. Less support of society reached 91,4%. The result of statistic test showed that there was a significant relationship between birthing records and the mothers' behavior ( $p=0,001$ ). It is hoped that health officers and health service can support mothers with HIV Aids so that they can pass the pregnancy and birthing periods healthily and safely. It is also hoped that there is a special program for mothers with HIV Aids which is monitored and evaluated regularly.

**Key words:** HIV AIDS, Behaviour, Perinatal Transmission

## INTRODUCTION

Based on the data of Ministry of Health, in 2012 there were 21.511 cases of HIV and 5.686 people living with AIDS. Based on the percentage of AIDS cases, one of the risk factors was perinatal transmission (2,7 %) 1.506 people. Department of Health, 2012.

Prevention of Mother to Child HIV transmission was one of the efforts in solving HIV and AIDS which was integrated with mother and child health service in health service center. Minister of Health Policy of Republic Indonesia Number 51 2013.

Mother to child HIV transmission, perinatal transmission, and HIV/AIDS virus pathophysiology, mother to baby transmission. HIV transmission from mother to child might occur in gestation period, childbirth, or breastfeeding. Transmission cases were mostly occurred in perinatal period as many as 50-65% cases.

According to Hadi Irwan, Program and Advocacy Division of AIDS Prevention Commission (KPA), Tangerang 2015, said that up to the moment, there were 34 children with AIDS in Tangerang since 2012. On average there were one to two infants were infected HIV in Tangerang. HIV AIDS Tangerang, 2016.

More than 90% of HIV-infected infants cases were transmitted from mother to child or *Mother To Child Hiv Transmission* (MTCT). Factors influencing PMTCT were: 1) infant factor: prematurity, fetus nutrition, digestive system, and immunity response. 2) mother factor: antepartum, intrapartum, breast milk. Factors influencing the transmission were mother's behavior toward knowledge, attitude, education, occupation, age, parity, health facilities, healthy behavior, infrastructure, and family support, community support, and health workers support. The impacts of HIV toward mother were: social paradigm, discrimination, morbidity and maternal mortality. Based on the description, the researcher wanted to

analyze the behavior of PLWHA (People Living with HIV AIDS) mothers in preventing perinatal transmission risk in Kotek Mandiri Foundation.

## RESEARCH METHODS

This research was conducted in Kotek Mandiri Foundation, Tangerang in Februari 2016. It was a quantitative design research with case control approach, added by qualitative design to complete the data, through in-depth interview toward the quantitative data results. Sample of this research were PLWHA mothers who included in PMTCT as many as 35 mothers with accidental sampling technique.

## RESULTS AND DISCUSSION

**Table 1: the characteristic**

Variables	N	%
<b>Behavior</b>		
Less good	15	42,9
Good	20	57,1
<b>Knowledge</b>		
Less	11	31,4
Good	24	68,6
<b>Attitude</b>		
Less	14	40
Good	21	60
<b>Education</b>		
High	13	37,1
Low	22	62,9
<b>Occupation</b>		
Not working	33	94,3
Working	2	5,7
<b>Age</b>		
> 35 years old	11	31,4
20-35 years old	24	68,6
<b>Parity</b>		
Multi	20	57,1
Primary	15	42,9
<b>Health Facility</b>		
No	4	11,4
Yes	31	88,6
<b>Pregnancy Check Up</b>		
Not complete	7	20
Complete	28	80
<b>Infrastructure</b>		
No	11	31,4
Yes	24	68,6
<b>Family Support</b>		
Less	31	88,6
Good	4	11,4
<b>Community Support</b>		
Less	32	91,4
Good	3	8,6
<b>Health Workers Support</b>		
Less	8	22,9
Good	27	77,1

**Table 2. Relationship between Parity and PLWHA mothers behavior**

Parity	Mothers behavior				Total	OR (95% CI)	P
	Less N	Good %	Less N	Good %			
Multi	13	65	7	35	20	100	
Primary	2	13,3	13	86,7	15	100	12,071 0,001
Total	15		20		35		

Based on the table analysis of relationship between parity and mother behavior, the result of statistical analysis was  $p=0,001$ , therefore it could be concluded that there was significant relationship between parity and mother behavior. The value of OR was 12,071 which meant that with multipara parity, there was 12,071 times of chance to misbehave.

### Attitude of PLWHA Mother

The answer of informants (PLWHA mothers) regarding the risk prevention of perinatal transmission behaviors included the use of condoms, drinking ARVs regularly, HIV testing, unplanned pregnancy, and support for PLWHA.

According to the informants, the answers indicated that the behavior of the PLWHA mothers on the risk prevention of perinatal transmission were, among others, complete check up to health service, the use of contraceptives, following the prevention programs of HIV positive mother to her baby, ARV therapy on a regular basis, did not breastfeed their babies, childbirth by SC and prophylaxis in newborns.

### Knowledge of PLWHA mothers

The answers of the informants (PLWHA mothers) about their knowledge on preventing perinatal transmission risk were, among others, knowing about HIV, childbirth by SC, using condom, following counseling, taking ARV on a regular basis, unplanned pregnancy, and support for PLWHA

According to the coordinator, the answers showed that the PLWHA mothers' knowledge toward perinatal transmission

risk prevention were, among others, knowing the ways to prevent transmission to the baby, HIV testing, ARV therapy on a regular basis, do not breastfeed the baby, childbirth by SC, and prophylaxis in newborns.

#### **Attitude/ opinion of PLWHA mothers**

The answers of the informants (PLWHA mothers) about their attitude toward perinatal transmission risk prevention were, among others, HIV transmission was not easy, using condom, transmission by injection, transmission by free sex, transmission by breastfeeding. According to the informant (coordinator) the answers showed that the attitude of PLWHA mothers toward perinatal transmission risk prevention were, among others, knowing the way to prevent HIV, using condom, being loyal with sex-partner, HIV testing, ARV therapy on a regular basis, do not breastfeed the baby, and childbirth by SC.

#### **Family support and behavior toward PLWHA mothers.**

The answers of the informants (PLWHA mothers) about family support toward perinatal transmission risk prevention were, among others, husband support, driving to health service, and family support.

According to informants (husband of PLWHA mother) the answers showed that the support of family toward PLWHA mothers were supporting mother to health service, driving mother to health service, and supporting to counseling service.

#### **Community Support, Community Behavior in Treating PLWHA Mother**

The answers of the informants (PLWHA mother) about community support on preventing perinatal transmission risk were, among others, they were left aside, there was no community support, no one knew about their condition in the living area.

According to the informants (husband of PLWHA mothers), the answers showed that community support in perinatal transmission risk prevention were, among other, they

were left aside, no one knew, discrimination, there was only support from husband.

According to informants (religious leaders), the answers showed that community support in perinatal transmission risk prevention were, among other, did not know that there was PLWHA mother in the area, there was no report from the community.

#### **Health Workers Support, Community Behavior in Treating PLWHA mothers**

The answers of informants (PLWHA mothers), about health workers support in perinatal transmission risk prevention were, among other, getting counseling from doctor, using contraceptive, and taking ARV in clinics.

According to informant (doctor) the answers showed that health workers support in perinatal transmission risk prevention was, among other, collaboration with KIA and childbirth division, supporting PMTCT program.

#### **PLWHA Mothers Behavior**

Based on in-depth interview of all informant about PLWHA mother behavior toward perinatal transmission risk prevention, it had been suitable with the guidance from Ministry of Health Republic Indonesia, 2011, about HIV prevention which included not doing sex before or out of marriage, loyal with sex-partner, use of condom, not using prohibited drugs and injection needle (mentioned in the questionnaire, see appendix) . It was also suitable with the information from the coordinator.

#### **Knowledge of PLWHA mothers**

Based on the results of in-depth interview of all informants about PLWHA mother knowledge of perinatal transmission risk prevention, it was known that 4 of 5 PLWHA mothers had good knowledge. While 1 mother was actually had good knowledge but misbehaved because she did normal childbirth.

Analysis results of in-depth interview toward PLWHA mothers and the



coordinator, showed that there were PLWHA mothers with good knowledge but misbehave. It was due to physiological factor in childbirth process which was unpredictable. Not in line with the guidance of Ministry of Health Republic Indonesia, 2011, about HIV prevention, which involved the ways to prevent mother to child transmission, general knowledge about HIV AIDS transmission (mentioned in the questionnaire, see appendix).

### **Attitude of PLWHA mothers**

Based on the results of in-depth interview of all informants about PLWHA mother attitude toward perinatal transmission risk prevention, there were 4 of 5 PLWHA mothers who had good attitude. While, 1 PLWHA mother had good attitude but the behavior was not good because she gave breastmilk to the baby. Based on the results of in-depth interview to PLWHA mothers and coordinator, there were PLWHA mothers who had good attitude but the behavior was not good. It was because individual factor who did not know that HIV AIDS could be transmitted through breastfeeding.

Not in line with the guidance from Ministry of Health Republic Indonesia, 2011, about HIV prevention which involved the ways to prevent mother to child HIV transmission, general knowledge about HIV AIDS prevention.

### **Family support, family behavior in treating PLWHA mothers**

Based on the result of in-depth interview of all informants about family support of PLWHA mothers toward perinatal transmission risk prevention showed that the mothers only got support from the husband, and they tended to hide the fact about their condition. Analysis results of in-depth interview with PLWHA mothers and the husbands, the mothers said they only got the support from the husbands because they hide the fact about their condition from family. Not in line with Ministry of Health (2010), the attitude and behavior formation in family

environment were influenced by: 1.) Environmental factor: a.) geographical condition, weather, water availability, and so on. b.) Biological environment, animals and other living creatures. c.) Physical environment created by human being. 2.) Other factors: a.) family type and structure, family size, relationship within family, and so on b.) The properties of biological and offspring traits of each member, the state of nutrition, physical and mental health. c.) The pattern of culture, family dynamics, roles and attitudes and the ability of the family. d.) The rate / family social status, system of values / norms, kind of job and family income, social customs, and health education.

### **Community support in treating PLWHA mothers**

The results of in-depth interviews of all informants about community support toward PLWHA mothers in perinatal transmission risk prevention, the whole PLWHA mothers said there was no community support. The results of the analysis of in-depth interviews with PLWHA mother and husband said there was no community support around. Neither the religious leader said not knowing that there was PLWHA mother in the area because of a couple of factors such as PLWHA do not tell anyone about the disease. Not in accordance with the opinion of (Abdul Yani, 2002), Musliha, Karim. 2008

### **Health Workers Support Community Support in Treating PLWHA Mothers.**

In-depth interviews of all informants about health workers support toward PLWHA mothers in perinatal transmission risk prevention, the whole PLWHA mothers said there was support of health workers. The results of the analysis of in-depth interviews with PLWHA mothers and doctors said there was support from health workers. As for the support of health workers in the form of wellness counseling, contraception and many matters relating to HIV / AIDS. In accordance with the opinion of Jacobson (in Orford, 1992) social support meant a form of behavior that fostered a feeling of comfort and made people believed that the individual

was respected, appreciated, loved, and that others were willing to pay attention and safety. PLWHA entitled healthier, 2015

The role of health workers in the psychology of change and adaptation was to give support or moral support for its clients, assuring that the client might face the pregnancy and changes she experienced were something normal. Health workers should work together and build a good relationship with clients in order to create an open relationship among health care workers with clients.

### **Relationship of Parity and PLWHA Mothers Behavior**

Respondents with multipara parity as many as 20 respondents, with details of 13 respondents (65%) who misbehaved. From the result of the respondent, there were still many PLWHA mothers that had less good behavior mother with children over 2. Prong 3: Prevention of HIV transmission from HIV Positive pregnant women to their fetuses, in this case the PLWHA mother needed space of pregnancy because it would produce the next generation which were less compassion than both parents.

### **CONCLUSION**

Based on PLWHA mother predisposing factors: the participation PLWHA Mother Behavior in preventing transmission to infants according to four prongs tended to behave well, knowledge of PLWHA in the prevention of mother to child transmission risk tended good knowledge, attitude of PLWHA mothers in the prevention of mother to child transmission risk tended to be good.

Based on PLWHA mothers reinforcing factors: Family Support in treating PLWHA mothers tended to do poorly, Community support in treating PLWHA mothers tended to be less good. Health workers support in treating PLWHA mothers tended to be good.

The service of HIV Transmission prevention of Mother to Child was integrated with

mother and child health care and family planning services at every level of health care. To prevent the transmission of HIV from mother to child, a comprehensive prevention program was implemented. If the program could run with guidelines of HIV transmission prevention from mother to baby, the number of Perinatal Transmission would decrease. Researchers found all newborns were given 40 days provilaksis, taking ARVs and antibiotics for 6 months and while their mothers took the drug twice a day.

The linkage of health institutions was essential to assist the prevention of HIV transmission from mother to baby with the proper procedure. Besides, a special program for PLWHA pregnant women with was monitored and evaluated was really needed so that the pregnant women were supervised by health workers.

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## FACTORS ASSOCIATED WITH FREQUENCY OF ANC VISITS IN 2016

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### ABSTRACT

Antenatal Care is a program that is planned in the form of observation, education and medical treatment to pregnant women, to get the safe and satisfactory process of pregnancy and childbirth. According to the WHO, mortality occurs during pregnancy, delivery, and within 42 days after delivery with the causes that relate directly or indirectly from pregnancy or childbirth. The purpose of this study was to determine the relationship between education, employment, socio-economic, age, and parity and the frequency of ANC visits in Budi Mulia Medika Clinic of Palembang Year 2016. This was an analytic survey with cross sectional approach. The population in this study was all TM III pregnant women who visited ANC (V4) in the study site totaling 35 respondents. Sampling in this study was taken with non-random method with accidental sampling technique. Each of these variables studied were analyzed using Chi-Square analysis  $\alpha$  (0.05). From the Chi-Square statistical test, there was a relationship between all variables studied and ANC visits. The researchers suggest that all mothers should have efforts of early health and pregnancy counseling and that health facilities should improve the quality of health services in order to increase interest in ANC.

**Key Words: Frequency Antenatal Visit**

### INTRODUCTION

Based on the 2012 Indonesian Demographic and Health Survey, the maternal mortality rate (MMR) increased from 228 thousand deaths per 100 thousand live births in 2007 to 359 per 100 thousand live births in 2012. The 2013 IDHS of South Sumatra reported that the coverage of pregnant mother visit in Indonesia in 2013 amounted to 85.83%. Of the 33 provinces in Indonesia, only 12 provinces (36.4%) have reached the target. South Sumatra province is one of the provinces that has not reached the target of the strategic plan with the coverage of pregnant women V4 amounted to 89.61%.

The direct cause of death has been known as the Triassic Classic since 2012, namely bleeding (28%), eclampsia (24%) and infections (11%). Indirect causes include illness or other complications present before pregnancy, such as hypertension, heart disease, diabetes, hepatitis, anemia, and malaria. The cause could be prevented with adequate antenatal care (Maryunani, 2013). Antenatal care aims to monitor the progress of the pregnancy, ensuring the welfare of the mother and fetal development. It improves and maintains physical, mental, and social

being of both the mother and baby, detect early problems/disorders and possible complications that occur during pregnancy, and prepare for safe pregnancy and childbirth for both the mother and baby with a minimum of trauma, prepare women to postpartum period and exclusive breastfeeding to run normally, and prepare the mother and family that may play a role in maintaining the baby to grow and develop normally.

Based on data from the Medical Record in Budi Mulia Medika Clinic of Palembang, the number of pregnant women who did checkups in the year 2013, 2014, and 2015 was 511, 480, and 435 women respectively. From these data, it can be seen that there is a decline in the numbers of antenatal care annually.

Given the importance of antenatal care as preventing potential problems/complications that may threaten the safety of the mother and the fetus, the researchers were interested in examining the factors associated with the inspection of Antenatal Care (ANC)

## RESEARCH METHOD

This was an analytical survey with a cross sectional approach to study the dynamics of the correlation between risk factors and effects, with the approach, observation or data collection at once at a time. In this study, the dependent variable was antenatal care and the independent variables were education, occupation, socioeconomic level, maternal age and parity collected at the same time.

The population in this study was all pregnant women who came for antenatal care at Budi Mulia Clinic Medika of Palembang. The sample in this study was partially the third trimester pregnant women who came to visit the clinic totaling 35 respondents. The analysis used bivariate using chi-square test with confidence interval 95% of significance ( $\alpha$ ) = 0.05.

## RESULTS AND DISCUSSION

Below is the result of this research

**Table 1**  
**Frequency Distribution of Respondent by Frequency of ANC Visit**

ANC Visits	f	%
Standard	21	60
No Standard	14	40
total	35	100

From Table 1, 21 respondents (60.0%) showed ANC visit standard while 14 respondents (40.0%) did not.

**Table 2**  
**Frequency Distribution of Respondents based on maternal Education**

Maternal education	f	%
High	19	54,3
Low	16	45,7
Total	35	100

From Table 2, 19 respondents (54.3%) had a high level of education and 16 respondents (45,7%) had a low level of education.

**Table 3**  
**Frequency Distribution of Respondents by Maternal Occupation**

Maternal Occupation	f	%
Yes	16	45,7
No	19	54,3
Total	35	100

From Table 3, 16 respondents (45,7%) were employed and 19 respondents (54,3%) were unemployed.

**Table 4**  
**Frequency Distribution of Respondents by Frequency of Socio-Economic With ANC Visits**

Socio-economy	f	%
High	19	54,3
Low	16	45,7
Total	35	100

From Table 4 di, 19 respondents (54,3%) had a high level of socio-economy and 16 respondents (45,7%) had a low level of socio-economy.

**Table 5**  
**Frequency Distribution of Respondents by Age**

Age	f	%
High risk	16	45,7
Low risk	19	54,3
total	35	100

From table 5, 16 respondents (45,7%) were at a high risk of age and 16 respondents (54,3%) were at a low risk of age.

**Table 6** **Frequency Distribution of Respondents Budi Mulia Medika Clinic of Palembang in 2016**

Paritas	f	%
High	16	45,7
Low	19	54,3
Total	35	100

From Table 6, 16 respondents (45,7%) had a high parity and 19 respondents (54,3%) had a low parity.

**Table 7**  
**Relationship between Maternal Education and ANC Visits**

Education	ANC Visit						p value
	Standard		No Standard		Total		
	F	%	F	%	N	%	
High	16	76,2	3	21,4	19	100	0,23
Low	5	23,8	11	78,6	16	100	
Total	21	-	14	-	35	-	

Based on Table 7, of 19 respondents with a high level of education, 76,2% had ANC visit standard while 21,4% did not. Of 16 respondents with a low level of education, 23,8% had ANC visit standard while 78,6% did not.

Based on chi-square test, this study obtained a *p value* of (0,023) which was  $< \alpha$  of (0,05), meaning that there was a relationship between maternal education and ANC visits statistically in this study.

**Table 8**  
**Relationship between Maternal Occupation and ANC Visit**

Occupation	ANC Visit						p value
	Standard		No Standard		Total		
	f	%	f	%	N	%	
Yes	13	61,9	3	21,4	19	100	0,023
No	8	38,1	11	78,6	16	100	
Total	21	-	14	-	35	100	

Based on Table 8, of 19 respondents who worked, 61,9% had ANC visit standard while 21,4% did not. Of 16 respondents who did not work, 38,1% had ANC visit standard while 78,6% did not.

Based on chi-square test, the obtained *p value* was (0,023) which was  $< \alpha$  of (0,05) meaning there was a relationship between

maternal education and ANC visit statistically in this study.

**Table 9 Relationship between Socio-economy and ANC Visit**

Socio-economy	ANC Visit				Total		p value
	Standard		No Standard		N	%	
	F	%	F	%			
High	12	54,1	10	71,4	19	100	0,041
Low	9	42,9	4	28,6	16	100	
Total	21	-	14	-	35	-	

According to Table 9, of the 19 respondents with high socioeconomic standards, 54.1% had ANC visit standard and 71.4% did not. Of the 16 respondents with low socioeconomic standard, 42.9% had ANC visit standard while 28.6% did not.

Based on the results Chi-Square test, the *p value* obtained (0.041)  $< \alpha = (0.05)$  so that there was a relationship between socioeconomic and ANC visits in this study statistically.

**Table 10**  
**Relationship between Maternal Age and ANC Visit**

Age	ANC Visit				Total		p value
	Standard		No Standard		N	%	
	F	%	F	%			
High risk	14	66,7	2	14,3	16	100	0,023
Low risk	7	33,3	12	85,7	19	100	
Total	21	-	14	-	35	-	

According to Table 10, of the 16 respondents with high risk of age, 66.7% had ANC visit standard while 14.3% did not. Of the 19 respondents with lower risk of age, 33.3% had ANC visit standard while 85.7% did not.

Based on the results of Chi-Square test, the *p value* obtained (0.023)  $< \alpha = (0.05)$  so that there was a relationship between maternal age and ANC visits in this study statistically.

**Table 11**  
**Relationship between Parity and ANC Visit**

Parity	ANC Visit				Total		p value
	Standard		No Standard		F	%	
High	14	66,7	2	14,3	16	100	<b>0,015</b>
Low	7	33,3	12	85,7	19	100	
Total	21	-	14	-	35	-	

According to Table 11, of the 16 respondents with high parity, 66.7% had ANC visit standard while 14.3% did not. Of the 19 respondents with low parity, 33.3% had ANC visit standard while 85.7% did not.

Based on the results of Chi-Square test, the p value obtained (0.015)  $< \alpha = (0.05)$  so that there was a relationship between parity and ANC visits in this study statistically.

#### ANC Visit

This study was conducted on 35 pregnant women respondents and the results of univariate analysis showed that the standardized respondents were by 21 respondents (60.0%) greater than the not standardized respondents by 14 respondents (40, 0%).

#### Relationship between Maternal Education and ANC Visit

The results of the univariate analysis showed that the respondents with higher education were 19 respondents (54.3%) and with lower education were 16 respondents (45.7%). Based on the results of Chi-Square test, the obtained p value was (0.023) which was  $< \alpha = (0.05)$  so that there was a relationship between maternal education and the ANC visits in this study statistically. The results were consistent with a study by Aryeni which showed the Chi-Square test results with the value of p value = 0.005 smaller than  $\alpha = 0.05$ .

Based on the theory of Sulistyawati (2009), the level of maternal education is instrumental in the quality of care of her baby. Information related to antenatal care is needed, so that this will increase her knowledge. In pregnant women with low

levels of education, sometimes when they do not get enough information about their health, they do not know about how to get good antenatal care.

Based on the results of research, higher education respondents amounted to 54.3%. Women with higher education would have more routine antenatal care visits for education influences the mindset and ability to absorb information on checking their pregnancy while the respondents with low education will rarely do checkups because they do not have knowledge about the importance of antenatal care visits during pregnancy.

#### Relationship between Maternal Occupation and ANC Visit

Based on the results of the univariate analysis, 16 respondents (45.7%) worked, while 19 respondents (54.3%) did not work.

Based on the results of Chi-Square test, this study obtained p value = (0.023)  $< \alpha = (0.05)$  so that there was a relationship between maternal occupation and ANC visits in this study statistically.

Based on the theory of Rocha (2012), a pregnant woman is getting busy with work so that the opportunity for antenatal care is getting smaller and the chances for checkups will tend to decline. Factors that cause this is the education factor.

Based on the results of the study, 45.7% of respondents who worked would be busy with work so that they did not have the opportunity to antenatal, while the respondents who did not work by 54.3% would have more opportunities to have routine and regular antenatal visits.

#### Relationship between Socio-economy and ANC Visit

The results of the univariate analysis showed that the respondents with high socioeconomic status were by 19 respondents (54.3%), while the respondents with low socioeconomic status were by 16 respondents (45.7%).



Based on the results of Chi-Square test, the p value obtained (0.041) which was less than  $\alpha = (0.05)$  so that there was a relationship between socioeconomic status and ANC visit in this study statistically.

Based on the theory of Sulistyawati (2009), socio-economic level proves to be very influential on the physical and psychological health of pregnant women. In pregnant women with good socioeconomic level, automatically they will get to perform the physical and psychological well too. They will be more focused to prepare physically and mentally as a mother. While in pregnant women with weak economic conditions, they have already faced with a lot of financial trouble, especially the problem of meeting the primary needs.

Based on the results of the study, the respondents with higher socioeconomic level would be able to do checkups regularly and plan the delivery process as much as possible while the respondents with low socioeconomic would have a lot of difficulties, especially problems to meet their primary needs so that they would rarely visit antenatal care.

#### **Relationship between Maternal Age and ANC Visit**

Based on the results of univariate analysis, the respondents with higher risk of age were 16 respondents (45.7%), while respondents with lower risk of age were 19 respondents (54.3%).

Based on the results Chi-Square test, this study obtained p value of (0.023)  $<\alpha = (0.05)$  so that there was a relationship between maternal age and ANC visits in this study statistically.

Based on the theory of Marmi (2011), age is a determining factor in the process of pregnancy. At the age of 20-35, women will tend to have ANC visits more regularly because they feel that antenatal care is very important. In contrast, those aged less than 20 years tend not fully understand the importance of antenatal visits regularly while those aged more than 35 years tend to be indifferent to the antenatal visits because

they feel they have had a good experience. In fact, both age groups should have routine antenatal to meet healthcare provider because of a high risk of pregnancy and childbirth. Age is useful to anticipate the diagnosis of health problems and the actions taken.

Based on the results of the study, the respondents aged with high risk were 45.7% due to the high risk of maternal age more than 35 years assuming that the pregnancy would be fine due to their previous experience; therefore, the mothers felt lazy to visit antenatal care. For maternal high-risk age less than 20 years, they were likely to not fully understand the importance of regular antenatal visits. Mother with lower age risk (54.3%) would be routinely tested in the pregnancy because they were very worried about the state of their selves and fetus' and they had not had a lot of knowledge and experience about the dangers of pregnancy complications.

#### **Relationship between Parity and ANC Visit**

The results of the univariate analysis showed that 16 respondents (45.7%) had high parity, while 19 respondents (54.3%) had low parity.

Based on the results of Chi-Square test, this study obtained p value of (0.015)  $<\alpha = (0.05)$  so that there was a relationship between parity and the ANC visits in this study statistically.

Based on the theory of Rasmini (2012), Parity is the status of a woman in connection with the number of children ever born. In parity more than 3, a woman has felt that she has experienced in pregnancy and childbirth, so she is not too worried anymore as during previous pregnancies. While mothers with parity 2-3, antenatal is an obligation for each pregnancy, not just on certain pregnancy so that the antenatal visits should be done regularly. It can readily detect problems during pregnancy.

Based on the research results, high parity respondents thought that they already had a



lot of experience regarding antenatal care so that the mothers would no longer need for checkups again while the respondents with lower parity would do more frequent antenatal visits because of the lack of experience regarding the danger of complications during pregnancy and the service provided could satisfy the mothers, such as counseling given in accordance with perceived complaints.

## CONCLUSION

Based on the analysis and discussion, It can be concluded that there was a relationship between maternal education, occupation, socioeconomic level, age, and parity and ANC visits in this study statistically.

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# THE EFFECT OF TURMERIC (*CURCUMA LONGA*) ON DYSMENORRHEA

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## ABSTRACT

**Background:** Primary menstrual pain is painful menstruation without abnormalities of the reproductive organs or with no gynecological disorders. The incidence of menstrual pain in the world is very large. On average over 50% of women in every country experiencing menstrual pain. In the United States the percentage figure of about 60% and about 72% in Sweden. While in Indonesia estimated 55% of women of childbearing age are tormented by painful menstruation.

**Objective:** To analyze the effect of turmeric juice drink against menstrual pain (disminore) primer on teenagers

**Method:** Pre experiment one group pre and post test design. The study population were all grade 1 and 2 as many as 293. The number of samples 30. The sampling technique used purposive sampling. Collecting data using questionnaires and observation sheets. Analysis by Wilcoxon Signed Ranks ( $p = 0.05$ ). **Results:** 30 minutes after giving turmeric juice drinks category most menstrual pain is not pain as much as 83.4%, mild pain as much as 13.3% and moderate pain as much as one 3.3%. Wilcoxon Test results Sgined Rank is there 30 minutes after giving effect drink the juice of turmeric against menstrual pain (disimonore) primer on teenage girls.

**Key words:** Tumeric effect, dysmenorhea

## INTRODUCTION

At the time of menstruation, there are some women who experience a variety of menstrual disorders from mild, moderate to fairly heavy. For example there are some who experience cramps due to contraction of the smooth muscles of the uterus, headache, abdominal pain, feeling weak until the painfull. (Anurogo & Wulandari, 2011). Excessive pain in the lower abdomen often occur during menstruation is called dysmenorrhea.

Dysmenorrhoea is divided into two, namely, primary dysmenorrhoea and secondary dysmenorrhoea. Primary dysmenorrhoea absence of a relationship with gynecological abnormalities, while secondary dysmenorrhoea caused by gynecological disorders (Purwaningsih & Fatmawati, 2010).

A section of women who have the primary dysmenorrhoea and menstrual pain relief with taking medication regularly. The use of pharmacological drugs cause side effects such as gastric disorders, anemia, and even worse is the mental impact of psychological

make sufferers suggestion and could not break away from drugs. They find that it's not experience menstrual pain then have to take medicine (Anurogo & Wulandari, 2011).

In addition to the drugs, pain can also be reduced with adequate rest, regular exercise, massage and warm compresses. In addition menstrual pain can also be treated using herbal plants such as : tapak liman, temu putih, turmeric dan sidaguri (Leli, Rahmawati & Atik, 2011). Data menurut IOT (Industri Obat Tradisional) dan IKOT (Industri Kecil Obat Tradisional), 4.187 there are 40% of people use kunyit as a treatment and 10% of people consume kunyit to relieve pain during menstruation (Ningharmanto, 2008 dalam Leli, Rahmawati & Atik, 2011).

Turmeric beverage is a beverage mixed with the main ingredient of turmeric. Naturally it is believed turmeric contains an active ingredient which can serve as analgesics, antipireutika, and anti-inflammatory.

The active compounds or chemicals contained in turmeric is curcumin (Princess, 2006). Curcumin will work to inhibit the reaction of cyclooxygenase (COX-2) thereby inhibiting or reducing the inflammation that would reduce or even inhibit uterine contractions. And curcumenol as an analgesic would inhibit excessive release of prostaglandins through the epithelial tissue of the uterus and would inhibit uterine contractions that will reduce the occurrence of dysmenorrhea (Wieser, et al,2007).

## RESEARCH METHODS

This study uses a study design with pre-experimental study design one group pre test and post test design by using one respondent groups in which the group was given treatment. The sampling technique used purposive sampling technique, namely by taking the case or the respondent accidental or available somewhere within the context of research (Notoatmodjo, 2010).

## RESULTS AND DISCUSSION

**Tabel 1**  
**Distribution Menstrual Pain Scale (dysmenorrhea) Respondents Before awarded Beverage Turmeric**

Menstrual Pain Scale	Frequency	Percentage (%)
Mild pain	26	86,7
Moderate pain	4	13,3
<b>Total</b>	<b>30</b>	<b>100</b>

Based on the results of Table 1 can be seen the results on the measurement categories menstrual pain before administration Sari Beverage Turmeric on 30 respondents. On the measurement before being given Sari Beverage Turmeric mild pain category as many as 26 respondents (86.7%), and the pain was as much as four respondents (13.3%).

**Tabel 2**  
**Distribution Menstrual Pain Scale (dysmenorrhea) Respondents after 30 minutes awarded Beverage Turmeric**

Menstrual Pain Scale	Frequency	Percentage (%)
No pain	24	80
Mild pain	5	16,7
Moderate pain	1	3,3
<b>Total</b>	<b>30</b>	<b>100</b>

Based on the results of Table 2 it can be seen the results of the measurement categories menstrual pain 30 minutes after given turmeric juice drinks in 30 respondents. In the following measurement categories given Beverage Turmeric most pain is not pain as much as 24 respondents (80%) mild pain as much as 4 respondents (16.7%) and moderate pain as much as one respondent (3.3%).

In the 30-minute measurement can be seen there is the influence of drink Turmeric against the pain scale on the respondents, it can be seen from the number of respondents who no menstrual pain, mild pain and moderate pain with no change before being given Sari Beverages Turmeric.

**Tabel 3**  
**Results Using Data Normality Shapiro Wilk**

Statistic	df	Sig.	Statistic	df	Sig.
.517	30	.000	.404	30	.000
.478	30	.000	.518	30	.000

Based on Table 3 it can be seen that the results of the Shapiro-Wilk test showed that Asymp. Sig (2 - tailed) at pretest and posttest is 0,000, so the value of Sig <0.05 means that the data obtained are not normally distributed. Therefore, the statistical test using Wilcoxon test results of the study can be summarized in the table below

**Tabel 4 Hasil Analisis Uji Wilcoxon Signed Ranks**

		N	Mean Rank	Sum of Ranks
Posttest-pretest	Negative ranks	27 <sup>a</sup>	14.00	378.00
	Positive Ranks	3 <sup>c</sup>	.00	.00
	Ties	30		
	Total			

- a. posttest < pretest
- b. posttest > pretest
- c. posttest = pretest

Based on the results of Table 4 is known from the box Ranks looks Negative Ranks 27 positive Ranks 0 and Ties 3 means 27 decreased menstrual pain, none of which have increased menstrual pain and 3 unchanged and the obtained values  $P = 0.000$  ( $P < 0.05$ ). So  $H_0$  rejected and  $H_a$  accepted that there is the effect of turmeric juice drink against menstrual pain (disminore) on SMPN 4 Banjarmasin.

On the results of measurements of menstrual pain scale (disminore) before being given a primer Beverages Turmeric Sari menstrual pain scale (disminore) is the largest primary mild pain scale as much as 26 respondents (86.7%), with very little disruption systemic symptoms, sometimes feels like a small puncture, feels like a stab deeper, enough interference is eliminated by shifting attention. From these results it can be seen that there is a before and after giving effect beverage turmeric.

This is supported by research conducted by Dannik Kumala Sari ie from 20 respondents there were 2 respondents did not experience menstrual pain, there were 17 respondents who experienced mild pain where previously there were only 7 respondents alone, and there is one respondent who experience moderate pain where before there 12 respondents and there are more respondents who experienced severe pain where before there is one person who suffered severe nyer. From these results it can be seen that there are before and after giving effect cider drink turmeric.

In granting Sari Beverage Turmeric after 30 minutes category menstrual pain most was not the pain scale of 0 to as much as 24 respondents (8%), mild pain with a scale of 1 by 3 respondents (10%), mild pain with a scale of 2 by 1 respondent (3, 3%), mild pain scale as much as one third of respondents (3.3%) and moderate pain with a scale of 6 by 1 respondent (3.3%), where before it was given turmeric juice drinks category menstrual pain is the most mild pain with a scale of 1 total 23 respondents (76.7%), mild pain with a scale of 2 by 3 respondents (10%), moderate pain with a scale of 4 cm 2 respondents (6.7%), moderate pain with a scale of 5 as one respondent (3.3%) and moderate pain with a scale of 6 by 1 respondent (3.3%).

From the results of the measurement after given Sari Beverage Turmeric percentage of the most experienced no pain, the result is very obvious change of scale before it is given juice drinks turmeric, it is appropriate in (Smith, 2003) In addition to handling pharmacologically menstrual pain can also be addressed through non pharmacological is to use warm compresses, taking analgesic drugs, regular exercise, acupuncture, and consuming herbal products have been trusted usefulness. In this case the researchers are using herbal products is an extract of turmeric.

Researchers assessed menstrual pain before being given turmeric juice drinks and then were observed for 30 minutes using a rating scale that has tiers 1-10 and turmeric given dose is 10 grams of boiled with water up to 300 ml. This is supported Syarwini Research (2013), in this study must first assess the scale of the pain experienced using a rating scale that has a level of 1-10, after these observations during 3 hours. Turmeric given doses of 10 grams. In this case the difference is only in the length of time of observation, because the length of time of observation the researchers did was 30 minutes.

It is also supported by a study Tika Wulandari (2010), found that the therapy turmeric is given to the respondents, while experiencing disimonore 1 cup drinks

turmeric ( $\pm 200$  cc) and then after 1 hour assessment at the level of menstrual pain. In a study conducted pneliti obtained from 30 respondents there were 29 respondents who experienced a change in menstrual pain scale and one respondent did not change after 30 minutes was given turmeric juice drinks.

The results of the response categories Award turmeric juice drink for 30 minutes at 30 respondents. In granting turmeric juice beverage after 30 minutes highest category menstrual pain is not pain as much as 24 respondents (80%), mild pain that is 5 respondents (16.7%) and pain were as many as one respondent (3.3). The measurement results menstrual pain scale (disminore) primer on female students before and after saffron juice beverages using the Wilcoxon test of the measurement results of the 30 respondents.

The results of the analysis before and after 30 minutes was given turmeric juice beverages obtained ( $p = 0.000$ ), it can be inferred from measurements before and after saffron juice beverages obtained results where  $p\text{-value} < \alpha$  ( $0.000 < 0.05$ ). Based on the analysis the researchers conclude that  $H_0$  rejected and  $H_a$  accepted that there is the effect of turmeric juice drink against menstrual pain (disminore) primer on SMP Negeri 4 Banjarmasin.

The uniqueness of this study is where the researchers conducted an experiment (interventions) in 30 adolescent girls who experience Disiminore and conducted observation for 30 minutes after administration of turmeric juice drinks. Juice drinks and very little given that only 150 ml and juice drink is pure mixture of turmeric without any material such as brown sugar or the other, that will cause unpleasant taste when consumed. But turmeric is very healthy and can prevent many illnesses one of them cancer. The content contained in turmeric has an active ingredient that can kill cells - cancer cells and also can relieve menstrual pain often experienced by young women. So there is no effect other than saffron in relieving menstrual pain in adolescent girls.

## CONCLUSION

Based on the research that has been conducted on 30 female students who experience menstrual pain (dysmenorrhae) primer in SMP Negeri 4 Banjarmasin, the result that is based on the result of painful menstruation (dysmenorrhae) before being given juice drinks turmeric scale menstrual pain most are mild pain as many as 26 people respondents (86.7%). Turmeric is given as much as 10 grams and then boiled in water 300 ml for 15 minutes until the water will shrink to  $\pm 150$  ml and given to respondents who experience menstrual pain in the first day or the second day.

After being given turmeric juice drinks then be observed for 30 minutes. Based on the result of painful menstruation (dysmenorrhae) after given juice drinks turmeric scale menstrual pain most are not experiencing pain as much as 24 respondents (80%) and no effect of juice drinks turmeric against menstrual pain (disminore) primer.

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# RELATIONSHIP BETWEEN THE QUALITY OF SERVICE IN MIDWIFERY WITH PATIENT SATISFACTION IN INDEPENDENT PRACTICE MIDWIFE SUGIATI SURABAYA

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## ABSTRACT

Midwifery service standards can be used as a parameter in assessing the level of quality and success of the care provided midwife. and can be used as a basis for assessing the service. Patient satisfaction is the first indicator of the standard of health care and a measure of quality of care. The purpose of the research is to analyze the relationship between the quality of obstetric care with patient satisfaction in Independent Practice Midwife Sugiati Surabaya.

The research design was descriptive correlation with cross sectional approach. Sampling using incidental sampling of outpatient and inpatient in January 2016, as many as 30 respondents to the questionnaire and data analysis techniques using Chi-Square of the significance level of 0.05.

The results showed that the quality of midwifery services at independent midwife practice Sugiati Surabaya is good (96.7%) and 70% of patients say satisfied with the services provided. From the Chi-Square test results obtained p-value of 0.001 which states there is a significant relationship between the quality of obstetric care with patient satisfaction.

The conclusion of this study indicate that the quality of midwifery services in terms of readiness, effectiveness, respect / care, security and punctuality are mostly good, patient satisfaction in terms of direct evidence, responsiveness, empathy, price and communication are satisfied, and there a significant relationship between the quality of obstetric care with patient satisfaction in independent midwife practice Sugiati Surabaya

**Keywords:** *quality of obstetric care, patient satisfaction*

## INTRODUCTION

Efforts are underway to reduce mortality and morbidity of mothers and children is by expanding the coverage of antenatal care (ANC) through prenatal care, improving quality and maintaining the continuity of maternal and perinatal health services at the level of basic services and primary referral service. Midwifery service standards can be used as a parameter in assessing the level of quality and success of the care provided of midwives and can be used as a basis for assessing the service (the standard used to judge the validity of results of operations, economic effectiveness and the level of satisfaction of a person to the activity). (Syafudin, et al, 2011: 95).

The first indicator of the standard of health care and is a measure of the quality of service is the satisfaction of patients, to assess the level of patient satisfaction with

the quality of health services required indicators that are relevant, valid and reliable so that aspect that really affects the level of patient satisfaction can truly represented.

According to Parasuraman in Wijono (1999) there are five factors to measure patient satisfaction, namely; direct evidence, reliability, responsiveness, assurance, empathy.

Patients who are satisfied is a very valuable asset, because if patients are satisfied they will continue to use the services of his choice, but if patients are not satisfied they will tell two times more powerful to others about bad experiences. Therefore, midwife should be concerned with the factors that influence the patient satisfaction, because if midwife are able to apply factors such satisfaction to the patient, then the patient must be satisfied with the services provided to him.

One indicator of the size of the service quality is patient satisfaction, therefore researchers interested in studying about "The Relationship Between Quality of Obstetric Care With Patient Satisfaction in Independent Practice Midwife Sugiati Surabaya".

Formulation of the problem is, whether there is a relationship between the quality of obstetric care with patient satisfaction in Independent Practice Midwife Sugiati Surabaya?.

The purpose of research is 1) to identify the quality of obstetric care in terms of readiness, effectiveness, respect / care, safety and timeliness, 2) identify patient satisfaction in terms of direct evidence, responsiveness, empathy, price and communication, 3) to analyze the relationship between the quality of service obstetrics with patient satisfaction.

## RESEARCH METHOD

The study design was descriptive correlational research, with cross sectional approach. The population is all patients either outpatient or inpatient get maternity care Midwife Practice Sugiati Mandiri Surabaya in January 2016 as many as 30 respondents using incidental sampling technique. Data collected by researchers using research instruments (Suyanto and Salama, 2008).

To determine the relationship between the quality of obstetric care with patient satisfaction used testing using Chi-square test with a significance level of 0.05

## RESULTS AND DISCUSSION

Table 1.

Frequency Distribution Quality of midwifery services

Service Quality	f	%
Good	29	96,7
Enough	1	3,3
Less	0	0
Jumlah	30	100

It can be seen in table 1. that most respondents provide both categories on the quality of midwifery services in BPM Sugiati (96.7%)

Table 2.

Frequency Distribution Patient Satisfaction

Patient Satisfaction	f	%
Very satisfied	8	26,7
Satisfied	21	70
Not satisfied	1	3,3
Jumlah	30	100

It can be seen in table 2 that most respondents said they were satisfied with the services of midwifery in BPM Sugiati which is 70%.

Table 3

Cross Tabulation Quality of midwifery services with Patient Satisfaction

Quality	patient satisfaction						Total
	Very satisfied		Satisfied		Not satisfied		
	n	%	n	%	n	%	
Good	8	26,7	21	70	0	0	29
Enough	0	0	0	0	1	3,3	1
Less	0	0	0	0	0	0	0
Total	8	26,7	21	70	1	3,3	30

Table 3 shows that of the total 30 respondents, 21 respondents stated that midwifery service says satisfied with obstetric care that has been given (70%), and from 8 respondents saying midwifery service both said it was satisfied with the maternity services that have been received (26, 7%), while from 1 respondents saying midwifery service good enough to say dissatisfied with midwifery services that have been received (3.3%).

From the statistical test using Chi-Square generate p value of 0.001 ( $p = \text{significance}$  ( $p < 0.05$ ), so that there is a significant correlation between quality of midwifery services with patient satisfaction in BPM Sugiati Surabaya.

### **Quality of midwifery services in terms of readiness, effectiveness, Respect for / attention, security and timeliness.**

The result showed that 30 respondents were 29 respondents provide both categories on the quality of midwifery services in BPM Sugiati (96.7%), while one respondent provide enough category (3.33%), given enough category in terms of effectiveness and caring , This suggests that obstetric services in terms of readiness, effectiveness, respect / care, safety and timeliness in BPM Sugiati is good, because the process of midwifery services consisting of technical services and management of interpersonal relationships between practitioners and clients are fully provided with either (Syafurudin, et al, 2011: 21).

According Nurmawati (2010), the quality of obstetric care is the level of perfection midwifery services are held, which on one hand give rise to satisfaction on each patient according to the average level of satisfaction. Quality midwifery services is a midwifery services that can satisfy the patient in accordance with the ethics and standards of professional services. Rate enough on maternity services in terms of effectiveness and respect / attention. Effectiveness is the level of care or the actions of the patient is done properly, as well as an explanation and knowledge appropriate to the situation, in order to meet the expectations of patients. While respect / concern is the degree to which patients are involved in decisions about her care. In this regard attention to meeting the needs and expectations of patients appreciated (Nurmawati, 2010). On BPM Sugiati there are still some health workers who have not been up in action and meet the needs of patients, when describing the state / condition of the patient was only partially informed, and still not fully involve the patient's family in making decisions.

### **Patient Satisfaction In terms of direct evidence, Responsiveness, Empathy, Price, and Communications**

The research showed that of the 30 respondents there were 8 people expressed very satisfied (26.7%), 21 people said they were satisfied (70%) and 1 states are not satisfied (3.3%). Dissatisfaction of respondents in terms of direct evidence, responsiveness, empathy, pricin, and communication.

The results of this study are supported by research Waryono (2009) which shows that there are positive and significant impact on the dimensions of tangibles (direct evidence) to the satisfaction of the patient / customer. One direct evidence that there was, namely service and comfort in the waiting room. In addition, research Purnama (2013) also states that there is a significant relationship between the dimensions of direct evidence with patient satisfaction. Direct evidence is the most influential dimensions and is associated with perceived service quality. Physical evidence indicated if the corresponding application in providing care for patients and is associated with consumer satisfaction with services received. That is, the physical evidence in the quality of service is very important in improving patient satisfaction with services received.

Tangibles (direct evidence) is the ability of a company to show their existence to external parties about the appearance of offices and employees, the ability of the company's physical infrastructure (including communications), as well as the surrounding environment is tangible proof of the services provided by the service buyers. Appearance service is not limited to the physical appearance of a magnificent building but also the appearance of the officer and the availability of facilities and infrastructure (Lupiyoadi, 2006). This is supported by research Bata et al (2013) found significant relationship between tangibles (physical evidence) with patient satisfaction of users access social with  $p = 0.001$ .

Although most patients are satisfied but there are 3.3% who are not satisfied, it is likely at the moment there is an increasing number of patients who are pregnant to exercise control so that the patient feels neglected by health workers.

### **The relationship of Quality of midwifery services with Patient Satisfaction.**

The results of the analysis using Chi-Square generate *p value* of 0.001 ( $p = \text{significance } (p < 0.05)$ ), so that there is a significant relationship between the quality of midwifery services with patient satisfaction in BPM Sugiati Surabaya

According Moison, Walter and White (in Haryanti, 2000) the service greatly influence consumer satisfaction, when providing health care more attention to the needs of patients and other people who visit health facilities, the satisfaction emerged from the first impression entry. Customer satisfaction has always changed along with changing customer expectations. Expectations that consumers have tended to rise in line with the consumer experience. If the customer was not satisfied with a service that is provided, these services can be ascertained ineffective and inefficient (Syafrudin, et al, 2011: 31).

In their research Kurniasari and Kuntjoro (2006) stated that the quality of health care is strongly associated with a desire to meet the needs of the users of health care services in the form of physical evidence and the more perfect fulfillment of these needs the better the quality of service, while Hizrani (2012) states that the customer must be satisfied, because if the customer was not satisfied with the service provided he would look for another place that is more satisfying. If the customer has already fulfilled its satisfaction, loyalty level will be good too. This can be accomplished by providing a quality service and to meet the needs of patients

The quality of midwifery services in terms of readiness, effectiveness, respect / care, security and punctuality are good (96.7%).

1. Patient satisfaction in terms of direct evidence, responsiveness, empathy, and communication prices are satisfied (70%)

2. There is a significant correlation between the quality of midwifery services and patient satisfaction in Independent Midwife Practice Sugiati Surabaya with *p value* = 0,001

### **SUGGESTION**

For a place that has been studied, this study should be used as a source of information and material input about any factors that need attention by the BPM Sugiati Surabaya to be improved in the future so that better obstetric care and patient satisfaction.

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# THE RELATIONSHIP BETWEEN KNOWLEDGE WITH THE FREQUENCY OF SEXUAL TOWARDS PREGNANT WOMEN OF 3<sup>RD</sup> TRIMESTER IN WORKING AREA OF CIMAH TENGGAH ON JULY 2016

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## ABSTRACT

A comfortable sexual intercourse and satisfying is one of important factor in a marriage relationship for many couples. The frequency of sexual intercourse can be decreased in pregnant women. Less knowledge about sexual intercourse during pregnancy is one of the factors that greatly influence. The impact of unfulfilled sexual intercourse during pregnancy if it is not understood by both partners will have an impact on the physical and psychic. The purpose of this research was to determine the relationship between knowledge with the frequency of sexual towards pregnant women of 3<sup>rd</sup> trimester in working area of Cimahi Tengah on July 2016. The method in this research is an analytic correlation with cross sectional study design. The population are pregnant women of 3<sup>rd</sup> trimester. Data collected in the form of primary data with a questionnaire tools, as well as using data analysis Univariate and Bivariate. The results showed that of the 27 respondents who have less knowledge as much as 92,6% have irregular sexual intercourse during pregnancy, from 16 respondents who have good knowledge as many as 81,3% have regular sexual intercourse during pregnancy. Statistical analysis showed that there is a relationship between knowledge and the frequency of sexual intercourse in the third trimester of pregnant women (P-value = 0.000; OR : 54,167). Sexual intercourse during pregnancy is very important because it benefited physically and psychologically and this is influenced by knowledge. The improper knowledge about sexual intercourse during pregnancy can greatly reduce the frequency of sexual intercourse, or even not at all.

**Key Words:** Sexual Frequenciess, Pregnant woman

## INTRODUCTION

Sexual intercourse is a series of desire, arousal and desire for sexual intercourse. Sexual are basic human needs such as the expression of the feelings of two private individuals who respect each other, so that the attention and affection of a relationship of feedback between the two individuals. Sexual intercourse can be impaired, especially in sexual intercourse, it is because the mother in a state of being pregnant (Indiarti, 2007).

Many couples during pregnancy experience some changes such as no sex or become a bit uncomfortable especially in the third trimester on pregnant women. Research conducted by Pangkahila 2005, obtained as many as 21% of women had no or little experience sexual pleasure when the first trimester of pregnancy, it increased by 41%

in the second trimester of pregnancy and 59% in the third trimester.

According to Jones (2008), it is influenced by several factors, among which affect the sexual intercourse in the third trimester which is the changing of physical such as the mother's abdomen is getting bigger, pain in the breast that causes decreased of libido, fluctuate psychological factors indirectly affect the sexual intercourse, mother's knowledge and attitudes mother like worrying and feeling guilty about the baby for having sexual intercourse so that the frequency of sexual intercourse decreased. Although hormonal factors play an important role in sexual functioning but about 26% of sexual disorders in pregnancy are more affected by physical discomfort, and 25-60% are influenced by knowledge factors.

Eisenberg (2006) states that the mother's knowledge about sexual intercourse during pregnancy has an important role to relieve anxiety so can feel peaceful in taking the

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decision whether do or do not to have sexual intercourse. Research conducted by Puspitasari (2006) in Surakarta states that as many as 33.3% of pregnant women have intercourse with based on a sense of worry and anxiety, 44.4% experienced a decrease in sexual intercourse and 22.2% did not have sexual intercourse because of fear for fetus condition. The less of knowledge about sexual intercourse will have an impact on increasing anxiety during pregnancy, thereby reducing the interest to have sexual intercourse.

According to the theory, having sexual intercourse in the third trimester has benefits for childbirth as the hormone dehydroepiandrosterone (DHEA) that are useful to strengthen bones and muscles as well as the immune system, provides energy, giving a feeling of relaxation. Strong bones and muscles can help to prepare for the birth of the baby's head, woman orgasm during sexual intercourse can serve as a reinforcement of the uterus and prepares the mother's body during childbirth, and sexual intercourse such as Kegel exercises that can fit perineal area in preparation for childbirth, reducing the risk of tearing, reducing the possibility of an episiotomy and accelerate postpartum recovery. (Murkoff, 2006)

Sexual activity as one aspect in assessing the quality of human life. Emotionally, pregnant women who unfulfilled sexual intercourse will be irritable, unhappy, and more sensitive and some of them suffered from depression, stress, disappointments, quarrels, infidelity and even to divorce (Pangkahila, 2006). Physical condition that is often experienced due to unfulfilled sexual needs (psychosomatic disorders) such as headaches, muscle pain, another disorder such as hair loss and skin allergic (Eisenberg, 2006).

The role of health workers should provide an explanation about the safety of sexual intercourse during pregnancy and various alternative sexual positions during pregnancy. Counseling focused to discuss misconceptions about sexual intercourse during pregnancy and decreased a sexual

enjoyment is wrong argument unless it is caused by psychological factors or other disease factors (Indiarti, 2007).

Public Health Centre of Cimahi located in the District of Central Cimahi and has a working area as many as 29 RW. Number of pregnant women in the district of Central Cimahi in July 2016 amounted to 358 pregnant women which there are 75 third trimester pregnant women who do not know about sexual intercourse during pregnancy.

Based on explanation above, the purpose of this research is to study the relationship of knowledge to the frequency of sexual intercourse in the third trimester towards pregnant women in Public Health Centre of Cimahi period of July 2016

## RESEARCH METHOD

The method used in this research was an analytic correlation with cross sectional study design. The study was conducted in Public Health Centre of Cimahi in July 2016. The population in this study were all pregnant women in the third trimester at Public Health Centre of Cimahi in the period of July 2016 as many as 75 people with the sample as many as 43 pregnant women in the third trimester.

The data collection technique used questionnaires with primary data, which is the source or type of data obtained directly from respondents by circulating questionnaires through written answers or questionnaires. The instrument used was a questionnaire that has tested the validity of (0.44) and reliability test (0.955).

The data analysis used univariate to determine the frequency distribution of respondents on sexual intercourse during pregnancy and bivariate (chi-square test) to determine the correlation between Knowledge with Sexual intercourse towards pregnant women Pregnancy in Trimester III.

## RESULT AND DISCUSSION

Univariate analysis conducted to see the picture of a frequency distribution of respondents on sexual intercourse during pregnancy in working area of Cimahi Tengah period of July 2016.

Table 1  
Pregnant women Knowledge in Trimester III towards on Sexual Intercourse during pregnancy

Knowledge	Frequency	(%)
Less	27	62,79
Good	16	37,21
<b>Total</b>	<b>43</b>	<b>100,0</b>

Based on Table 1, from 43 respondents, it is almost half of the respondents have sufficient knowledge as many as 22 people (51.2%).

Table 2  
Distribution of frequency of sexual intercourse in Pregnancy Trimester III In Puskesmas Central Cimahi 2016

Frequency Sexual	Frequency	Percentage (%)
Irregular	28	65,1
Regula	15	34,9
<b>Total</b>	<b>43</b>	<b>100,0</b>

Table 2 shows that from 43 respondents, it is almost half of respondents sometimes have sexual intercourse as many as 28 people (65,1%).

Table 3  
Knowledge Pregnancy Trimester III on Sexual Intercourse during pregnancy with the frequency of sexual intercourse in pregnancy Trimester III

Knowledge	Frequency of sexual intercourse during pregnancy					P-Value	OR 95% CI
	Irregular		Regular		Total		
	N	%	N	%			
Less	25	92,6	2	7,4	27	0,000	54,167 (8,016-366,01)
Good	3	18,8	13	81,3	16		
<b>Total</b>	<b>28</b>	<b>65,1</b>	<b>15</b>	<b>34,9</b>	<b>43</b>		

Analysis Results in Table 3 shows that of the nine respondents who has less knowledge as much as 66.7% did not have sexual intercourse during pregnancy, from 22 respondents who have enough knowledge as many as 63.6% rarely have sexual intercourse during pregnancy and from 12 respondents who have good knowledge, almost half of respondents (58.3%) frequent sexual intercourse during pregnancy. Statistical analysis showed that there is a relationship between knowledge and the frequency of sexual intercourse in the third trimester of pregnant women (P-value = 0.000).

This is consistent with the theory Notoatmodjo (2010). Knowledge is constituted with a proper understanding and will foster new expected behaviors. Domain knowledge is also very important for the formation of a person's actions. In addition there are several factors that can affect sexual intercourse during pregnancy, according to Jones 2008, the factors affecting sexual intercourse during pregnancy includes changes to the physical and psychological, knowledge and mother attitude, knowledge and attitude of the couple, disease accompaniments, beliefs by couples and families and myths about sexual intercourse during pregnancy in the community and is regarded as a truth.

The statistical test results are consistent with the theory Eisenberg (2006), knowledge of mothers and couples about sexual intercourse during pregnancy have a very important role to alleviate fear and anxiety so that couples can feel at ease with the decision whether or not to have sex. In addition, most couples especially on women who less of understanding about sexual intercourse during pregnancy tend to shy to ask about sex during pregnancy.

This is supported by research from Puspitasari (2006) which states that the less of proper knowledge about sexual intercourse will impact on the desire for sexual intercourse. Knowledge about sexual intercourse during pregnancy can influence the quality of sexual intercourse because

knowledge is a very important for the formation of a person's actions.

Existing knowledge in the third trimester of pregnant women may affect the frequency of sexual intercourse during pregnancy. The failure knowledge about sexual intercourse during pregnancy can lead to decreased frequency of sexual intercourse. In theory, sexual intercourse has a role in the statement of affection, a sense of security and peaceful, togetherness, a feeling of closeness in the relationship of husband and wife. Especially the condition of pregnant women who undergo drastic physical changes cause the mother is in need of attention and intimacy in sexual relations especially in the third trimester of pregnant women (Puspita, 2006).

Moreover the theory Eisenberg (2006) mentions that pregnant is not an obstacle to sexual intercourse. The fulfillment of the regular sexual intercourse will affect the mental and emotional balance which after someone having sex the brain releases endorphins that result in decreased stress and become happy feelings. In addition to sexual intercourse, pregnant women with enlarged body will feel more loved her husband. This is a pride for the husband for being able to give offspring. Expression of love that is needed on both couples to strengthen the relationship between them.

Not only to fulfill the expression of love, at 39-40 weeks of gestation when pregnant women do not also feel the signs of labor with sexual intercourse can induce the laboring. Physiologically a man's sperm contains prostaglandins that can result in a contraction of the uterus and can cause the cervix to open and stimulate the occurrence of heartburn. But in fact, many pregnant women think one of the causes of miscarriage because of sexual intercourse. In theory, heartburn of prostaglandins not to cause miscarriage. A miscarriage may occur due to the location of abnormal uterine, there are omissions in the uterus, or abnormalities in infants. Sexual intercourse does not interfere, even if the couple is doing sexual

intercourse more often (Glesser & Gebbie, 2006).

## CONCLUSION

From the description, it can be concluded that sexual intercourse during pregnancy is very important for getting the benefits of physical and psychological sexual relations to strengthen the marital relationship. Statistical analysis showed that there is a relationship between knowledge and frequency of sexual intercourse in the third trimester of pregnant women (P-value = 0.000). The less of knowledge about sexual intercourse during pregnancy can decreased the frequency of sexual intercourse during pregnancy.

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# IMPACTS OF EXCLUSIVE BREASTFEEDING OF DEVELOPMENT OF BABY AGED 6 – 12 MONTHS

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## ABSTRACT

Infant development include perceptual abilities, motoric (body movement), cognitive, and social skills. The development was influenced by two factors: genetic and environmental. One effort that can be done to support the growth and development of children in order to run optimally is to provide proper nutrition and appropriate to their needs. The purpose of this study was to analyze the effect of exclusive breastfeeding on the development of infants aged 6-12 months in Puskesmas Karawaci Baru Tangerang. Cross sectional study was conducted on 270 respondents who had infants aged 6-12 months and fully met the inclusion criteria. Sampling was done by cluster sampling in Puskesmas Karawaci Baru in May-July 2013. Exclusive breastfeeding history was obtained from interviews with respondents. Quantitative data were analyzed univariable, bivivariable using chi-square and multivariable logistic regression analysis with significance level of  $p < 0.05$ . The result showed most of the male sex, a history of pain in the last 2 weeks, complete immunization status, and get the motor and intellectual stimulation. Based on statistical tests chi-square of 9 variables studied were breast-feeding, the baby's sex, stimulation of the motor, intellectual stimulation, immunization status, history of illness, education father and mother, mother's occupation, only two variables were significantly associated with motor development, social and language in infants aged 6-12 months, namely the status of immunization and exclusive breastfeeding. In conclusion, the risk of progression suspect in infants who are not exclusively breastfed compared to infants receiving exclusive breastfeeding was 8.6 times greater.

**Key Words:** Exclusive Breast Feeding, Baby's Development

## INTRODUCTION

In an effort to achieve optimal health level to improve the quality of life of the nation, the good nutrition condition is an important element. Malnutrition will hinder the growth-development process. Especially in babies and under-five children, this is largely determined by the amount of breast milk obtained, including energy and other nutrients contained in the breast milk. Breast milk without other foods can meet the growing needs of babies up to the age of six months. Breastfeeding without other foods for the six months is done by exclusive breastfeeding.

Although the efficacy of breast milk is so great, not many women want or are willing to give exclusive breastfeeding for six months as suggested by the World Health

Organization (WHO). *Sentra laktasi Indonesia* or Center for Indonesia's Lactation has noted that, based on the 2002-2003 Indonesian Demographic and Health Survey (IDHS), only 15% of mothers exclusively breastfed their babies for 5 months. Due to the reports of Tangerang Municipality, the coverage of exclusive breastfeeding in the Karawaci Baru Health Center in 2008 amounted to 36.13%. This was still far from the target of Healthy Indonesia 2010 by 80%. In addition, the 2012 IDHS showed that 42% of children aged under 6 months were exclusively breastfed.

The low rate of exclusive breastfeeding was caused by many things, due to the lack of knowledge of mothers on the benefits of breastfeeding and how to breastfeed correctly, the lack of lactation counseling services, the perception of socio-cultural that opposed breastfeeding, mothers who had jobs outside the home, the existence of

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wrong administration of the hospital (some hospitals gave formula milk to newborn babies before the mother was able to produce milk), as well as the inadequate conditions for working mothers (the maternity leave was too short and no room in the workplace for breastfeeding or pumping breast milk).

In Warliana's study, children who were not exclusively breastfed were likely to have a risk of alleged delays in motor development by 7.99 times compared to those exclusively breastfed. Nuryanti's study showed that children who were breastfed for less than three months indicated three times more at risk for impaired raw motor development than those who were breastfed for more than three months. A study conducted by Lestari (2011) also got the result that babies who were not breastfed exclusively were at risk of developmental disorders by 193.6 times greater than those who were breastfed exclusively.

The implementation of Monitoring the child development through *Posyandu* or neighborhood health care post for under-five children is also one thing that has not been carried out continuously; mostly *posyandu* just monitors growth. The screening of the developments which is widely used by the medical profession is KPSP, consisting of 10 questions that could easily be done in the community. From the results of the screening by using KPSP, a baby can be detected to have a normal condition or impaired growth and development in certain aspects, so that ultimately test and early stimulation can be done in accordance with the shortcoming aspects. The objective of this study was to analyze the effect of exclusive breastfeeding on the development of babies aged 6-12 months in Karawaci Baru Health Center of Tangerang.

## RESEARCH METHODOLOGY

This was a comparative analytic study with a cross sectional approach. The sampel was taken using area sampling or cluster sampling, amounted to 270 respondents. The data collection was done from May to July 2013 in Karawaci Baru Health Center of Tangerang. The data analysis was performed using bivariable analysis (chi-square test) and multivariate analysis (logistic regression analysis).

## RESULT AND DISCUSSION

Table 1  
Relation of Child Development by Subject's Characteristic

Characteristic	Child Development				n	Value p
	Normal		Suspect			
	N	%	N	%		
<b>Gender</b>						
Male	134	95.7	6	4.3	140	0.855
Female	125	96.2	5	3.8	130	
<b>Illness Hist</b>						
No	120	96.8	4	3.2	124	0.516
Yes	139	95.2	7	4.8	146	
<b>Immunization</b>						
Complete	237	97.1	7	2.9	244	0.014
Incomplete	22	84.6	4	15.4	26	
<b>Motor stimulation</b>						
Yes	189	96.9	6	3.1	195	0.185
No	70	93.3	5	6.7	75	
<b>Intellectual stimulation</b>						
Yes	189	95.9	8	4.1	197	1.00
No	70	95.9	3	4.1	73	

Note: The p-value is calculated based on the Chi square test; specially for p-value of immunization history, motor and intellectual stimulation, they use Fisher's Exact test because there are cells that have the expectation values of less than 5

Based on the results of the study, only immunization variable had a significant difference to the child development. The other variables such the history of illness, motor and intellectual stimulation, and sex showed no significant with p of more than 0.05, with OR (95% CI) 6.156 (1.671 to 22.674).



Table 2  
Relation of Child Development by Characteristic of Subject's Parents

Characteristic	Child Development				Total	P value
	Normal		Suspect			
	N	%	n	%	n	
Mother's Occupation No Yes	115	98.3	2	1.7	117	0,121
	114	94.1	9	5.9	153	
Father's Education High Low	202	96.2	8	3.8	210	0,713
	57	95	3	5	60	
Mother's Education High Low	176	96.7	6	3.3	182	0,345
	83	94.3	5	5.7	88	

Note: The p-value uses the Fisher Exact test because there are cells that have the expectation values of less than 5

Calculation using Chi square In Table 2. test showed that there was a significant difference between child development and exclusive breastfeeding

Table 3  
Child Development Differences by Groups receiving and Not receiving Exclusive Breastfeeding

Exclusif Breast feed	Child Development				Total	P value
	Normal		Suspect			
	N	%	n	%	n	
Yes	121	99,2	1	0,8	122	0,014
No	138	93,2	10	6,8	148	

Note: The p-value is calculated by chi-square test

In Table 3, the subjects of study who were exclusively breastfed at most had a normal development, as many as 99%, while the subjects who were not exclusively breastfed had suspected development, as many as 10 babies. Calculation using Chi square test showed that there was a significant difference between child development and exclusive breastfeeding (p = 0.014).

Table 4  
Multiple Logistic Regression Analysis on Differences in Development of Baby Aged 6-12 Months Who Received and Did Not Receive Exclusive Breastfeeding (Final Model)

Variable	B	SE (β)	P Value	OR (CI 95%)
Exclusive Breasfeed ing	2.171	2.171	0.040	8.768 (1.106 - 69.491)
Constants	4.796			

Table 4 showed that based on the results of the multiple logistic regression analysis, there was only one variable that had a significant difference to child development; this variable was exclusive breastfeeding. This was indicated by the value of p <0.05. From the above calculation, it was shown that the statistically significant factor that influenced the development of babies aged 6-12 months was exclusive breastfeeding.

The results of this study, if seen from gender, showed that both men and women had no difference to the child development. This study did not correspond to the results of a study carried out by Kramer et al (2008), although this study did not specifically contain the hypothesized sex differences. However, the result of the analysis of the observations of the effects of treatment was higher in boys when it was seen from the IQ verbally. Overall, boys' IQ was higher than girls' (the boys were 6.1 points and the girls were 5.7 points). This meant that there were significant differences between child development and gender.

Both biological and environmental factors might play an important role against the sense of being male or female. Biological effect was not always universal, inevitable, or could not be changed, as well as social or cultural influence that was not always easy to overcome. Both sexes were equally sensitive to touch, tended to have similar patterns of teething, got up from the fall to sit down, and walked on the same schedule. Male and female babies also reached the



starting point of motor development in the baby's periods at the same time, so that male and female had the same pattern of development. (Papalia, 2009).

In this study, the subjects' age were equal. The education level of the parents was mostly senior high school graduates, both in babies who received motor and intellectual stimulation and who did not receive the stimulation.

Another study conducted by Sharma and Nagar (2009) in India regarding environmental influences on the psychomotor development of babies and children aged 0 to 18 months got the results that babies and children who were given interventions such as providing toys stimulated the ability of the child development, and increased parental involvement in parenting, making sure the house was in secure condition, as well as giving parents an understanding of the milestones of child development; the results of motor examination were better. This showed the success of stimulation did not depend on parents' education but rather determined by the effectiveness and sustainability of stimulation in children.

For assessing the development, it can be used instruments according to the need, for example, the ability of human resources that perform assessments, the age of the child who will be evaluated, and what aspects to be valued. In this study, the research team used KPSP tests to assess aspects of child development such as motor, social and language.

A number of studies regarding the ability of child development were mostly done in babies and children at high risk including prematurity and children who were born or lived in the environment with low or poor socio economy. These studies were conducted to look for evidence that babies and children who were given stimulation and early intervention would increase their growth and development. Clinically, these studies showed an increase in the development in babies and children given

stimulation and early intervention. In this study, stimulation had no effect on children's development because of the intensity and methods as well as when to start the stimulation on each baby were not measurable and clear.

Immunization is one way to increase one's immunity actively against an antigen, so that if one day he/she is exposed to the similar antigen, a disease does not happen. Children who do not have immunity against infectious diseases will fall ill causing a decline in nutritional status. This is due to infectious diseases and immune function that are closely linked with each other and this will ultimately affect the baby's development.

The results of this study was similar with a study conducted by Nur Sa'adiyah (2010) that there was a relationship between the completeness of basic immunization and the motor development in children aged 0-1 years. In this current study, the results of illness history were not related to the child development. This study only surveyed all respondents who experienced illness in the last 1 month. Therefore, under-five children in this often had a fever caused by a virus although they had a complete immunization status. The under-fives were still experiencing illness, so that the result was not meaningful.

From the above data, there was no difference in the development in the study's subjects viewed from gender, history illness, motor stimulation and intellectual stimulation. However, immunization status still influenced the development of the baby.

### **Differences in Child Development by Characteristics of Research Subject's Parents**

National Institute of Child Health and Human Development (NICHD) in the United States has been researching the problem of working mothers who left their children in the care of others. From this study, the results showed that there was a

significant difference between child development and the mother's occupation status (Adam, 2011). The occupation relates to breastfeeding, working mothers tend to have a little time to breastfeed due to the busy work, while mothers who do not work (housewives) have enough time to breastfeed their baby. This certainly affects the growth and development of the baby.

The available amount of time for mothers to breastfeed their children made long interaction between mother and child. With a long interaction, the mother indirectly acquires a broader opportunity to provide stimulation to the baby. This has obviously affected the growth experienced by the baby. Children who get directed stimulations will have faster development compared with those who are less or even not stimulated.

In this study, the mother's occupation did not affect the development of children; it was because in the interview conducted mostly mothers who had children just worked around the house so that this did not differ significantly from the mothers who did not work.

Parental education is one important factor in the development of the children. With the good educational background, parents can give stimulation in children better than those with less educational background. This is due to lack of knowledge about the importance of stimulating the growth and development of children. Development requires stimulations, especially in the family, for example, provision of toys, socialization of children, and the involvement of the mother and other family members of the children activities. Children who get directed stimulations would have faster development compared with those who were less or even not stimulated. This is contrary to the theory that states that the higher the education of the parents, the better the child development. This is caused by another dominant factor, namely exclusive breastfeeding.

### **The difference of Developments of Baby Aged 6-12 Months Who Received and did Not Receive Exclusive Breastfeeding**

The results of this study concluded the presence of a positive relationship between breastfeeding and the development. There was a tendency of development of gross motor, fine motor, language, and social personal in normal babies aged 6-12 months who were exclusively breastfed compared with those not exclusively breastfed. Multivariable analysis showed babies who were not exclusively breastfed had a risk of developmental disorders by 8.768 (95% CI: 1.106 to 69.491) when compared to babies who were exclusively breastfed.

The results were consistent with research conducted by Nuryanti that children who were breastfed for less than three months had three times more at risk for impaired gross motor development than those who were breastfed for more than three months. This was according to the results of a study conducted in the United States which found that children who were exclusively breastfed had a likelihood of 32% lower delayed gross motor developments and 33% lower delayed fine motor skills than those who were not exclusively breastfed. The delay in gross and fine motor development was reduced, especially in children who were exclusively breastfed for  $\geq 3$  months. Breastfeeding could protect a developmental delay.

The results of this study were also consistent with a study conducted by Warliana that children who were not exclusively breastfed were likely to have a risk of alleged delays in motor development amounted to 7.99 times compared with children who were exclusively breastfed. The results of Sacker et al. (2006) also showed that babies who were never breastfed were as much as 50% likely to experience delay in gross motor and increased duration of breastfeeding associated with the possible reduction of delays.

This study was also consistent with the results of Lesmana's study (2009) that showed that the babies aged six months

who were exclusively breastfed had a higher score of developmental quotient development of language and visual motor than those not exclusively breastfed. This was accordance with the results of two studies conducted by Nofita et al. (2008) and Riva that the duration of breastfeeding affected baby's cognitive development (IQ).

Babies who were breastfed for 6 months would have a higher IQ scores compared with those breastfed less than 6 months. It also was in line with a study conducted by Kramer et al. (2008) which showed that exclusive breastfeeding for 3-6 months was associated with higher verbal IQ of 4.7 points (95% CI: 4.0 to 5.3 ) compared to the exclusive breastfeeding <3 months. Exclusive breastfeeding  $\geq$  6 months was associated with an increase in IQ of 5.2 points (95% CI: 3.7 to 6.7).

A study by Sacker et al. (2006) showed that the proportion of babies who mastered the stage of development had an increase in line with the duration and exclusivity of breastfeeding. Although the mechanisms that explained how the relationship between breastfeeding and child development was still not completely understood, a number of researchers tried to find out the specific workflow of breastfeeding. In addition to developing hypotheses about the environmental and psychosocial influence associated with breastfeeding (eg the interaction between mother and child and the attachment during breastfeeding), various studies had also identified a number of biological effect of breastfeeding.

In motor development, the decisive elements are muscles, nerves, and the brain. These three elements are performing each role interactively positive. This means that the elements are interrelated and complementary with each other element to achieve more perfect motor conditions. Likewise, voice is owned by someone who has the perfect nerve center (Zulkifli, 2009). Expertise to talk needs complete physiological structures and functions (including the respiratory, the hearing, and the brain) plus the intelligence, as well as the need to communicate and

stimulation. With the increasing ability of the child motor movements, the child is motivated to do his/her own things and is encouraged to relate to anyone other than his/her own family members.

Breastfeeding will enhance the relationship or bond between mother and child. A close, intimate, and harmonious inner bond created permanently and early is very important, because it helps determine the child behavior in later life, stimulates the child brain development, stimulates the child attention to the outside world, as well as creates attachment between mother and baby. With clutching the baby during breastfeeding and invite him to talk with full affection, a mother already meets the baby's needs to stimulation (teaser).

This study showed no significant differences between the levels of development (gross motor, fine motor, language, social and personal) of babies exclusively breastfed and of those not exclusively breastfed. The level of development in this study was assessed with KPSP examination. The level of development obtained from KPSP examination showed that babies exclusively breastfed had more normal development compared with those not exclusively breastfed.

## CONCLUSION

In this study, the significant variables with the development of motor, social and language in babies aged 6-12 months were the status of immunization and exclusive breastfeeding. The risk of suspected development in babies not exclusively breastfed compared to those receiving exclusive breastfeeding was 8.6 times greater.

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# RELATIONSHIP OF THE MIDWIFE BEHAVIOR ABOUT KIE EXCLUSIVE BREASTFEEDING WITH BREASTFEEDING EXCLUSIVE SUCCES IN BPM VINCENT ISMIJATI SURABAYA

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## ABSTRACT

Exclusive breastfeeding may accelerate the decline in infant mortality, and increase nutritional status of children. Coverage of breastfeeding in the continent of Asia reached 50%, while the Baby in Indonesia just getting exclusive breastfeeding until the age of 1,7 months. One of the causes of the failure of exclusive breastfeeding is, the lack of support for health personnel in Program Implementation exclusive breastfeeding. KIE is delivering a message, idea, either directly or indirectly with the aim of changing behavior for the better, while exclusive breastfeeding is breastfeeding only to infants up to age 6 months without additional liquids or other foods. Health education is one way that can be done by a midwife as a support for the success of exclusive breastfeeding. The purpose of this study to determine the relationship of Conduct Midwives, about KIE exclusive breastfeeding to breastfeeding Exclusive success.

This study is *Descriptive* with the *Purposive Sampling*. This research was conducted in BPM Vincent Ismijati on Jl Abdul Karim Gunung Anyar Surabaya in september - December 2015. The population in this study is, all Postpartum Mothers giving birth in BPM Vincent Ismijati. Methods of data collection using questionnaires and interviews. Analytical test used *Chi Square*.

The result showed that the behavior is Midwife of exclusive breastfeeding is doing KIE about Exclusive breastfeeding, while the success of exclusive breastfeeding is not exclusive breastfeeding and test results of Chi Square is 0,184 so that  $p > \alpha$  can be concluded that there is no relationship of Conduct midwife about exclusive breastfeeding with the success of exclusive breastfeeding

**Keywords:** behavior midwife, KIE, success of exclusive breastfeeding

## INTRODUCTION

Infant mortality rate (IMR) is one indicator in determining the level of social welfare. The infant mortality rate in the world every year to reach four million. Approximately two thirds of infant deaths occur in the neonatal period, which occurred in the first week. Every year there are 1-1.5 million babies in the world who died was not breast-fed exclusively. Infants who were exclusively breastfed for 6 months and still be breastfed up to 11 months can reduce child mortality by 13%. Infant mortality in the first two months are not breastfed, have a risk six times greater compared with breastfed infants. (Fikawati and Syafiq, 2010).

Exclusive breastfeeding is a program to reducing infant mortality. But there are many factors inhibiting exclusive breastfeeding, thus the scopes exclusive

breastfeeding in Indonesia is still low at 35.9%. One of the barriers on exclusive breastfeeding is, for lack of lactation counseling services and support of health workers. (Fikawati and Syafiq, 2010).

Breast milk is the best food for babies. Breast milk is needed for the health of the baby as well as supporting the growth and development of infants optimally. Infants who have been granted exclusive breastfeeding will obtain all the advantages of breastfeeding and nutritional needs are met to the maximum so that he will be healthier, more resistant to infection, not prone to allergies, and more rarely sick. (Arisman, 2009).

Scope of exclusive breastfeeding is influenced by several things, namely, the implementation of the 10 steps to successful breastfeeding exclusively (LMKM), not all infants are IMD, lack of knowledge of



mothers and families about the benefits and how to breastfeed right, lack of counseling services lactation and support of health workers, socio-cultural factors, lack of adequate conditions for mothers who work and incessant marketing of formula milk. (Risksda, 2013)

Midwives is the caregiver who had a big hand in the success of exclusive breastfeeding, so that it can introduce breast milk early to infants through IMD (at least 1 hour) and continuously provide information and education exclusive breastfeeding to mother and / or family members since the pregnancy until the administration period exclusive breastfeeding is completed (2 years). Based on Preliminary Study conducted in BPM Vincent Ismijati to 10 mothers of infants aged 6 months, six people who do not give exclusive breastfeeding and four people have been exclusive breastfeeding. Of the six people who did not give exclusive breastfeeding, 4 people do not get KIE about exclusive breastfeeding. Based on the background of the problem, there needs to restrictions on the problem in this study, so that research can be done effectively, not widened and focused on the following issues:

1. The behavior of midwives in the KIE on the importance of exclusive breastfeeding.
2. The success of that exclusive breastfeeding is stil llow.
3. Relationship of Behavior Midwives about KIE exclusive breastfeeding with the success of exclusive breastfeeding

## RESEACRH METHOD

This study uses Descriptive research, ie research that tries to explore how and why health phenomenon that could happen then analyzing the correlation between phenomena. The approach used is cross sectional, conducted in BPM Vincent Ismijati in Surabaya in September 2015 to March 2016.

The population in this study is the Mother Postpartum who have given birth in the BPM Vincent Ismijati Surabaya. Sampling technique used is purposive sampling technique Simple, one in which each individual in the population has the same chance to be sampled. The variables in this study are Independent Variables: The behavior of Midwives about KIE exclusive breastfeeding and the dependent variable is the success of exclusive breastfeeding. While the data analysis using the chi square test to determine the relationship behavior KIE exclusive breastfeeding of midwives about the success of exclusive breastfeeding.

## RESULT AND DISCUSSION

The study was conducted with a sample of Postpartum Mothers who have given birth in September to December 2015 by 40 respondents and the use of exclusive breast milk was evaluated in June 2016. The results obtained are as follows:

Table 1  
Distribution Frequency Behavior of Midwives about KIE exclusive breastfeeding

Variabel	N	Percentage (%)
Do	23	57,5
Is Not Done	17	42,5
Total	40	100

Source : Data Primer, 2016

Based on table 1, particularly of a midwife about KIE exclusive breastfeeding is Conduct KIE on exclusive breastfeeding as much as 23 respondents (57.5%). Behavior is all the activities / human activity were observed either directly or indirectly (Notoatmojo, 2005), while the KIE is submission of a message, idea, either directly or indirectly with the aim to change behavior better.



KIE is one of the ways used by midwives in providing health education to Mother Postpartum and Breastfeeding. Health education is one of the competencies required of health workers, especially midwives, because it is one of the roles that must be implemented in every delivery of health services, especially the good Midwifery Care to Individuals, Families, groups and communities. Based in Singapore's National Survey in 2001 showed that many mothers can not afford to build and maintain a successful breastfeeding, 68% of mothers said breastfeeding failure due to lack of antenatal education and counseling on breastfeeding. Interventions and recommendations to overcome obstacles and special constraints in breastfeeding is develop curriculum level of education for all health workers cover lactation support and counseling skills.

Table 2  
Distribution Frequency success of exclusive breastfeeding

Variabel	N	Percentage (%)
Breastfeeding Exclusive	19	47,5
Not Breastfeeding Exclusive	21	52,5
Total	40	100

Source : Data Primer, 2016

Based on Table 1.2 mostly not use exclusive breastfeeding as much as 21 respondents (52.5%). According to WHO Breastfeeding Exclusive breastfeeding is only in infants until the age of 6 months without additional liquids or other foods. Exclusive breastfeeding is the basis for the formation of human capital quality in addition to the growth and development of children is optimal. Breast milk is a nutritious food that does not require additional compositions.

In addition, breast milk is easily digested by the infant and immediately absorbed. Exclusive breastfeeding or exclusive breastfeeding until 6 months old baby is very beneficial, because it can protect

infants from various diseases cause of infant mortality. In addition to favorable babies, exclusive breastfeeding also benefits the mother, which is to reduce postpartum bleeding, reduce blood loss during menstruation, accelerate the achievement of weight before pregnancy, reducing the risk of breast cancer and cervical cancer. (Swandari, 2013). The failure in exclusive breastfeeding in the above research caused by: working mothers reached 22 respondents, did not commit early initiation of breastfeeding, and provision of drinks prelacteal before the milk out. According Karleni 2013, the working mother is not a reason not to give exclusive breastfeeding the baby, many solutions offered to continue to provide exclusive breastfeeding, and the important thing here is the change in mindset and commitment as parents are always concerned with the health and growth of the fruit heart.

Table 3  
Cross Tabulation Conduct of Midwives KIE Exclusive breastfeeding with the success of exclusive breastfeeding

Variabel	Breastfeeding Exclusive				Total	
	Yes		No		n	%
Do	13	32,5	10	25	23	57,5
Is not done	6	15	11	27,5	17	42,5
	19	47,5	21	52,5	40	100

Source : Data Primer, 2016

Based on Table 3 shows that out of a total of 40 respondents, most midwives do KIE on exclusive breastfeeding and exclusive breastfeeding successfully (32.5%) of 13 respondents and a small portion did KIE exclusive breastfeeding and also does not give it exclusive breastfeeding for 6 respondents (15%). While based on the chi square test analysis showed that  $p = 0.184$  with  $\alpha = 0.05$  level of security so  $p > \alpha$ , then  $H_0$  is rejected and  $H_1$  accepted, so it can be stated that there is no relationship KIE Granting exclusive breastfeeding, with the success of exclusive breastfeeding. Based on research conducted by Lin-Lin Su entitled Antenatal education and postnatal support

strategies for improving rates of exclusive breast feeding: a randomized controlled trial in 2001.

Tabel 4 Chi square analysis

Chi-Square Tests					
	Value	df	Asymp . Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1,766 <sup>a</sup>	1	,184		
Continuity Correction <sup>b</sup>	1,018	1	,313		
Likelihood Ratio	1,785	1	,182		
Fisher's Exact Test				,216	,157
Linear-by-Linear Association	1,722	1	,189		
N of Valid Cases	40				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8,08.

b. Computed only for a 2x2 table

The goal is to determine whether antenatal breastfeeding education course or postnatal lactation support are increasing exclusive breastfeeding compared to a regular hospital treatment. The results showed that women who received postnatal support exclusive breast feeding in two weeks postnatally, while women receiving antenatal education is more likely to breastfeed exclusively to six weeks postnatal. Antenatal breastfeeding education and support for breastfeeding after birth, as a single intervention that is based in the hospital significantly increases the rate of exclusive breastfeeding up to six months after delivery. Postnatal support is slightly more effective than antenatal education.

The failure of exclusive breastfeeding in the study above due to many factors, among them the lack of effective education and support breastfeeding in nursing mothers. Midwife only provide education about breastfeeding, when treated in BPM, lack of antenatal education and postnatal support ongoing. Another obstacle is the lack of knowledge about breastfeeding and lack of support from health professionals. Evidence of effective interventions to improve

exclusive breastfeeding for six months is rarely recommended. While there is evidence for effectiveness, professional support in extending the duration of breastfeeding and increase breastfeeding initiation rate, the strength of the effect on the rate of exclusive breastfeeding is not clear. Judging from the journal Efforts to Increase Coverage Exclusive breastfeeding (Efforts to Improve Breastfeeding Exclusive Coverage) CORE Group, Social and Behavior Change Working Group. The journal Lancet maternal and child nutrition series estimate that interventions to promote exclusive breastfeeding has the potential to reduce deaths in children under 36 months of 9% (Bhutta et al, 2008). Protecting the safety of the baby as important as exclusive breastfeeding, so it was not a practice that is easy to promote exclusive breastfeeding effectively, required clinical skills and counseling.

## CONCLUSION

1. The behavior of the midwife KIE exclusive breastfeeding in BPM Vincent Ismijati is good (57.5%)
2. The success of exclusive breastfeeding in BPM Vincent Ismijati is largely exclusive breastfeeding(52.5%)
3. No Relationship Behavior of Midwives KIE Exclusive breastfeeding with the success of exclusive breastfeeding in BPM Vincent Ismijati

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# FACTORS RELATED TO POSTPARTUM HEMORRHAGE IN INDONESIA

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## ABSTRACT

Indonesia as a developing country with high population growth is facing various health problems, one of them is Maternal Mortality Rate (MMR). In 2012, MMR in Indonesia was increased significantly from 228/100,000 live births in 2007 to 359/100,000 live births. The biggest factor causing maternal death in Indonesian area is hemorrhage with the percentage is 28%. The research was conducted to identify the factors related to postpartum hemorrhage in Indonesia. The data were collected in a Public Hospital in a district of Yogyakarta Province, Republic of Indonesia. 97 samples were recruited by systematic random sampling technique. Results showed that there were significant correlations between parity ( $p=0.001$ ) and mothers' age ( $p<0.05$ ) with postpartum hemorrhage. Therefore, it is suggested to increase the promotion of contraceptive program in order to prevent high parity and pregnancy among high risk maternal age.

**Key words:** Post partum hemorrhage

## INTRODUCTION

In 2014, the highest maternal mortality rate in D.I. Yogyakarta Province was happened in Bantul District attain 14 cases. The biggest causing of maternal mortality rate was hemorrhage (33%) and followed with eclampsia (28%) (Dinas Kesehatan Propinsi DIY, 2013). Postpartum hemorrhage causing by atonia uterine 50-60%, retensio placenta 23-29%, and genital tract laceration (4-5%) (Manuaba, 2007).

Severe postpartum hemorrhage incidence associated with parity and mothers' age. More frequent of pregnancy and labor process resulting to impairing of maternal uterus elasticity. The problem of uterus elasticity consequences to uterine contraction (Prawirohardjo, 2010). Another predisposition factors related to postpartum hemorrhage is mothers' age. Pregnancy among adolescent increase the risk of postpartum hemorrhage incidence.

Other predisposition factors which influence postpartum hemorrhage is age. If pregnancy happens during adolescence ages, the risk of postpartum hemorrhage increased as the growth period is taking place during adolescence ages who is in high need of optimum nutrition.

Meanwhile, during pregnancy, hemodilution is taking place as well. This can incline the risk of anemia which leads to hemorrhage during postpartum (PAHO, 2010). At the same time, the age of more than 35 years old is closely related to deficiency and decrease of immune system and many chronic diseases which cause anemia. Anemia causes weak uterine contraction during labor and postpartum as well as the risk of retained placenta which cause postpartum hemorrhage (Wiknjosatno, 2010).

## RESEARCH METHOD

Descriptive correlational research design was used to investigate factors related to postpartum hemorrhage at Panembahan Senopati Public Hospital of Yogyakarta Province, Indonesia. The medical record data becomes the data source in the research and thus, mothers who have labor process in Panembahan Senopati Public Hospital with complete medical record were recruited as the samples of the research. 97 samples were drawn using systematic random sampling technique. The research used descriptive correlational and cross sectional approach. The data were collected using secondary data in the form of medical record. Systematic random sampling was used in the research.

Descriptive analysis was used to describe the research variables. The correlation between labor type, parity, labor history, labor range, educational level, age, anemia status and postpartum hemorrhage incident. The statistical analysis used *Chi-Square*.

## RESULT AND DISCUSSION

**Table 1. Samples' Characteristics**

	Frequency	Percentage
<b>Gemeli</b>		
Gemeli	0	0
Singleton	97	100
<b>Education</b>		
Elementary	36	37,1
Senior High Schoole	50	51,5
Higher Education	11	11,3
<b>Pregnancy Range</b>		
< 2 years or > 4 years	47	48,5
≥ 2 years	50	51,5
<b>Labor History</b>		
Normal	86	88,7
Manipulated	11	11,3
<b>Anemia</b>		
Hb ≤ 11 gr%	26	26,8
Hb ≥ 11 gr%	71	73,2
<b>Labor Type</b>		
Spontaneous	87	89,7
Manipulated/SC/	10	10,3
<b>Parity</b>		
Risk	35	36,1
No Risk	62	63,9
<b>Age</b>		
Risky age	68	70,1
Non-risky age	29	29,9
<b>Postpartum Hemorrhage</b>		
Hemorrhage	21	21,6
No Hemorrhage	76	78,4

Secondary Data, 2015

Generally, the samples' characteristics in the research are singleton pregnancy (100%), Senior High School graduates (51,5%), pregnancy range of ≥4 years (51,5%), possessing normal labor history (88,7%), no anemia (73,2%), having normal labor in the last labor (89,7%).

According to data analysis using Chi-Square, it is revealed that factors related to postpartum hemorrhage are parity (p=0,001) and mother's age (p<0,005).

The result shows that 6 (28,6%) of 21 mothers who have postpartum hemorrhage suffer from anemia. Statistical analysis result shows no correlation between anemia and postpartum hemorrhage. At the 3<sup>rd</sup> stage of labor process, every mother gets 10 unit of oxytocin injection in order to support adequate uterine contraction. This definitely can decrease the risk of postpartum hemorrhage incident although mothers have anemia.

Most of the samples in the research have no risk parity (parity 1-2) with 62 samples (63,9%), while the risky parity (≥3) were 35 samples (36,1%). Even though the percentage of risky parity is lower than no risky parity, some of mothers have postpartum hemorrhage were risky parity mothers (66,7%). Mochtar (2012) states that one of predisposition factors of postpartum hemorrhage caused by atonia uterine is parity. Uterine which has experienced many labors tend to be inefficient during labor process. This can increase the risk of hemorrhage during labor and postpartum period (Oxom, 2010). Uterine experiences muscle and tissue change in every pregnancy and labor. The change decreases uterine ability to perform an adequate contraction to compress uterine blood vessels after placenta is released from uterine wall. This increases the risk of women who had high parity to get postpartum hemorrhage (Depkes RI, 2010).

Mother's age when facing pregnancy and labor highly determines her health during pregnancy and labor. The older age makes more mature way of thinking and thus, it is expected that health provider visit for



antenatal care regularly is higher. Health reproductive age is between 20 – 35 years old because in that ages, a woman has mature reproductive organ (Prawirohardjo, 2010).

Wiknjastro (2010) explains that maternal mortality among woman who have pregnant and labor under 20 years old have 2 - 5 times more risk compared to maternal mortality in the age of 30 – 35 years old. A woman who is pregnant under 20 years old has more risk of anemia related to the growth period which needs complete nutrition. Meanwhile, woman who is pregnant more than 35 years old has the risk related to deficiency and declining of immune system and various chronic diseases which cause anemia.

The result of the study to postpartum hemorrhage incidents at Panembahan Senopati Bantul Public Hospital shows that there were 21 cases of postpartum hemorrhage (21.6%). However, 76 of the respondents (78.4%) did not experience postpartum hemorrhage. Although hemorrhage rate had smaller presentation, it needs to get serious attention since hemorrhage is the highest cause of maternal mortality. Hemorrhage, in the study, mostly happened on the respondents who had risky parity and ages. It happens because when the placenta gets out, the blood vessels of the uterine that previously stick to placenta is opened. The muscle of uterine has special structure, so when there is contraction, blood vessels can be confined, and the hemorrhage stops. However, women who have more than three parity and who are aged < 20 years and > 35 years old have higher risk in experiencing weak uterine contraction (Prawirohardjo, 2010).

The distance among pregnancies on most of the respondents was  $\geq 2$  years with 50 respondents (51.1%), with hemorrhage incidents < 2 years on 14 respondents (14.4%) and  $\geq 2$  years on 7 respondents (7.2%). The result shows that most of the women who experienced hemorrhage were those had distance of pregnancy < 2 years. The study is supported by Manuaba

(2007) who states that short distance among pregnancies will cause a woman not to have enough time to cure her body condition after the partum process, so unfit condition of the woman can be a factor to cause maternal and baby mortality.

Chandharan, E & Arulkumaran, S.S. (2013) mention that the distance among pregnancies as predisposition factor of postpartum hemorrhage due to respective partum processes in a short time period can cause bad uterus contraction. Woman body needs around 2 until 4 years to completely cure the body condition before getting ready for the next pregnancy. The result of previous study conducted by Ujjiga Thomas T. A. et al (2014) explains that parity and women's age have significant correlation on postpartum hemorrhage incidents; parity with value: (OR = 3.6, CI = 1.9 – 10 and  $p < 0.005$  /  $p = 0.0026$ ); and women's age with value: (OR = 5.32, CI = 2.23 – 12.68) and  $p$  value < 0.005 /  $p = 0.000074$ . The study mentions that *multiparity* women have 4 times bigger risk to experience hemorrhage compared to *primipara* due to less elastic of uterus muscles that can cause weak uterus contraction.

## CONCLUSION

There was significant correlation between women parity and postpartum hemorrhage incidents at Panembahan Senopati Bantul Public Hospital in 2015 with  $p$  value = 0.001 ( $p < 0.005$ ). it is caused by women with parity more than 2 (*multiparity*) can trigger repeated uterus over-distention, so the uterus performance becomes inefficient. The impact is when contraction happens, the condition of the uterus becomes inadequate and can cause hemorrhage .

There was also significant correlation between age and postpartum hemorrhage incidents at Panembahan Senopati Bantul Public Hospital in 2015 with  $p$  value ( $p=0.005$ ). It happens because too young aged women (<20 years old) do not have mature reproduction system, so it can give impact during partum process by inadequate uterus contraction that can



lead to hemorrhage cases. On the other hand, too old aged women (> 35 years old) have the decrease of reproduction system and the other systems, so during the partum process the women can be easily exhausted. Thus it can bring impact to the performance of uterus that can lead hemorrhage incidents.

Optimum early detection in every woman both in pre-conception period and in conception period is significantly needed to analyze the risky factors and to give the most appropriate care.

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# PERSONAL HYGIENE AND KNOWLEDGE OF YOUNG WOMEN IN MAINTAINING THE CLEANLINESS OF THE GENITALIA TOOL WITH THE INCIDENCE OF VAGINAL DISCHARGE

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## ABSTRACT

Whitish in adolescents can occur roughly 6 months to 1 year before a teenager was obtained first menstruation, and continued after they get their menstrual period. At this time expected to teenagers started to pay attention to personal hygiene (*personal hygiene*) is primarily a tool genitalia. One of the effects of lack of personal hygiene keeping the genitalia tool is the occurrence of abnormal vaginal discharge (*pathology*). Abnormal vaginal discharge is a discharge that contains leukocytes caused by infectious microorganisms in the vagina, which is characterized by the increase in volume, there is a peculiar smell, change in consistency and color, as well as itchy. The purpose of this study was to determine relationship personal hygiene and knowledge of young women to keep their genitalia tool with the incidence of vaginal discharge in high school Pembina Palembang. The design study is a quantitative research *analytic survey* with design, *cross-sectional* sampling in this study conducted by sampling techniques *random* and methods *systematic random sampling* with a total sample of 138 respondents. The results of the statistical test *Chi-square* shows that there is a correlation *personal hygiene* with the occurrence of whitish with  $p\text{ value} = 0.016$  ( $p\text{ value } \alpha \leq 0.05$ ) and there was a significant relationship between knowledge relationship with the incidence of white girls with  $p\text{ value} = 0.007$  ( $p\text{ value } \leq \alpha = 0.05$ ). It can be concluded that there are many young women who experience vaginal discharge in high school Pembina Palembang in 2016. Thus it is expected that the young women to be able immediately to the health services when it was whitish and health officials to be more proactive in UKS program in preventive efforts by providing information counseling.

**Keywords:** Personal Hygiene, Knowledge, Genesis whitish

## INTRODUCTION

Adolescence is marked by the onset of puberty is the time a woman is able to experience the conception that menstruation / menarche, and their wet dreams on son male. At that time among adolescents experience sexual development, maturation of sexual organs start to function, either for reproduction (procreation) and recreation (have fun) (Permatasari et al, 2012).

In adolescent approximately 6 months to 1 year before a teenager was obtained first menstruation, and continued after they get their menstrual period usually experience vaginal discharge. At this time expected to teenagers started to pay

attention to personal hygiene (*personal hygiene*) mainly health tool genitalia. One of the effects of lack of personal hygiene keeping the genitalia tool is the occurrence of abnormal vaginal discharge (*pathology*). Abnormal vaginal discharge is a discharge that contains leukocytes caused by infectious microorganisms in the vagina, which is characterized by the increase in volume, there is a peculiar smell, change in consistency and color, as well as itchy (Rismalinda et al, 2010).

According to the *World Health Organization* (WHO) in 2007, the prevalence rate in 2006, the ratio of women in the world who have experienced vaginal discharge 75%

while European women who experience vaginal discharge by 25%. BKKBN (2011), in Indonesia as much as 75% of women had experienced vaginal discharge at least once in their lives and 45% of them could experience vaginal discharge two times or more.

In South Sumatra patient discharge in 2012 covers Indonesia reached 38 635 people as many as 539 people including died of a note by the health department of South Sumatra. The number of cases of vaginal discharge in South Sumatra in January as many as 286 cases and 159 cases in the early to mid-February 2012. The number of people since January 2012 reached 445 cases (PHO in Muslim, 2013).

Meanwhile, based on the scope of the data can be in Palembang teenagers who suffer whitish in 2010 from January to December amounted to 431 teenagers, in 2011 amounted to 620 adolescents, and in 2012 amounted to 416 adolescents (the City Health Office in Muslim, 2013). Furthermore, based on the scope of data that can be at the health center Kertapati in 2014 of 105 adolescents only 36 teens who suffer from vaginal discharge (PHC Kertapati).

Based on this background, the authors are interested in examining the issue with the title "Relationship Personal Hygiene and Knowledge Young Women In Maintaining Cleanliness tools genitalia with Genesis Discharge in High School Pembina Palembang.

## RESEARCH METHOD

The research design was *analytical survey* or research that tries to explore how and why health phenomenon that happens, then analyzing the dynamics of the correlation between phenomena, whether between the risk factor and the effect factor, with approach *cross sectional*, which is to see the relationship of personal hygiene and

knowledge (independent variables) of young women to keep their genitalia with events discharge tool (the dependent variable).

The sample in this study is partly grade XI science and social studies. The sample size in this study is determined according to the theory work table Notoatmodjo and obtained 138 samples. Criteria for inclusion in this study were young women aged 17-21 years and are willing to be the subject of study.

Engineering sample selection of this research is *Random Sampling* the method of *Systematic Random Sampling* is sampling by dividing the number of samples in want, the result is that the sample interval numbers 2.

Operational definitions of the dependent variable is if the mucus a whitish color, odor, and itching. While the operational definition of the independent variable of personal hygiene is an action that young women in performing self-care to maintain the cleanliness of the tools genitalia. Operational Definition Knowledge is the stuff pa is known about white girls. Data collected by spreading questionnaire to the respondent.

## RESULTS AND DISCUSSION

**Tabel 1**  
**The Frequency Distribution whitish Respondents By Genesis**

Variabel	Frequency (f)	Percentage (%)
<b>Genesis Whitish</b>		
Yes	77	55.8
No	61	44.2
<b>Total</b>	<b>100</b>	<b>138</b>
<b>Personal hygiene</b>		
Good	43	31.2
Less	95	68.8
<b>Knowledge</b>		
Good	54	39.1
Less	84	60.9

Based on table 1 it can be seen that of the 138 girls, who suffered whiteness as many as 77 (55.8%) of respondents.

Based on table 4.2 it can be seen that out of 138 respondents, the majority of respondents with *personal personal hygiene* is less by 95 (68.8%).

Table 2  
Relationship *Personal Hygiene* with Genesis Discharge

<i>Personal Hygiene</i>	Genesis Whitish				Total		$\alpha$	P value
	Yes		No		N	%		
	N	%	N	%				
Good	17	39,5	26	60,5	43	100	0,05	0,016
Less than	60	63,2	35	36,8	95	100		
Total	77		61		138			

In table 2 above can be seen that of the 43 respondents with *personal hygiene* good by 17 (39.5%) of respondents who experience vaginal discharge and the occurrence of 95 respondents with *personal hygiene* less than 60 (63.2%), who experienced vaginal discharge. Based on the statistical test using *chi-square* p value is obtained = 0.016 is smaller than the 5% significance level (p value: 0,016 <  $\alpha$ : 0.05). This means showed no significant relationship between *personal hygiene* with events discharge in high school Pembina Palembang.

Tabel 3 Relationship of Knowledge Young Women with Genesis Discharge

Knowledge	Of Genesis Whitish				Total		$\alpha$	P value
	Yes		No		N	%		
	N	%	N	%				
Good	22	40,7	32	59,3	54	100	0,05	0,007
Less than	55	65,5	29	34,5	84	100		
	77		61					

In table 4.5 above can be seen that out of 54 respondents with a good knowledge of young women by 22 (40.7%) of respondents who experience vaginal discharge and the occurrence of 84 respondents with less knowledge as much as 55 (65.5%), who experienced vaginal discharge.

Based on the statistical test using *chi-square* p value is obtained = 0.007 is smaller than the 5% significance level (p value: 0,016 <  $\alpha$ : 0.05). This means showed no significant relationship between the knowledge of young women in high school events whitish.

## DISCUSSION

Based on bivariate analysis p value <0.05 so that the personal hygiene with whitish events in Palembang high school coaches have a meaningful relationship. This is consistent with the results of research conducted by Indriyani et al (2012), the results support the hypothesis using statistiktest *Chi-square* with p value = 0.004 (p value <0.05). Showed that there was a significant relationship between personal hygiene with the incidence of vaginal discharge.

*Personal hygiene* is a health efforts of individuals to be able to maintain their health, improve and enhance the values of health and prevent the onset of disease (Susanti and Ash, 2013). *Personal hygiene* includes skin care, head and hair, eye care, nose, ears, toenails and hands, genitalia, the whole body skin and body care as a whole (Maryunani, 2011).

One of the factors that cause vaginal discharge is *personal* a poor hygiene. How to wash the vagina that is not true and is not clean, damp pubic area, vagina scratching with dirty hands, rarely change pads during menstruation, and so forth. This is what causes the bacteria to easily enter and

expand, so that women experience vaginal discharge (Trisna, 2012). For women *personal hygiene* very should be maintained, especially in the area of femininity. *Personal hygiene* is bad will facilitate bacteria, fungi, parasites and even viruses to easily expand. Because the worse the *personal person's hygiene*, then the greater the likelihood of vaginal discharge or inflammation of the genital and reproductive organs. This of course will cause inconvenience to the students during activity.

According Susanti and Abu (2013), the higher the level of *personal person's hygiene*, the more likely to suffer from vaginal discharge and vice versa the lower the *personal hygiene* level, the more likely to suffer vaginal discharge. This occurs due to *personal hygiene* good can prevent the occurrence whitish vaginal discharge this is due to occur due to lack of personal hygiene. Personal hygiene is good not only can prevent the discharge but also to avoid other diseases, such as hives, mushrooms and so on.

Based on the results of the study in SMA Pembina Palembang shows there are still many who experience vaginal discharge. Drawn conclusions based on observations at the time of the study, this happens because it is known mostly *personal hygiene* in adolescent girls is still a lack of understanding in maintaining personal hygiene as was how to keep the moisture in the vagina (still using underwear nylon), how to wipe, and the use of soap and cleansers womanhood.

### **Relationships knowledge Young Women with Genesis whitish**

The results of this study showed that there was a significant relationship between the knowledge of young women with the incidence of vaginal discharge in high school Pembina Palembang.

This is consistent with the results of research conducted by the Goddess and Abu (2013), the results of the study support statistik hypothesis using test *Chi-square* with *p value* = 0.001 (*p value* < 0.05). Showed that there was a significant relationship between the knowledge of young women with vaginal discharge events.

Factors that led to the development of vaginal discharge is partly because knowledge is low, especially teenagers who are biologically immature *serviknya*. Because in transition, then in adolescence often found problems that are closely related to the growth of his body. Especially in this case is the reproductive organ that had a large impact on the lives of young people in the future (Susanti and Ash, 2013).

For That is very important for young women to obtain adequate knowledge of reproductive health in particular discharge so that they know how they should behave when faced discharge will affect the whiteness that happened, whether behave healthy or unhealthy (MOH, 2009).

In teenagers lack of knowledge and information about hygiene tool genitalia likely to impact the behavior of adolescents in maintaining the cleanliness *genetialianya* especially female organs are very vulnerable diseases that cause infections in the genitals. Because knowledge is very influential on how we can maintain the health of the reproductive organs, especially the female organs because the female organs are very susceptible to vaginal discharge. If the discharge is not promptly treated can cause pathological things that can cause infection in organ genitalia. Therefore, a good knowledge about reproductive health for adolescents be given early. (Notoadmodjo, 2010).



According to Susanti and Abu (2013), the higher the person's knowledge, the less likely he experienced something whitish and vice versa, the lower the person's knowledge, the more likely to experience vaginal discharge events. This is because by having a high degree of knowledge about the whiteness, the young women are not able to prevent vaginal discharge, whereas those who had low knowledge resulted not understand about the symptoms and how to prevent the occurrence of vaginal discharge so that when the symptoms of vaginal discharge appears that young women do not know that did not make the effort prevention so that it can suffer from vaginal discharge.

Overall it can be concluded that there are many young women in high school Pembina Palembang, who experienced vaginal discharge. Based on observations at the time of the study, this happens because of a lack of information and knowledge about vaginal discharge. For example there are girls who can not distinguish normal vaginal discharge or pathological and they also do not know how to keep the moisture in the area of her nature. So there are many young women experience vaginal discharge. In accordance with the existing theory of knowledge is essential to ensure the growth and development of adolescent optimally.

## CONCLUSION

Based on the results of research on "the relationship personal hygiene and knowledge of young women in maintaining the cleanliness of the tools genitalia with events discharge in high school Pembina Palembang 2016" it can be concluded that There is a relationship between personal hygiene with events discharge in high school Pembina Palembang 2016  
There is a relationship between knowledge of young women in high

school with whitish events Pembina Palembang Year 2016.

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# MOTIVATION TO LEARNING OF PARTOGRAPH RECORDING IN CASE STUDY METHOD ON SOPHOMORE OF DIPLOMA III PROGRAM OF SARI MULIA MIDWIFERY ACADEMY BANJARMASIN

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## ABSTRACT

**Background:** The partograph is a composite graphical record of vital observations during the course of labor in its progress, maternal and fetal condition, the care given to the patient, as a tool of early identification of labor complication and carry out appropriate clinical decision if and when necessary. Based on sophomore students of third diploma program of Sari Mulia Midwifery Academy, 10 students said that they learned partograph from their lecturers, they have their own way of learning partograph to understand itself, eight of the students said that they would prefer to learn partograph with friends and from 2 next student said they would prefer learn on their own and learn with the lecturer than with friends.

**Objective:** Analyzed the correlation of environmental condition and learning motivation to learning of partograph recording in case study method on sophomore of diploma III program of Sari Mulia Midwifery.

**Methods:** The method used was analytical survey using cross sectional approach. The population in this study were 107 sophomore of diploma III program of Sari Mulia Midwifery Academy Banjarmasin. The sample was taken by simple random sampling of 52 students. The analysis by Chi-square and fisher exact test.

**Results:** There was a correlation to the environmental conditions based on the analysis of learning of partograph recording in case study method with Fisher Exact Test  $p$  value = 0,039  $< \alpha$  (0,05) and there was a correlation between learning motivation to learn against learning of partograph recording in case study method based on the analysis Chi-square test  $p$  value = 0,012  $< \alpha$  (0,05).

**Conclusion:** There was a significant correlation between the Environmental condition to learning of partograph recording in case study method on sophomore of diploma III program of Sari Mulia Midwifery Academy Banjarmasin and there was a significant correlation between learning motivation to learning of partograph recording in case study method on Sophomore of diploma III program of Sari Mulia Midwifery Academy Banjarmasin.

**Key words:** learning, motivatin, partograph recorded

## INTRODUCTION

Midwifery education is one of educational institution that educates midwives, needs to prepare the health care who are ready to work and is skillful enough so that they can face the challenge and demand from the community. Because education is important thing for the prosperity of the country. Good education will generate the high quality human resources. Good education is an education which able to create a good relationship with the teacher, so the student can participate actively in learning process. (Trislijayanti, 2015).

In Sari Mulia Midwifery Academy in Banjarmasin, the quality aspect of the students has become a strong commitment since it was established. It seemed from the learning process given and the availability of learning facilities which are sufficient, the buildings, comfortable classrooms, and other learning facilities. Sari Mulia Midwifery Academy in Banjarmasin is always facilitate the students to be better. The environmental condition which is comfortable will create successful learning, such as those facilities that Sari Mulia Midwifery Academy has given to the students. So we expect that all the students whom we taught will become a

high quality, independent and competent midwife.

Beside the facilities, peer circumstances is another factor that able to influence the grade point of the students. Peer circumstances is where sensitive and quite regularly interaction happens with people in the same level either to age or status, which in the activities can give a positive or negative impact. A peer can Peers can enhance the spirit and motivation of the student while they are in the classroom following the learning activities, it is because students feel comfortable when learning as well as ask questions about the lecture material with their peers.

A student's learning process needs a teaching that is expected to be able to give motivation to enhance their self confident. Motivation is a Motivation is one determinant of success in achieving a certain goal. The better motivation in a person to learn, the better the learning results obtained, the motivation is the driving force of the individual to perform learning activities to increase knowledge and skills and experience. Motivation is Motivation is a thing that encourages a person to take action to do something (Sardiman, 2011).

Students as individuals that develop maturity and try to understand objectively the capability themselves with increasingly complex environmental conditions. Of course students have different competences, not least in developing cognitive processes to survive in their system when they joined the new environment, new friends and interact with friends who will influence the attitudes, a change of mindset and behavior, this condition indicates the environmental condition of the person has correlated with learning (Mudyahardjo, 2012).

Intranatal Care subject in which there is sub subject of partograf learning which is a compulsory subject for students of

Sari Mulia Midwifery Academy in Banjarmasin. This subject is taken by sophomore. This subject gives students knowledge on how to provide midwifery care during labor which is included of making clinical decision and also learning of partograph recording, so this subject is very important for a midwifery students, so that when she graduated and have become a midwife, she is able to provide delivery care properly.

Results of a preliminary study in AKBID Sari Mulia Banjarmasin which is done to 107 students, then they had been asked questions to 10 students. They all said that learning of partograph recording is a significant sub subject, learning of partograf recording seems easy but in fact it is very difficult and they have different learning motivation, out of 10 sophomores said after they learn how to record the partograph from thoir lectures they have different ways of learning the partograph recording to deepen learned itself, 8 of 10 students said that after they learned about partograph recording from their lecturers, they like to discuss or learn partograf with friends, in which is more comfortable and easy, from 2 other students say that they would prefer to learn by themselves and learn with the lecturer than learn something with friends, learn by themselves makes them more quiet and more able to focus on learning, while learn with friends is hard to focus on the lesson itself since they often talk unnecessary things than concern on the lesson itself.

Based on the background, the researchers are concern to conduct a study about "Correlation of environmental condition and learning motivation to learning of partograph recording in case study method on sophomore of diploma III program of Sari Mulia Midwifery Academy Banjarmasin".

The objective of this study is to analyze correlation of environmental condition

and learning motivation to learning of partograph recording in case study method on sophomore of diploma III program of Sari Mulia Midwifery Academy Banjarmasin

## RESEARCH METHODS

This study used analytical survey method and cross sectional approach. The sample was taken by simple random sampling. Sample in this study was 52 persons, that were divided into 2 classes. In A class, there were 26 out of 54 students taken as sample. While in another class, 26 out of 53 students taken as sample.

Giving the questionnaires about environmental condition and learning motivation and also a piece of paper contains case to be recorded in partograph to the respondents was the first step that was done by the researcher, which was given to students in class A and B, the questionnaires were answered and had been checked by the researchers. Data was analyzed by computerization technique by  $\alpha$  0,05. The case for partograph recording then were analyzed manually by researchers according to the partograph which was recorded by researchers based on the same case. Then the cases that has been analyzed would be classified as competent or incompetent.

## RESULT AND DISCUSSION

Based on the study which had been done on 52 sophomores, then the result was:

**Table 1**  
**Environmental Condition on Sophomore**

Environmental Condition	F	p
Bad	12	23,1
Good	40	76,9
Total	52	100

Based on table 1 above, we can see that frequency of environmental condition or interaction with peer in good category was the highest, as amount as 40 students (76,9%).

**Table 2**  
**Learning Motivation on Sophomore**

Learning Motivation	F	p
Low	24	46,2
High	28	53,8
Total	52	100

Based on table 2, we can see that the frequency of students with high motivation on learning was the highest, as amount as 28 students (53,8%).

**Tabel 3**  
**Learning of Partograph Recording in Case Study Method by Sophomores**

Partograph Recording	F	p
Competent	18	34,6
Incompetent	34	65,4
Total	52	100

Based on the table above, we can see that the frequency of incompetent student in partograph recording is 34 students (65,4%).

**Table 4**  
**Correlation of Environmental Condition to Learning of Partograph Recording in Case Study Method**

Environment condition	Partograph Recording				Total		Exact sig (2 sided)
	Incompetent		Competent		N	%	
	N	%	N	%			
Bad	11	21,1	1	1,9	12	23,1	.039
Good	23	44,2	17	32,7	40	76,9	
Total	34	65,3	18	34,6	52	100	

The result of this study on 52 sophomores in Sari Mulia Midwifery Academy Banjarmasin in 2016 about the correlation of environmental condition to learning of partograph recording in case study method that there were 40 respondents (76,9%) has good interaction with their own environmental

condition who divided into 23 respondents (44,2%) were incompetent in partograph recording, and on the contrary 17 respondents were competent in partograph recording. Based on the result of Fisher's Exact test which was  $p\text{ value} = 0.039 < \alpha (0.05)$  so the  $H_0$  was declined. The conclusion of the test that there was correlation between environmental condition with learning of partograph recording.

**Table 5**  
**Correlation of Learning Motivation to Learning of Partograph Recording in Case Study Method**

Learning Motivation	Partograph Recording				Total		Asymp. Sig. (2-sided)
	Incompetent		Competent				
	n	%	n	%	n	%	
Low	20	38,4	4	7,7	24	46,2	,012
High	14	26,9	14	27	28	53,8	
Total	34	65,3	18	34,7	52	100	

The result of the study on 52 sophomores of Sari Mulia Midwifery Academy in Banjarmasin in 2016 about the correlation of learning motivation to learning of partograph recording in case study method that there were 28 respondents (53,8%) has high motivation to learn, 14 out of 28 respondents (26,9%) were incompetent in partograph recording, and on the other hand 14 respondents (27 %) were competent in partograph recording. Based on the analysis of Chi-square, the result was  $p\text{ value} = 0.012 < \alpha (0.05)$  so the  $H_0$  was declined. The conclusion of the test was that there was correlation of learning motivation to partograph recording.

Based on the table 1, the result of this study about environmental condition (peer circumstances) was that there were 40 students have good circumstances (76,9%). Based on the data, we know

that if a person has good circumstances in interaction side with their friends, the person would be better in learning process. The factors that influence the quality of environmental condition itself is based on the questionnaire that respondents will ask their friends if they have any difficulties when they learn something, it is appropriate to the questionnaire item about enhancing their capabilities by having any interaction with their own friends to understand more about partograf to enhance their capabilities or skill in partograph recording.

This study is appropriate to the study that was done by Desmita (2009) that being a person that loved by their friends will make that person be more comfortable and happy on themselves.

This study is also appropriate to the study that was done by Yudha and Idri (2012) that the social influence of peers' role as a model, instruction strategy or feed back (environmental element to student) are able to influence on students' personal factors such as goal, efficacy sensitivity on duty (explaining the next session of the lesson), attribution (the conviction of success and failure), and self-regulation process such as planning, self monitoring and control on disturbance. Whereas, the interaction model between environment, individual, and behavior are both-sides interaction which determine each other so on that process, self regulation could be made in optimally evaluation accomplishment.

The researchers opined that good environmental condition (peer interaction) could influence someone in learning process by positive attitude that will determine the achievement or can give negative impact on learning process they get, environment also influence on students' enhancement of knowledge and skill. Students can adapt on any environment such as physical, biological, and social will be easier to



understand the lesson given, so the skill will be better too. Students keep the environment for being conducive so the learning process will be more comfortable.

This study is appropriate with Yamin's theory (2007) that non-physical environment has big role in influencing on learning condition especially in setting of learning condition, appearance, pedagogic, peer interaction, organization and matter of lesson well, that appropriate on students' capabilities and development that oriented more in process not matter. Influence of environment in physical, biological, even social around that influences someone's behavior so the encouragement and influence of environment will increase individual motivation to do something.

Based on tabel 2, the result of learning motivation is known that most students who has high learning motivation as much as 28 respondents (53,8%), it is appropriate with the statement on the questionnaire, most of students with high motivation were agree that "I join the learning of partograph recording because I want to be a smart midwife in observing delivery process". It is appropriate to the questionnaire item which is in themselves that motivation is accompanied by happiness and it will make the person be satisfied which we could call as interest.

This study is as the study which is done by Sardiman (2011), motivation will be stimulated because of the person's goal. So the motivation in this case is a respond of an action which is a goal. Motivation arises from within human, but it appears because of another stimulation, which in this case is as a goal. This goal will related to the needs, learning motivation is one of physical aspect that helps and encourage a person to reach his goal. So everyone must have motivation, because motivation is basic modal to reach their goal.

This study is also appropriate to study which was done by Fitri Wulandari (2014), the strongest motivation is an intrinsic motivation that comes inside a person, because we realize that we want to do something not because of wage, compliment, punishment, etc, but because we really wants that thing. This statement was supported by Gibson et.al in book which is written by Notoatmodjo (2010) that state that motivation is all condition that encourages person from the inside which describe as desire, willing, encouragement, or condition of someone from the inside that activate or drive them.

Researcher opined that motivation is able to give positive impact to student, because by having high motivation, the students will realize their need to reach the goal they want, especially in learning, students need to get an encouragement that able to drive them to be more actively in learning. Because, by having learning motivation, students will try new things in understanding the matter of a lesson which is given by their lecturer. Especially in the learning of partograph recording, by more actively learn it, they will understand the partograph and they will be able to be more skillful in partograph recording.

For variable of partograph recording, students will be given a case that they had to record on partograph. Then it would be analyzed manually by researchers according to the partograph that had recorded by the researchers, the researchers then classified the respondents whether they were competent in partograph recoring or not. Based on table 3, from a piece of paper that contains a case of partograph which is recorded by students, we got that 34 respondents (65,4%) were incompetent in record the partograph itself, based on a case itself were mostly full of mistakes in the front part especially in part of cervix dilatation, descended and



the time of dilatation itself in the partograph.

This study is appropriate on Arsi & Sujianti's theory (2013) that the using of partograph routinely could make the care provider be sure that the maternal and fetal get intranatal care that was safe, adequate, give on the right time and also help to prevent the complication that threaten their life. *Evidence based* partograph has proven effectively in preventing prolonged labor and decreasing any kind of surgery that might increasing the fetal health effectively. Because of partograph could be an early identification to help the care provider taking early decision of when they do the referral.

This study is also appropriate to study which is done by Fitri Wulandari (2014) that partograph is very important to be done by the birth attendant to observe any complication that might be happen in any labor and help the midwife to make decision whether it is necessary to carry out appropriate clinical decision or do referral.

Researchers opined that by learning partograph well, it will help us to record the partograph well and we are able to decrease the Maternal and Infant Mortality Rate because we can make right clinical decision, students should realize that partograph is important, and have to be more actively learning how to record the partograph by learning it routinely with different cases to practice their skill in partograph recording.

This study is appropriate with study which is done by Yulizawati (2015), it shows that there is a significant rise after cooperative learning model was used in learning of partograph recording, it is because of communication between students, they help each other that can help students to develop and to use their analytical thinking and group cooperation, make positive interpersonal relation between students, applying the

guidance by their friends, and create the environment that respect on scientific values.

It is according to Santrock (2011), who stated that "generally, the involvement of another people will make a chance to students to evaluate and fix their understanding, when they hear other people's arguments, and when they participate in understanding something together. Which is in student's condition, the peer relationship will bring positive and negative impact into their learning process. It is also because of the understanding given by their seniors that partograph is so hard to understand and only some of them passed the test, it made students give up in learning partograph without any effort to understand it more. The understanding like that had to be avoided because it will make them loss and break their enthusiasm to learn partograph itself.

The researchers opined that environmental condition (peer interaction) might give good impact to learning and there there so many students were incompetent, while they should have been more actively ask and share information to their friends, and also students should be able to use the campus' facilities that is given to them especially campus area which is not use optimally. One of them is the internet connection that could be access by students, but they don't use it to search important information such as partograph. So it made them lack of skill in partograph recording. Students should be more actively search information that will be useful for them such us download some example of cases of partograph and its explanation of how to do it, and they can discuss it with their friends in their spare time.

Based on table 5, we got that 28 respondents (53,8%) has high motivation top learn, 14 out of 28 (26,9%) are incompetent in partograph

recording, while the rest (27 %) are competent in partograph recording and they have high motivation to learn. According to analysis result of Chi-square test, we got  $p\text{ value} = 0.012 < \alpha$  (0.05) so the  $H_0$  is denied.

This study is appropriate to Sardiman's theory (2011), motivation is the basic thing to reach the goal, so the motivation has to be the trigger of all activities they do. This study is appropriate to study which is done by Dwi Hastuti (2013), the result of Fisher Exact test showed that there is correlation between motivation ( $p = 0,013$ ) and midwives attitude ( $p = 0,045$ ) on comprehensiveness of partograph recording in hospital and midwifery clinic in the working area of branch of Indonesian Midwifery Association in Ngemplak Boyolali.

The result of this study is supported by the study which is done by Yayu Puji Rahayu (2013) with  $p\text{ value} 0,001 < \alpha$  (0,005), which means as there is significant differences on pre and post of partograph course on knowledge and skill of students in three years diploma of midwifery program in partograph recording. Because the partograph learning needs knowledge, skill and also motivation, because motivation can drive someone and also as their need, it also comes naturally on fulfill their own need to reach their goal. So the students can learn it routinely based on various cases so they will be more competent and they have to realize how important partograph is to help midwife lowering the Maternal and Infant Mortality Rate.

Researchers opined that students also can use role play method to learn partograph where 1 student acts as the delivery women, 1 student acts as the midwife that supervised by their lecturer as the director who gives them case to be done. So when the students face the real case of delivery process they will be well prepared and be more skillful in partograph recording, they can discuss

with their friends that understands more about partograph recording.

## CONCLUSION

Based on the result of the study, environmental condition that has good quality was the highest as much as 40 students (76,9%), most students that has high motivation to learn were as much as 28 students (53,8%), and there were 34 students were incompetent in partograph recording (65,4%).

Based on the result, we can conclude that there is correlation between environmental condition and learning motivation to learning of partograph recording in case study method on sophomore. There is correlation between environmental condition to learning of partograph recording in case study method based on  $p\text{ value} = 0.039 < \alpha$  (0.05). while there is correlation between learning motivation to learning of partograph recording in case study method based on  $p\text{ value} = 0.012 < \alpha$  (0.05).

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## DELIVERY ASSISTANCE ON IMPROVED SKILLS-LAB AMONG STUDENTS AT MIDWIFERY ACADEMY

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### ABSTRACT

*According to Guthrie, skill contains many actions, including specific movements: therefore, there is a need lot of repetitions to master the skill. It also applies in the skill of assisting a delivery. It covers lot of specific actions and needs so many repetitions to master it. Based on the theory, midwifery students have been given some targets for delivery assistance during their education program, to develop and maintain their skill. The purpose of this research is to know whether there is a significant skill difference between the students who have greater number of targets to the students who have smaller number of targets.*

*This is a comparative research using cross-sectional approach. Population in this research is midwifery students who meet the criteria that have been set up by the researcher for specific purpose. Sampling technique is purposive sampling that consists of 36 respondents. Data analyzed is by non-parametric statistic using Kruskal Willis test to test three variables or more that have no normal distribution.*

*The data show that most respondents are in the average group for the number of normal deliveries or 67% of all respondents. Data analysis shows that there is no significant skill difference between the student with greater number of targets and those with smaller number, with p value higher than 0.05 ( $p=0.386$ ).*

**Key words: Skill, number of target**

### INTRODUCTION

The skills are acquired through learning activities. This also applies to delivery assistance skills that must be mastered by students. One of the activities carried out in learning is repetition or exercise that is not done only once. Some leaders like Thorndike, Gagne, and Guthrie state their opinions that the repeated activity or exercise will improve individual skills in performing a particular job. Over time, more practice brings about being more skilled individual in doing a job.

The more often a behavior trained or used, the stronger the association. This law is actually reflected in the phrase 'practice makes perfect', which means that more practices will result in more skilled person to do something or becoming more competent (Hergenhahn, 2009). This also applies in the process of learning skills in delivery assistance. Thus, targets with a certain skills to be achieved by the students to finish their education program are made. Of course, the hope is that more and more frequent delivery assistance, then the

student skills will be better and later after they graduate from education, they can directly be involved in the world of work.

According to Guthrie, skill consists of a lot of action and the action consists of many specific movements, so it takes many repetitions to be able to master a certain skill. Doing delivery assistance is a skill that consists of many complex actions, so it takes a lot of repetition to become skilled in making good and right delivery assistance. Students who have more delivery assistance practices repeatedly, as evidenced through the Maternity Care report, should ideally have a good score value of laboratory skills in making delivery assistance.

Central Kalimantan province has four (4) higher educational institution that organize Midwifery Diploma program, consisting of 1 (one) public institution as well as three (3) private institutions. Three institutions are in the city of Palangkaraya, while one institution is in the district.

Target of normal delivery assistance to each practitioner is 50 times. According to the Provincial Health Office of Central Kalimantan in the book Health Profile of Central Kalimantan, the number of births in 2014 in Central Kalimantan province amounted to 47,474 births (Central Kalimantan Health Office, 2014).

When viewed roughly, that number is more than enough to meet the ratio of the number of cases with the practitioner. Based on the above projections, the number of achievement of normal delivery assistance target by midwifery students should be achieved optimally. Therefore, students gain clinical learning experience as much as needed. Yet, this target amount can surely vary from one student to another. There is a number of students with not too high achievements, in the laboratory the students pass with a high enough score value. However, there is also a number of students with high achievement but their laboratory scores are within the limit pass.

It becomes important to study because at the end of the education program, the student will be assessed their skills through skills-lab examinations not with direct patients considering ethical considerations. Thus, this study aimed to find out for sure if there are significant differences between the number of students achieving the more target of delivery assistance to students whose accomplishments are lacking and the skills laboratory. This study result is expected to increase the success rate of students in overcoming obstacles passing final exams with only one exam time.

## RESEARCH METHODS

This research was a comparative study using a cross sectional approach. The study period was 6 (six months) including the preliminary study that began in February until July 2016. Data collection was performed at the Academy of Midwifery Betang Asi Raya Palangkaraya. The population in this study was all students at the beginning of the semester V (five) that met the criteria totaling 36 people.

The target number of normal delivery assistance during the study period was 50 (fifty) deliveries. In this study, the target number calculated is the number of targets achieved in the fourth semester, which had been acquired by the students during the implementation of the Midwifery Clinical Practice I (PKK I).

Sampling used purposive sampling so that members of the population were included as respondents in this research by 36 people who fit the criteria. Data were collected through a study of the documentation from the list of student INC test scores and recording of the results of recapitulation achievement of the target number of students INC skills. The bivariate analysis was done through non-parametric statistical tests using Kruskal-Willis test to test the difference between the three (3) or more variables with data that was not normally distributed (Sujarweni, 2012).

## RESULTS AND DISCUSSION

**Table 1**

### Comparison of Students in the Skills-Laboratory in Conducting Normal Delivery Assistance in Midwifery Academy

Variable	F	(%)	<i>p</i>
<b>Skill</b>			
Good	12	12	0.386
Fair	11	11	
Bad	13	13	
<b>Number of Achieved Target</b>			
Many (>20)	1	1	
Moderate (10 – 20)	24	24	
Less (<10)	11	11	

In table 1, we can see that the majority of 67% had achieved a sufficient number, that is, by 24 students. Based on the analysis of data using different test non-parametric Kruskal-Willis test used to test some of the sample data not normally distributed by the very small number of samples, there was



no significant difference in skills-laboratory between students with smaller target numbers and those with more target numbers with the p value of 0.386 ( $p > 0.05$ ).

When linked with theories about the skills, ideally the number of students who have a larger target achievement will be better in mastering the skills. It has been stated in the introduction that some theories say the skills to be mastered by someone when he often does repetitions.

Learning law proposed by Thorndike is the Law of Exercise. In this law, the connection between stimulus and response will be strengthened when both are used. In other words, the relationship between stimulus and response will be formed if the relationship is often repeated or trained many times. Part of this exercise is called the Law of Use. It is also stated that the connection between the situation and the response will be weakened if the practice is stopped or if the relationship is not used neural bond. Part of the Law of Exercise is called the Law of Disuse (Baharuddin, 2009).

In addition to studying the above two laws, Thorndike also states one more learning law called to the Law of Effect. This law states that the strengthening or weakening of a connection between stimulus and response as a result of the consequences of the response. This means that if a response results in satisfactory effect, the stimulus-response relationships will be stronger. Conversely, if the effect achieved is unsatisfactory by the response, hence the weaker the relation that occurs between Stimulus-Response (Iskandar, 2009).

This means that if a skill is not often repeated, then the relationship between the stimulus and a response will be weak. Thus, by the time a student facing mothers who will labor, the possibility of the student to be a little confusion about what action she will take and how she will do it will happen. But if she often practices, she tends to react to the stimulus (in this case the mother that is facing labor) based on

some experiences she has ever had to be associated with mothers giving birth.

According to Guthrie and Horton, a skill is made up of a lot of action, and the action consists of a lot of movement. The relationship between a single device and a single motion stimuli is studied in detail in one trial, but the learning process is not spawned proficiency in performing a skill. For instance, to drive a car, operate a computer, or play football, everything is complicated skill that consists of many associations of stimulus response and one of the bond or association is studied thoroughly in a single experiment. But it takes time and practice to the association to be realized (Hergenhahn, 2009).

Like doing delivery assistance, this skill consist of various complicated actions that it takes a lot of repetition and a long time to be able to master it. Someone who is able to master a course of action cannot master a skill right away. For example, a student who has mastered how to help birth to the baby's head will not be considered capable of doing delivery assistance if she does not master how to deliver the placenta.

Skills of doing childbirth assistance will be assessed to be achieved if the student can master the various acts to perform delivery assistance, starting from seeing the mother come, watching the progress of labor, delivering the baby, delivering the placenta, performing suturing in the event of a tear, as well as monitoring bleeding. Specific actions also need to be done if other complications arise, such as when a baby cannot be born in the usual way, the placenta cannot be born normally, bleeding and other complications requiring treatment.

Several other studies regarding the repetition process also show similar results. Tomporowski and colleagues conduct a study that examines the effects of exercise on children's intelligence, cognition, or academic progress. As in adults, it facilitates the exercise of executive functions of children, such as processes to select, organize and meet



objectives. Exercise is proven important and is a simple method to develop aspects of child mental function center for children's cognitive progress. This study illustrates the relationship of exercise to one aspect of competence namely cognitive (Tomprowski, 2008).

Relations of exercise to competence is also reflected in a study conducted by Widoyoko. In his research, the teaching experience of teachers has an influence on the level of teaching competence. Teaching experience can be translated as the teachers often doing exercises to teach so that the more often teaching (teaching experience is getting longer), the better teaching competence (Widoyoko, 2005).

A number of studies show more than 60% gains of the learning activities are obtained from direct involvement. Direct involvement of the students give a lot of benefits, both direct benefits perceived at the time of the learning process, and long-term benefits after the learning process occurs. When the learning process to achieve such changes involve a direct role of students, there will be faster changes because students are involved in their own experience, or practice their own dimensional abilities (Aunurrahman, 2009).

This explains why there are no significant differences in the skills of doing delivery assistance between the students with smaller number of targets and those with greater number of targets. In terms of number, it is possible that a lot of repetition is only done whether the repeater does the repetition as a whole in a skill or just a repetition on some course of action. Thus, this makes it possible for the students with smaller number of targets in helping birth, but they are able to acquire the skills laboratory values higher than those with greater number of targets, or the other way around, because maybe, despite many repetitions, it is not done as a whole but only certain actions. It is also of course that the direct involvement of students provide reinforcement to the repetition that occurs. If repetition is not lived well, it

would be impossible to give a good result to the skills.

It is strongly associated with individual characteristics of students to the repetition process. There may be students who simply go through the process of repetition 10 times and they are declared competent, because they internalize well every repetition done with detail of specific actions. However, there are also students who have to repeat more than 10 times even more than 50 times to be declared totally competent. This may occur as a consequence of the lack of these students to live up to the process of repetition, so there are some specific actions that require more repetition until the skill is mastered entirety.

## CONCLUSION

The results of data analysis in this study show that there is no significant difference of skills in doing delivery assistance between the student with smaller number of targets and those with greater number of targets.

It really depends on how the repetition of the act of doing delivery assistance is done, not only on how much repetition is done. In addition, the direct involvement of students in the process of repetition itself is important. The number of repetitions does not guarantee the good laboratory skills, otherwise good laboratory skills also does not necessarily make a person able to perform childbirth assistance well.

Laboratory skills learning activities cannot be 100% replacing the clinical learning experience. However, clinical learning experiences also cannot completely replace the role of the laboratory skills learning. Each has its own role in shaping students' competencies.

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## EFFECT OF HEAT THERAPY TO DECREASE THE INTENSITY OF LABOUR PAIN ON FIRST STAGE ACTIVE PHASE

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### ABSTRACT

Childbirth is a stressful moment that causes pain, fear, and anxiety. Childbirth pain can be reduced with heat therapy. The research aimed to know the effect of heat therapy to reduce pain intensity at the first active phase. This study used pre experimental with plan one group pretest posttest design. The population were all of maternal mothers in Muhammadiyah Surabaya Hospital on July 03 to 17 2016. The total of samples were 50 maternal mothers with accidental sampling. The data used were primary data with interview and observation. The instruments used were electrical heat therapy, timer, check-list and FLACC behavioral scale. The data were analyzed with t-Test level of significance ( $\alpha = 0,05$ ). The results that almost entirely childbirth pains of pre heat therapy were very uncomfortable 84%. After the heat therapy 70% of maternal mothers experienced moderate pain. The results of t-test showed heat therapy affect the first stage of labor pain reduce ( $p=0.000$ ). This research concluded that the heat therapy affect the first active phase pain reduce.

**Key Words:** Heat therapy, Labour Pain.

### INTRODUCTION

Childbirth pain as a myometrium contraction is a physiological process with different intensity toward each individual. The pain experienced during the childbirth was unique to every mother and could be influenced by several factors including age; gender; culture; the meaning of pain; attention; anxiety; fatigue; previous experience; coping styles; and family and social support (Perry & Potter, 2005).

Pain in childbirth is considered as the only physiological pain so there is an opinion that pain intensity does not need to be reduced (Prawirohardjo, 2009). Although the childbirth pain is a physiological thing, it is painful, unpleasant and frightening for mothers (Gondo, 2011). According to research by Khofiah 2015 entitled "Differences Effectiveness Massage Techniques (Massage Effleurage) and Heat Therapy Against First Stage of Labor Pain in Puskesmas Bergas Kabupaten Semarang" with 14 maternity women as respondents, 21.4 % maternal experiencing severe pain, 78.6 % moderate pain and 0.0 % mild pain.

Factors causing the childbirth pain were lack of oxygen to the muscles of the

uterus (child birth pain became more severe if the interval between contractions was short, so that the supply of oxygen to the muscles of the uterus has not fully recovered); stretched cervix (effacement and dilation); baby pressure on the nerves in and near the cervix and vagina; tension and stretched the supporting connective tissue of the uterus and pelvic joints during contraction and falling infant; pressure on the urinary tract, bladder, and rectum; stretched the muscles of the pelvic floor and vaginal tissue; fear and anxiety can cause the release of stress hormones in large quantities (epinephrine, nor-epinephrine, and others) that resulted in the emergence of labor pain were longer and heavier (Simkin, 2007).

The pain felt by the mother could increase body metabolism characterized by rapid breathing. Changes in maternal respiration and metabolism causing interference with the placenta, so the fetus was deprived of oxygen and continued on the occurrence of anaerobic metabolism, increased cardiac output, tachycardia, arrhythmia, tachypnea and hyperventilation. Another impact if the pain was not interfered with the increasing maternal anxiety could lead to birth complications (Yuliatun, 2008).

Considering that the pain impact was significant enough for the mothers and babies, there must be an effort to reduce the pain. Various attempts were made to reduce labor pain pharmacological and non-pharmacological. Pharmacological pain control was more effective than the non-pharmacological method, but pharmacological method was more expensive and it potentially effected and harmful for the mothers, fetus, as well as for the progress of the childbirth. Meanwhile, non-pharmacological pain control was inexpensive, simple, effective and without disadvantageous effects and could improve satisfaction during the childbirth because the mother can control the feelings and strength (Maryunani, 2010).

Pharmacological methods of pain management included: analgesia, Intra Thecal Labor Analgesia (ILA), local anesthesia and general anesthesia (Andarmoyo, 2013). Non-pharmacological methods management of childbirth pain were: childbirth companion; regulation of breath and relaxation; water treatment; massage; positioning and mobilization; injection of sterile water; Transcutaneous Electrical Nerve Stimulation (TENS); acupressure; acupuncture; aroma therapy; biofeedback; homeopathy; intervention body and mind; music; reflexology; self-hypnosis; and compress therapy.

Compress therapy could be done with warm and cold compresses. A heat therapy was one of the non-pharmacological methods considered highly effective in reducing pain as it could increase the local temperature of the skin increased circulation to the tissues for metabolism in the body. This could reduce muscle spasms and reduce pain (Yanti, 2010).

According Brown, et. al. (2001) entitled "Women's non-pharmacological Evaluation Methods Used Pain Relief During Labor" in North Carolina, United States with 46 respondents of maternity women, heat therapy 44 % are very effective in reducing pain, 56 %

somewhat effective and ineffective 0 %. Although heat therapy is effective in reducing labor pain the use of heat therapy still slightly at 28%. Until now, researchers have not found references research conducted in Indonesia on the use of heat therapy to handle labor pain.

## RESEARCH METHODS

This study used pre experimental design with plan one group pretest posttest design. The population of this study were all of maternal mothers in Muhammadiyah Surabaya Hospital on July 03 to 17, 2016. The total of samples were 50 maternal mothers. The sampling technique used in this study was non-probability sampling with accidental sampling technique.

Before doing observations, the researcher explained to the mothers about the purpose of the research and asked them to fill out and sign the informed consent sheet. Then, the researcher assessed whether the mothers were qualified as respondents or not. If a woman qualified as a respondent, the next step was observing the intensity of pain by using a behavior observation scale (behavioral FLACC scale) pre action.

Maternal mothers were given a heat therapy with electric hot pot on pain points of the first stage active phase of the childbirth between the umbilicus with symphysis, hips, and lower back part of the thoracic 10, 11, 12 and lumbar 1 for 10 minutes at each point alternately with mothers position was tilt during heat therapy were given.

After compressing for 30 minutes, the observation was then done to the intensity of pain using a scale observation of behavior (behavioral FLACC scale) post action. The data were analyzed by using computer software through statistical test t-test with significance level ( $\alpha = 0.05$ ).

## RESULT AND DISCUSSION

**Table 1**  
**Pain Intensity Pre Action on Maternal Mother at the First Active Phase**

Mean	Mean ± SD
Pre action	7.86 ± 1.229

Table 1 showed that the mean of the childbirth pain before getting the heat therapy was 7.86.

**Tabel 2**  
**Pain Intensity Post Action on Maternal Mother at the First Active Phase**

Pain Main	Mean ± SD
Post Action	5.80 ± 1.340

Table 2 showed that the mean of the childbirth pain after getting the heat therapy was 5.80.

**Table 3**  
**Effect of Heat Therapy to Reduce Pain of Maternal Mother at the First Active Phase Pain Intensity**

Pain Childbirth	Mean ± SD	Δ mean	95% CI	P
Pre action	7.86 ± 1.229	-	-1.771	0.000
Post action	5.80 ± 1.340	± 2.060	- (-2.349)	

Table 3 showed that the childbirth pain of pre and post action decreased by 2.060. the result of *t-Test* value  $P = 0.000$  which showed that heat therapy affect the first active phase pain.

### **Pain Intensity Pre Action on Maternal Mother at the First Active Phase**

The pain experienced by each person was subjective, individual and various, because the sensitivity or pain threshold was different. The level of significance toward the pain was also different. People who have a high level of significance toward the pain did not feel the pain of small stimulus. Whereas, people who had a low level of

significance toward the pain could feel the pain of small stimulus. According Judha (2012), the average pain intensity of maternal mother at the first active phase with a VAS scale of 6-7 parallel with severe pain intensity on a descriptive scale.

The pain experienced during the childbirth was unique to every mother. It could be affected by several factors including age; gender; culture; the meaning of pain; attention; anxiety; fatigue; previous experience; coping styles; and family and social support (Perry & Potter, 2005).

Based on the results of the study mothers aged less than 20 years felt uncomfortable pain on childbirth process. The score was 10 (very high) according to FLACC behavioral scale. This is in accordance with the opinion of Andarmoyo (2013). He stated that the young age tend to be associated with unstable psychological conditions. It caused much worry so that maternity felt more severe toward the pain. Age was also used as one of the factors in determining the level of significance of the pain. The level of significance would increase hand in hand with the age increasing and the understanding of the pain.

In this study, the average pain intensity mothers with parity <1 (primigravida) was higher than the intensity of a mother with parity >1 (multigravida). This was reinforced by the opinions of Andarmoyo (2013) the previous delivery would help to overcome the pain. Previous pain experience did not necessarily mean that the individual would receive easier pain in the future. If the individual often experience a series of pain episodes for a long time without recovering the fear, it would arise and vice versa. As a result, clients would be better prepared to undertake the necessary measures for the relief of pain (Perry & Potter, 2005).

### **Pain Intensity PostAction on Maternal Mother at the First Active Phase**

The working principle of a heat therapy using pot heat by conduction was where the heat transfer occurred from the jar heat into the stomach would enhance blood circulation and reduce muscle tension. It could decrease the pain of maternal women because they experienced uterine contractions and smooth muscle contraction.

The Gate control theory says that stimulating the skin to enable the transmission of sensory nerve fibers A-beta were bigger and faster. This process reduced pain transmission through the fiber C and delta - A small diameter. Synapses gate closed pain impulse transmission. The heat therapy would increase blood flow and relieve pain by removing the inflammatory products, such as bradikinin, histamine, prostaglandins that caused local pain. The heat would stimulate the nerve fibers that closed the gate so that the transmission of pain impulses to the spinal cord and to the brain was blocked (Simkin, 2005).

There were a few maternal mothers at the first active phase who did not feel the change of the pain intensity. This was due to individual tolerance to pain was different and the intensity of pain would grow higher and more frequently in accordance with the opening of the cervix mothers till the pain could not be transferred to the heat therapy method. According to the research, mothers whose cervixes opened 8 cm could not decrease the intensity of delivery pain after a heat therapy. 25% of mothers whose cervixes opened 7 cm did not feel the decrease pain intensity, and the 75% mothers could feel it but not significant after the heat therapy. Mothers whose cervixes opened 6 cm, 41.7% felt the pain intensity decrease not significant after getting a heat therapy. According to Andarmoyo (2013), pain intensity was proportional to the strength of contraction and pressure occurred. Pain increased when full dilatation of the

cervix due to the infant pressure on pelvic structures followed by straining and tearing of the birth canal. In accordance with the limitations of non-pharmacological pain relief was that not all women who use this method could obtain the desired level of pain (Maryunani, 2010).

### **Effect of Heat Therapy to Reduce Maternal Mother at the First Active Phase Pain Intensity**

Statistical test results in table 3 showed that there were effects of heat therapy to reduce pain intensity of the first active phase of childbirth. Ratnasari (2015) stated that there was effect of a heat therapy to the first stage of labor pain intensity. It was supported by the result of Behmanesh, et. al. (2009) which stated that a heat therapy could reduce the intensity of labor pain.

In this study, most maternal mothers of the first active phase of childbirth felt pain and only a small percentage experiencing moderate pain before the heat therapy. This occurred because the uterine muscle contractions caused pain in the waist, abdominal area and spread to the thigh. The intensity of the pain associated with the strength of contraction and the pressure posed. The pain increased with the isometric contractions of the uterus against constraints by the cervix /uterus and perineum. Strong uterine contractions were the causes of strong pain (Andarmoyo, 2013).

Based on the research finding, after getting a heat therapy, maternal mother at the first active phase experienced significant pain reduction. It was supported by Manurung, et.al. (2011), there was an effect of heat therapy to the reduction and prevention of a meaningful increase in labor pain scale. Siregar (2012) showed that there were significant effects of heat therapy giving to reduce pain intensity in first stage active phase maternity. Another study conducted by Brown, et.al. (2001) entitled "Women's



Evaluation Non-Pharmacological Pain Relief Methods Used During Labor" in North Carolina, United States with 46 respondents of maternity women, heat therapy 44 % were very effective in reducing pain, 56 % somewhat effective and ineffective 0%.

Heat therapy increased the local temperature, circulation and tissue metabolism. Heat therapy reduced muscle spasms and increased the pain threshold. The heat would stimulate the nerve fibers that close the gate so that the transmission of pain impulses to the spinal cord and brain was blocked (Simkin, 2005).

## CONCLUSION

There were affects of giving heat therapy to reduce first stage active phase of the childbirth pain intensity. This study did not observe the frequency, duration, and intensity of prior treatment, so that in subsequent studies need to be done prior to observations provide measures to reduce labour pain.

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# DESCRIPTION OF PREMARRIAGE PREGNANCY PREPARATION IN DISTRICT SEDAYU

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## ABSTRACT

Premarriage Pregnancy Preparation is a very important thing to be considered, but this should not be a priority in health care. Antenatal Health Care has not provide premarriage pregnancy preparation. The antenatal care is just given when the mother became pregnant, it can cause delaying in the handling of various issues that affect pregnancy, such as anemia, Chronic Energy Deficiency (CED), pregnancy planning and a lack of premarriage woman knowledge towards preparation for pregnancy. According to the data of Indonesian centers and health information, highest cause of maternal mortality ratio in 2012-2013 was others diseases until 40.8%, followed by hemorrhagic disease until 30.3%, hypertension until 27.1%, 7.3% infection and 1, 8% obstructed labor. The data indicate that the causes of maternal deaths can be prevented if they were had earlier detected and anticipated. Therefore it is very important to know as early as possible preparation for pregnancy in pregnant mothers. The study aims to describe the premarriage pregnancy preparation. This research was conducted with a cross-sectional approach to the samples, obtained by accidental registering for marry in Sedayu District. The results of the study Show that 64.6% Premarriage women are not ready to get pregnant, 60.8% Premarriage Women had anemia, 33.4% had KEK, 18.6% do not have enough knowledge about pregnancy and 29.1% do not have a plan of pregnancy.

**Key Words: Premarriage Pregnancy Preparation**

## INTRODUCTION

Nowdays, maternal mortality remains one of the main problems in maternal and child health. According to the Indonesian Demographics Health Survey (IDHS) in 2012, MMR and IMR in Indonesia still shows a Table quite high and far from the target of the MDG's in the amount of 359 per 100,000 live births, while the infant mortality rate (IMR) is 40 per 1,000 live births and Neonatal Mortality Rate (NMR) is at 19 per 1,000 live births (IDHS).

According to the Indonesian data centers and health information highest cause of maternal mortality ratio in 2012-2013 others diseases until 40.8%, followed by hemorrhagic disease until 30.3%, hypertension until 27.1%, 7.3% infection and 1, 8% obstructed labor (Center for

Data and Information Ministry of Health, 2014).

Causes of maternal deaths above could be avoided and prevented if known, as early as possible so that premarriage women can prepare for pregnancy. Maternal mortality is influenced by the presence of risk pregnancies. Pregnant women should get the right services, because the management of the pregnancy greatly affect maternal mortality and morbidity. The Antenatal Care for normal pregnancy should be carried out to detect complications which exist in pregnancy by promote approach (Asrinah et al, 2010).

Pregnancy preparation are things that need to be specially prepared about three or four months prior to pregnancy for the welfare of the child, They are include

healthy reproductive age, nutritional status, hemoglobin levels, TT (Tetanus Toxoid) vaccination, knowledge about prenatal care and pregnancy planning. (Prasetyono, 2008).

Measurement of nutritional status in premarriage can be used to determine whether Caten Premarriage women have a risk of CDE (Chronic Deficiency Energy) or not. KEK can soon be overcome if we knew before pregnancy. KEK shown by LILA (Upper Arm circumference) indicators less than 23.5 cm, which is can cause anemia, Haemhoragic Pospartum, infection, prolonged labor, prematurity and low birth weight (Annual Report, 2015)

Premarriage preparation for pregnancy is very important, because it can anticipate the problems that may arise during pregnancy and childbirth. Preparation needed to get a good pregnancy includes preparation of free from anemia, preparation of good nutrition, preparation of enough knowledge to pregnancy preparation (Tanu, 2011).

Premarital anemia diagnosed ditegakkan when A hemoglobin level less than 11 g%. anemia can be overcome if it is early known before pregnancy, so it can be immediately supplemented. Treatment of pregnant women with anemia by giving iron supplementation 90 tablets during pregnancy is a standard way to improves the Hemoglobin during pregnancy (Standard Maternal Health Service, 2002), but the fact during pregnancy, sometimes the mother do not check her pregnancy or the mother have no obedient in taking iron tablets. (WHO, 2012). The formation of red blood cells in the body takes about 120 days. (Harper, 2003) So that takes a long time to overcome anemia in pregnancy. Early detection satus when premarrital anemia and iron supplementation before pregnancy may help increase hemoglobin levels faster and avoid the problems of pregnancy and childbirth are caused by anemia.

Tetanus Toxoid (TT) Immunization is given to a woman some weeks before marry, usually given at least one week before the marriage and then it is given back within 1 month after the first immunization. TT immunization useful to prevent tetanus in the infants and the mother . TT is a mandatory program of government that should be followed by premarriage women before marriage (Prasetyono, 2008).

The level of someone knowledge about the health effect on one's health behavior. (Notoatmodjo, 2012). So knowledge of prenatal care is a very important factor to make a pregnant woman should behave appropriate prenatal care. Antenatal care is given at least four times during pregnancy, to maintain and improve the health status of mothers during pregnancy and detect any problems or complications, so that it can be overcome and it is anticipated as early as possible. (Mufdillah, 2010).

Some of premarriage women does not has pregnancy plan, whether to get pregnant immediately after marriage or will postpone. Based on preliminary studies of Premarriage woman in Sedayu 1 Primary Health Care 5 has no plan pregnancies, they mostly follow the course, whether it will be pregnant or not, 3 wanted not pregnant right away, but hesitated to talk about it with her spouse and 2 want to immediately get pregnant , Planning a pregnancy is an important related to the mother's readiness in terms of physical, psychological and health finance. Pregnancy preparation is very important to create human quality. (Kusmiran, 2011).

Indonesian Health Program has been providing services to premarriage preparation, but it is only include tetanus toxoid immunization and pregnancy test, so that, hemoglobin level data, anthropometry, the level of knowledge and pregnancy planning is still limited. This study is useful because it gives an overview on the premarriage pregnancy preparation

Subdistrict Sedayu have 62.3% of Pregnant Women with Anemia, 37.6% of pregnant women with KEK. The number is the second highest number districts in Bantul area.

The anemia status data, nutrition status data, level of knowledge about pregnancy and pregnancy plans data needed to describe the anemia status, nutritional status, level of knowledge about pregnancy and pregnancy plans on premarriage, so that if a problem can be known in advance and immediate treatment in order can be anticipated, besides the data is also necessary to better and healthier pregnancy preparation.

Based on the description background above, the study is very important to know and discover the description of pregnancy preparation in Sedayu 1 and 2 Primary Health Care include anemia status, nutritional status, level of knowledge about prenatal care and pregnancy planning.

## RESEARCH METHOD

The study is descriptive research study. The descriptive research study aims to describe about the particular circumstances objectively (Machfoedz, 2013), using cross sectional design.

The research was conducted in June-August 2015 Sedayu district, Bantul, Yogyakarta.

The population in this research is the prospective bride Woman in District Sedayu within three months amounted to 97 people, 79 samples are taken by accidental sampling technique.

The tools used in the study is Haemometer Sahli to measure hemoglobin concentration, tape to measure MUAC, Scales and Mikrotoise to measure the Body Weight and Body Height, questionnaires to measure the level of knowledge about preparation for pregnancy and collect data on pregnancy plans.

Variables examined included reproductive age, anemia status, nutritional status, TT immunization status, the level of knowledge about the preparation of pregnancy and pregnancy plans.

These variables are variables that determine a Caten readiness for pregnancy (Praetyono 2008, Tanu 2011), When a Caten have one of these indicators in a category is not good, then the Caten declared not ready for pregnancy.

## RESULTS AND DISCUSSION

**Table 1 Frequency Distribution For Pre Marriage Pregnancy Preparation Indicators**

Pregnancy Preparation	Frequency	%
indicator on good category	3	3,7
indicator on good category	5	6,3
Indicator on good category	8	10,1
Iindicator on good category	9	11,3
Iindicator on good category	16	24,0
Indicator on good category	28	35,4

From Table 1 it is known that 28 respondents had six indicators in good categories, 16 respondents have 5 indicators in good categories, 9 respondents had 4 indicators in good categories, 8 respondents have 3 indicators in good categories, 5 respondents have two indicators in good categories, 3 respondents have one indicator in good categories.

**Table 2 Distribution Frequency of Pregnancy Preparation**

Pregnancy Preparation	Category	N	%
Ready for Pregnant	All Indicators in good category	28	35,4
Not Ready for pregnant	Not All Indicators in good category	51	64,6
<b>Total</b>		<b>79</b>	<b>100</b>

Based on the above table, it can be seen the premarriage pregnancy preparation in the District are 28 people ready to become pregnant (35.4%) and 51 (64.6%).were not yet ready to become pregnant .

**Table 3 The Distribution Frequency of Health Reproductive Age**

Category	Frequency	Percentage
Unhealthy Reproductive age	10	12,6
Healthy Reproductive age	69	87,4
<b>Total</b>	<b>79</b>	<b>100</b>

From Table 3 it is known that 10 (12.6%) respondent are in unhealthy reproductive age and 69 (87.4%) are in a healthy reproductive age.

**Table 4 Premarriage Anemia Frequency Distribution**

Anemia Status	Haemoglobin Value	Frequency	%
Not anemia	12 g/dl – 16 g/dl	31	39,2
Very mild anemia	11 g/dl- > 12 g/dl	17	21,5
Mild Anemia	Hb 8 g/dl - < 11 g/dl	17	21,5
Moderate Anemia	Hb 7 g/dl - 8 g/dl	11	13,9
Severe Anemia	Hb < 7 g/ dl	3	3,8
<b>Total</b>		<b>79</b>	<b>100</b>

Based on Table 4 above can be seen in the Premarriage anemia status in District Sedayu. They are 31 people (39.2%) were not anemic, and 48 people (60.8%) had anemia consisting of mild anemia once , 17 people (21.5% ) with mild anemia, 17 (21.5%) people was moderate anemia and 11 (13.9%) people with severe anemia 3 (3.8%).

**Table 6 The Distribution of Mid Upper Arm Circumference (MUAC)**

MUAC	Category	Frequency	Percentage (%)
CED Risk	<23,5	24	30,4
Not CED Risk	23,5	55	69,6
<b>Total</b>		<b>79</b>	<b>100</b>

Based on Table 6 above can be seen on the size LILA Caten Kecamatan Sedayu perempuan in as many as 24 people (30.4%) had a risk of KEK and 55 (69.6%) did not pick the risk KEK.

**Table 7 Imunization Status Distribution**

TT Imunization satus	Frequency	Percentage (%)
Yes	79	100
No	0	0
<b>Total</b>	<b>79</b>	<b>100</b>

According to the table above, We know that the Premarriage immunization status in the district Sedayu ie 100%. Premarriage women have been immunized against Tetanus Toxoid.



**Table 8**  
**Premarriage Knowledge**

Variabel	Frequency	Percentage (%)
<b>Knowledge Level About Pregnancy Preparation</b>		
Good	3	3,8
Enough	69	87,3
Less	7	8,9
<b>Knowledge Level About Healthy Reproductive Age</b>		
Good	23	29,1
Enough	44	55,7
Less	12	15,2
<b>Knowledge Level About TT Immunization</b>		
Good	12	15,4
Enough	35	44,3
Less	32	40,5
<b>Knowledge Level About Folic Acid</b>		
Good	6	7,6
Enough	42	53,2
Less	31	39,2
<b>Knowledge Level About Anemia</b>		
Good	25	31,6
Enough	38	48,1
Less	16	20,3
<b>Knowledge Level About Nutrition During Pregnancy</b>		
Good	8	10,1
Enough	43	54,4
Less	28	35,4

Based on Table 8 above. We Know that the level of pregnancy preparation knowledge in the District Sedayu are quite enough as many as 69 people (87.3%). The level of knowledge about healthy reproductive age quite as many as 44 people (55.7%). The level of knowledge about TT immunization quite as many as 35 people (44.3%). The level of knowledge about folic acid are quite as many as 42 people (53.2%). The level of knowledge about anemia are quite as many as 38 people (48.1%). The level of knowledge about the nutritional status are quite as many as 43 people (54.4%).

**Table 9**  
**Premarriage Women Pregnancy Planning Distribution**

Pregnancy Planning	Frequency	Percentage
Not Have Pregnancy Planning	31	39,2
Have Pregnancy Planning	48	60,8
<b>Total</b>	<b>79</b>	<b>100</b>

Table 1 shows that 28 respondents had six indicators in good categories, 16 respondents have 5 indicators in good categories, 9 respondents had 4 indicators in good categories, 8 respondents have 3 indicators in good categories, 5 respondents have two indicators in good categories, 3 respondent has one indicator in good categories.

Marriage preparation consists of several things that have to be prepared that is healthy reproductive age, nutritional status, anemia status, TT immunization status, level of knowledge about the preparation of pregnancy and pregnancy plans on prospective bride woman. If there is a bride/premarriage woman who has one indicator in the bad category. She said not ready for pregnancy. There are only 28 brides (35.4%) who had six indicators that are in good category, the rest have one or more categories of the indicators are not good, so it is classified on the bride who is not ready to get married.

Acordding to the Table 5, We Know that Premarriage women anemia status in District Sedayu are 31 people (39.2%) were not anemic, and 48 people (60.8%) has very mild anemia anemia, 17(21.5%) people has mild anemia 17 (21.5%), 11 (13.9%) has moderate anemia, and 3 (3.8%) has severe anemia .The result shows that the incidence of anemia is greater (60.8%) compared to premarriage woman who are not anemic (39.2%).

This study supports the research results conducted by Andriani , Description of Higschool Girl Anemic Status, students who are anemic as much (74.79%) and non-anemic as much (25.21%), the difference in this study in which respondents on average still life of middle adolescents (15-18 years) and late (18-22 years) where they have a low awareness in conducting examination Hb, and lack of knowledge about the importance of Hb examination. Therefore The HighSchool Girl will be premarriage women in prospective time, so the Highschool girl anemic indicators

suitable for premarriage anemic indicators.

Based on research conducted Halinda (2008) on "Hemoglobin Blood Analysis on Women Workers in PT Belawan Food Frozen (cold storage) gained prevalence of anemia among women workers in the study is quite high 47.2%, with 90% of women workers are in healthy reproductive age is 20-35 years. Anemia in women can reduce the productivity of workers who work less than workers who are not anemic. The incidence of anemia in women workers due to less consumption of iron. And when viewed in terms of age, the bride and groom who are anemic average age is 22-35 years earning as much as 5.2% (41 people).

According the research result of Indiarti (2009), iron deficiency before they are pregnant and not addressed can lead to pregnant women suffer from anemia. Some of the symptoms of anemia include: fatigue, difficulty concentrating, complications in childbirth and are prone to infection, it can even lead to abortion. From the research results can be seen the size premarriage women LILA in District Sedayu many as 24 people (30.4%) had a risk of KEK and 55 (69.6%) do not have the risk of KEK

MUAC on premarriage woman describe the nutritional status so that it can be used as material information on premarriage woman to find her nutritional status and consider her condition is ideal or not ideal for pregnant, so it can be anticipated immediately before begin pregnancy. Underweight can cause infectious diseases, depression, anemia and diarrhea. Women who are underweight are at risk of having a baby with low birth weight and if the weight would pose a risk to various diseases such as heart disease, diabetes (diabetes mellitus), high blood pressure disorders of joints and bones, kidney disorders, disorders of the gall bladder, cancer. (Blair , Arnaw A. Haas, & Millheiser, 2013).

According Marmi (2011) Malnutrition of course will lead to a bad outcome for mother and baby. Mothers can suffer from anemia, so the blood supply that delivers oxygen and nourishment to the fetus will be inhibited, so that the fetus will experience impaired growth and development. On the other hand, excess nutrients can have an impact also was not good also to the mother and fetus. The fetus will grow beyond normal weight, so she will have difficulty during delivery.

Premarriage woman nutritional status affects the prospective of Pregnancy, who are malnourished are likely to give birth to babies who are undernourished. Weight of babies born less than 2500 grams named Low Birth Weight (LBW). LBW infants born to have a proportional size as small as the head, body limbs and other organs in the body. In more severe state of malnutrition brain retardation can reach 10-20%. Small brain volume led to reduced significantly , besides LBW infants did not have sufficient reserves of nutrients in the body so susceptible to disease, especially infectious diseases, hypothermia and consequently easily passed (Supariasa, 2013).

The study, almost same was done by Putri (2013), entitled "Comparison of Substance Consumption Nutrition, Nutritional Status and Hemoglobin Premarriage Woman on the Probolinggo coast and agriculture ". The study results obtained from the majority of respondents both in coastal areas and agriculture research was no difference in the consumption of nutritional status of women according to BMI (Body Mass Index).

Distribution of Immunization Status Table can be seen that 79 people or 100% received injections of TT (Tetanus Toxoid) , because TT Immunization Caten was a requirement to request a permit marriage to KUA. Of the 79 respondents, 8 people are already pregnant, so that 8 people are getting injections of TT Caten after she became pregnant, not before she was pregnant.

Based on Table 9, Table of knowledge level about pregnancy preparation in District Sedayu quite as many as 69 people (87.3%).

The level of knowledge about healthy reproductive age quite as many as 44 (55.7%) people. The level of knowledge about TT immunization quite as many as 35(44.3%). People. The level of knowledge about folic acid with quite as many as 42(53,2%) people. The level of knowledge about anemia quite as many as 38(48,1%) people. The level of knowledge about the nutritional status quite as many as 43(54.4%) people.

Quantity of respondents by category level of knowledge about pregnancy preparation the bride, where of 79 people showed that a majority of 79 votes knowledgeable enough as many as 69 (87.3%) people, and the lowest percentage of 7(8.9%) people less knowledgeable. According Notoatmodjo (2010), Knowledge (knowledge) is the result out of the man, who simply answering the question "what", for example, what the water, what a man, what nature, and so on. Most people's knowledge gained through the senses of hearing and sense of sight. The factors that influence knowledge in this study is the educational and social culture that can influence attitude in receiving the information (Nurunnayah & Nur, n.d.). Education is needed to obtain information for support health to improve the quality of life ( Henry ,2011). The results are consistent with a study done by Rita (2014) with the results of research is most category level of respondents knowledge about pregnancy preparation are knowledgeable enough ie (56%).

According to the results of Endri wulandari and Wijayanti (2014) knowledge of pregnant women about the danger signs of pregnancy most with enough knowledge, as many as 17 respondents (56.7%), this is in line with research Novia Sari Milita about the level of knowledge of women of reproductive age ( WUS) about the preparation

kehamlan in health centers, 23 respondents knowledgeable enough (76.7%), while the Ferry Dwi Cahya According to research Riftana Relations knowledge level of high risk pregnancy with childbirth in pregnant women age remajadi Puskesmas Bangsalsari Jember mother has poor level of knowledge as much as 89% (26) people and poor preparation for labor as much as 58% (17) people.

The results showed that the majority of brides who are in Sedayu I and II Primary Health Care has no plans related to pregnancy number of 23 people or 29.1%, plans to delay pregnancy as many as 11 respondents (13.9%), which is not much delay pregnancy 37 respondents (46.8%) and already pregnant as many as 8 people (10.1%). Couple bride and groom who will postpone pregnancy due to financial reasons and occupation of respondents, so Their partners is not yet ready to have children. While respondents are not planning a pregnancy because the couples eager to have children and feel has been sufficiently able to support his family.

In this research, there are couples who have been pregnant bride due to pregnancy outside marriage so that couples bride is no longer plan or postpone pregnancy because it was pregnant.

Pregnancy is a fertilization process in order to continue the descent, which occurs naturally, resulting in the growing fetus in the womb. The gestation period begins from conception to the birth of the fetus. The duration of normal pregnancy is 280 days (9 months 7 days) is calculated from the first day of last menstruation.

Optimal family planning through planning pregnancy a safe, healthy and desirable is one important factor in reducing the maternal mortality rate. Keeping within the pregnancy is not only to save the mother and baby from the side of health, but also improve the

quality of family relationships psychological (Sugiri, 2007).

One pregnancy planning among others by following the Family Planning (KB). KB give to couples choice about when to have children, how much, spacing of their children with each other, and when they should stop having children (Yolan, 2007).

In planning and spacing pregnancies, couples planning can be affected by many factors, both in terms of economic maturity, the age of the couple, the influence of social, cultural, environmental, employment and health status of the pair (Susan, 2006).

Planning a pregnancy at this bride is influenced by several factors such as age, education, occupation, income, and type of contraception will be selected. The age factor is an important factor in determining the spacing pregnancies, especially for women when it was 38 years old and still wants 2 children then can not get pregnant by age range of three years between one another, when aged under 30 years and has no health problems endanger the pregnancy then still have a chance to spacing pregnancies (Dwijayanti, 2005).

Employment and income couples is essential in pregnancy planning . Study shows most couples who do not want to have children argue that they are not capable enough to provide decent support to raise children properly. With mental preparation as well as the economy of the pair will facilitate couples to determine the distance of pregnancy (Zeверina, 2006).

One of the advantages in planning and preparing the pregnancy is in terms of the social economy namely improve the quality of life of women overall. In addition to health and pediatrics, the economic aspect is equally important. If unplanned especially about preparation funds can also be fatal (Diana, 2007). Therefore the preparation of couples both physically and psychologically very

important to determine the distance of pregnancy in couples of childbearing age.(Handayani & Rahmawati, 2016).

The results are consistent with research conducted by Amrina and Nuniek (2014) with the results of the study stating that 52 couples of childbearing age will not delay pregnancy despite having enough knowledge about pregnancy planning.

## CONCLUSION

51 (64.6%) Premarriage Woman in District Sedayu not yet ready to become pregnant. 10 (12.6%) premarriage women are not in a healthy reproductive age. 48 (60.8%) premarriage woman in District Sedayu experiencing anemia, 24 (30.4%) premarriage woman in District Sedayu have risk KEK, 31 (39.2%)premarriage woman of the bride in the District Sedayu plan is not have a pregnancy planing

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# NONPHARMACOLOGICAL THERAPY OF ENDORPHIN MASSAGE TO REDUCE BACK PAIN ON THE FINAL TRIMESTER OF PREGNANCY

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## ABSTRACT

Back pain is a complaint that is often felt by pregnant women as their gestational age due to uterine enlargement and kurvatura lumbo sacral increasingly lordosis. Endorphin massage is believed to be able to reduce back pain. The research aims to determine the effectiveness of endorphin massage against back pain in pregnant women.

Experimental research designs (randomized trial) with the approach of pre-posttest design. The subject of research is 20 pregnant women who meet the criteria of a sample that is experiencing back pain, gestational age more than 36 weeks and not currently using medication analgesics as well as complementary therapies. Research data retrieval used Visual Analog Scale sheet in BPM Mutiara Fatma Brondong Lamongan. Data were analyzed with Paired t-test at significance level 0.05.

The results showed the average of back pain scale of pregnant women before given the endorphin massage is 5.93 and after given the endorphin massage is 4.58. The average of back pain scale decrease is 1.35 point. The results of the analysis Paired t-test obtained by value  $t = 5.190$  and  $p < 0.001$ . Endorphin massage is effective to lower back pain on the final trimester of pregnant women, so that endorphin massage can be used as a non pharmacological therapy for the management of cases of back pain on the final trimester of pregnancy.

**Key Words: Nonpharmacological Therapy**

## INTRODUCTION

Pregnancy is a time of the most special and boast for a woman. However in pregnancy will occur the body's physiological changes that can lead to the emergence of complaints during the period of her pregnancy.

One of the physiological changes that lead to complaints of back pain is the enlargement of the uterus and kurvatura lumbar lordosis that increasingly sacred. This complaint many experienced by pregnant women, generally begin to appear on the second to the third trimester and can also be experienced throughout pregnancy until the period of postpartum. Pain is felt at the area of the vertebrae, can be mild to severe to interfere with the physical activity of pregnant women.

The incidence of back pain in pregnant women is quite high. Mantle et al and Ostgaard in Fraser (2009) said that 50%

of pregnant women in the United Kingdom and Scandinavia were reported suffering from back pain, and Bullock-Saxton found 70% of pregnant women in Australia are having back pain at some stage of pregnancy.

Lichayati's research results of the year 2012 in Lamongan found 10 people (30.3%) of 33 pregnant women experienced back pain. The results of survey on BPM Mutiara Fatma Brondong Lamongan in January 2016 obtained throughout the three trimesters of pregnant women that experienced lower back pain: mild pain 12.5%, moderate pain 50%, and severe pain 37.5%. The observation of the pain scale used the scale VAS.

Back pain of pregnancy is affected by multifaktor, among other changes in body posture during pregnancy and hormonal factors. In line with increasing weight gradually during pregnancy and the increase in the size of the uterus



causing body posture and the way of woman walks changes in blatant. Pregnant women who did not give his full attention toward the posture of her body then she would walk with the swing of the body backwards due to increased lordosis. This arch will then stretch her back muscles and cause pain. There is also a tendency for back muscles for abdomen muscles stretched if it retracts so it can cause muscle imbalances around the pelvis, the extra strain can be felt above the ligaments. This has resulted in the emergence of back pain which is usually derived from sacroiliaca or lumbar, the condition can be a nuisance if the long-term balance of the back muscles and pelvic stability not restored after delivery. An increase in the hormone progesterone during pregnancy that causes relaxation of ligaments and joints can raise complaints of pain. While the changes to increased breast size will cause the breasts become heavy and resulted in the upper back pain (Varney. 2006). This opinion of the Orvieto et al which reported that back pain increases as gestational age. (Cunningham. 2005). The problem worsens if the woman's muscles are weak so that failed to support the uterus or an enlarged uterus.

In addition to the above factors, activity during pregnancy also became a factor in the occurrence of back pain during pregnancy, many household tasks such as ironing or preparing meals that can be done in a sitting position but is done by standing in a long time, including if the pregnant mother must lift heavy objects then occurs the contracting on the pelvic muscles, all circular motion while lifting is dangerous and should not be done (Fraser. 2009). Therefore, improper body mechanics to be one of the causes of back pain.

The severity of the pain ranges from mild discomfort after standing for long periods of time until the pain that interferes with daily life. Back pain if not promptly handled, could lead to long-term pain, increases the tendency of postpartum back pain and chronic back pain that will be more difficult to be

treated or cured so that mothers need to be referred to an expert women's health physiotherapy to get assessments of individuals who may need to do a proper rehabilitation to train postural muscles and restore the stability of the pelvic (Eileen, 2007). Back pain in pregnant women who do not immediately treated can lead to anxiety that cause increased blood pressure and oxygen needs. Anxiety or stress trigger the release of hormones that high catecholamines and excessive steroid. This hormone triggers muscle tension, vasoconstriction, so that the blood flow becomes not smooth, and causes a ischemia of body tissue that makes implus of pain increased. Of course, this is if it lasts a long time would give an impact on pregnancy and the birth process.

Therefore, the back pain at the pregnant time was as possible as to overcome. Midwives can provide therapy in non pharmacological, including with endorphin massage. Roger Chou, MD & Laure Hoyt Huffman, MS 2007 did sistematic review about "Nonpharmacologic Therapies for Acute and Chronic Low Back Pain," stated that the study on primary health services, 65% recommend to use massage therapy. Endorphin massage is one of the effective massage technique for reducing back pain because it can increase the secretion of endorphin. Endorphin has long been known as a substance that many benefits, such as controlling the pain as well as pain that settled, control feelings of stress, boost the immune system and regulate the production of growth hormone and sex. In addition with the massage, the secretion of endorphin in the body can be triggered through a variety of activities, such as breathing and relaxation, as well as meditation (Kuswandi 2011).

Endorphins also known as substances that have mechanical devices such as morphine that serves to provide peace, overcome stress while pregnant and was able to reduce pain such as pain in the lower back region (Emilia & Freitag. 2010). Work of the endogenous

endorphin analgesic or pain in losing by way of disrupting the transmission of pain by the way of increasing the circulation of neurotransmitter produced naturally by the body at the Synapse neural pathways in the central nervous system. (Aryani. 2015). Endorphin massage can also stimulate the secretion of oxytocin thereby trigger the uterus to contract. Thus endorphin massage is important enough done on pregnant women with gestational age of 36 weeks or more until it's time to give birth. Some research on endorphin massage that much done is associated with labor pain, and the research of endorphin massage of pregnant women is still very minimal. Therefore, the authors are interested in doing research "Endorphin massage and back pain in pregnant women." The research aims to know the influence of endorphin massage against back pain at pregnant women on the final trimester of pregnancy.

### RESEARCH METHODS

Experimental research designs (randomized trial) with the approach of pre-posttest design. The population of the research was the entire final trimester of pregnant women who experienced back pain in BPM Mutiara Fatma Brondong Lamongan. The sample amounts 20 pregnant women who experienced back pain with pregnancy age criteria are more than 36 weeks, not being an analgesic drug use as well as complementary therapies. A given intervention is endorphin massage, massage lightly in the shoulder, neck and back while given affirmations for 15 minutes.

he observed variable is the scale of back pain, before and after given an endorphin massage used Analog Visual Scale sheets. Data were analyzed with Paired t-test on the level of significance of 0.05. Before being tested with Paired t-test, firstly tested its data by using the Kolmogorov Smirnov normality.

## RESULTS AND DISCUSSION

The results of the research on endorphin massage against back pain on the final trimester of pregnant women are as follow:

**Figure 1**  
**Back pain Scale curves before and after given the Endorphin Massage**

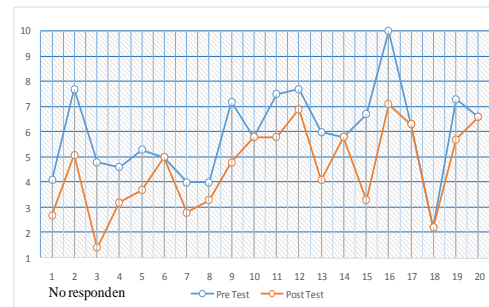


Figure 1 above shows that the majority of the respondents i.e. 15 pregnant women (75%) experienced a decrease in back pain after being given endorphin massage and only a small percentage i.e. 6 people (25%) who did not experience a decrease in pain or are likely to be unchanged.

**Table 1**  
**The difference in Average Scale of back pain before and after given the Endorphin Massage**

		Mean	N	SD	Std. Error Mean
Pair 1	Pre Test	5.9300	20	1.76250	.39411
	Post Test	4.5800	20	1.68041	.37575

Based on table 1 can be explained that the average scale of back pain after given the endorphin massage decline, where average scale of back pain before given the endorphin massage is 5.93 and after given the endorphin massage 4.58.

**Tabel 2**  
**Result of Paired T-test of Endorphin**  
**Massage against back pain in pregnant**  
**women**

	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pre Test - Post Test	1.350	1.163	.260	.805	1.894	5.190	19	.000

Statistical analysis results in table 2 above shows that the average decline in the scale of back pain after the respondents given endorphin massage of 1.35 points, the value of  $t = 5.19$  and  $p < 0.001$ . This means there is a significant influence of the endorphin massage to back pain. Can be interpreted also that endorphin massage is effective for back pain at the final trimester of pregnant women. Endorphin Massage is therapy or light massage that important enough given to pregnant women on the nearly of the childbirth until the time of birthing because endorpin massage have excellent benefits, one of which is effective to decrease back pain. Endorphin massage can be done by anyone accompanying the pregnant woman, but ideally performed by the partner or husband of the pregnant woman in order to be ever more closely the relationship between husband and wife, as well as the babies that will be born (<http://www.provclinic.com/articles/endorphin-massage>).

In this study, endorphin message was conducted by the midwife (researchers). The massage techniques used are expectant mothers are positioned seated comfortably with facing the back chair, after that the mother asked for drawing breath in slowly and gently pull it out while closed her eyes repeatedly, along with that of researchers doing massage gently and lightly start from the upper arm toward the forearm, then massage to the neck hold down towards forming the letter V inverted (direction of massage from the neck towards the outside toward the side of the rib). This lightly massage

is forwarded up to the bottom of the back. When performing a massage, researchers say the affirmative sentences, like when I did touch it, feel that endorphin is spread throughout the body, this endorphin will eliminate discomfort of mother.

When done the touching of stimulation or massage, the body will respond and secreting of endogenous analgesic (endorphin) which is a hormone naturally as the best pain relievers. The body will produce endorphins when being in a state of deep relaxation. The production of this hormone is very effective if done at the area of the arms, neck, back and thighs. A study about the massage by the University of Maryland Medical Center, Massage can be used to overcome cases such as musculo sceletal of lower back pain, fibromyalgia, sprains and strains. A single session of massage can be done for 15 to 90 minutes depending on the severity of the complaint. The procedure of massage on this research have been adapted to the study of the above theory, that area in massage is the upper and lower part of the arm, neck, hold down up to the lower back for 15 minutes. While doing the massage, pregnant women are conditioned in a state of deep relaxation with a conveniently positioned, breath exercise and affirmation given so that the results of research showed a significant decrease in pain ( $p < 0.001$ ).

The workings of endorphin massage in lowering levels of back pain was disrupting the transmission of pain by the way of increasing the circulation of neurotransmitter produced naturally by the body at the Synapse neural pathways in the central nervous system. Endorphin bind to prasinaptik membrane, where the release of substance P inhibited so that the transmission of pain is also obstructed. When the touching and pain are stimulated simultaneously, the touching sensation will run to the brain, and desendens control systems will stimulate the thalamus to release endorphin which closes the pain in the gate of the medulla spinalis. Thus the

perceived pain will be reduced. (Rokade, B.P. 2012 and Fraser D.M. 2009). According to Mander. 2003, massage has the effect of distraction that can stimulate the receptors of opiates which are in the brain and spinal cord. The central nervous system will produce opiate endogen (endorphins) through desenden control system, in addition to affecting the transmission of pain, endorphin can also make muscle relaxation.

The results of this research are supported by previous research, i.e. NurAzizah's research of the influence of endorphin massage against the pain intensity of the first delivery stage, obtained the results of a given group of endorphin massage mostly (60.0%) experienced mild pain, and in the control group the majority mostly (66.7%) experienced severe pain. A similar study conducted by Lestari at al, 2013, also showed there is a decrease in the level of pain before and after getting a deep back massage on the birthing mother of the first delivery stage. Weerapong (2005) also stated that a massage can give the effect of lowering a severe muscle pain, but does not effect on the loss of muscle function.

Although the results of the statistical analysis in table 2 declares endorphin Massage effectively lose the back pain ( $p < 0.001$ ), but in Figure 1 are found a small percentage of pregnant women who did not experience a decrease in pain after being given endorphin massage. A reduced rate of pain in patients who do endorphin massage depends on the endorphin levels secreted. This is in accordance with the results of the Aryani's research that stated there is a negative correlation between the levels of endorphins with the intensity of the pain. The higher of the endorphin levels, the lower of the perceived pain. The defference in level of endorphin on each individual can be influenced by the factor of person's physical and psychological. The perception of a person also can affects the level of pain. According to Kitzinger and Mander (Fraser. 2009), the perception of pain is affected by factors such as emotions of fear, confidence and

cognition, so mothers who fear or worry and have no confidence when done endorphin massage will most likely not have a good response to the pain that is perceived. Therefore midwives have important role in helping and facilitating the mother in maintaining the control of the pain.

## CONCLUSION

Endorpin massage can lower back pain effectively. Research results can be used as learning materials study of Pregnancy Care in particular about non pharmacological treatment of back pain at the final trimester of pregnancy. For health practitioner in midwives particularly are expected to use endorphin massage as a therapy of non pharmacological in the case of back pain by increasing health education to the husband or the family of pregnant women to take an endorphin massage to his partner that is experiencing back pain during the 9 months of pregnancy or above 36 weeks to enter the process of childbirth. A non pharmacological therapy is relatively cheap, easy to do and has not negative side effects against pregnancy.

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## STUDY OF CROSS CULTURE OPTIMISM AMONG MIDWIFERY STUDENTS

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### ABSTRACT

This research was conducted to investigate the correlation between optimism and ethnicity among midwifery college students. This is quantitative research with correlational design and sample used midwifery college students in the area of Jakarta, Banten, West Sumatera and West Java. Overall, 476 midwifery student participated in this research by filling out questionnaire consisting of Life Orientation Test-Revised (LOT-R) constructed by Scheier, Carver and Bridges (1994). The result showed that ethnicity did not have a positive and significant correlation with optimism, which means that ethnicity of participant, did not have effect on high and low scores of optimism on midwifery students. On the other hand, variability of participants' ethnicity was not predictable by the correlation with optimism.

**Keywords:** Cross Cultural, Optimism

### INTRODUCTION

Optimism is defined as positive expectations of the future (scheier, carver, & bridges, 1994). Carver and scheier (2002) believed that optimism is a basic characteristic of positive thinking. Optimism is also a positive anticipation of future events that acts as an important factor to help reducing problems such as maladaptive distress and interpersonal problems (hong et al., 2014). Optimism is defined as a person's tendency to believe that he/she will achieve positive things in life (lee, brown, Mitchell, & schiraldi, 2008). Based on the elaboration given, it can be concluded that optimism is a positive thought or a person's positive expectations about the future. An optimist also possesses confidence about the future that brings them to continue their efforts towards the expected goals despite the some obstacle in achieving the goals (Carver et al., 2010; Slutske et al., 2005 (in Hanssen et al., 2015).

Midwifery students, as prospective midwives, who have a role and an important position as in terms of reducing Maternal Mortality Rate (MMR) and

Figures morbidity and infant mortality (IMR) (Decree of the Minister of Health of the Republic of Indonesia (MoH), 2007), is considered important to have high optimism. High optimism possessed by midwifery students can also help them to continue their efforts to achieve the expected goals (Carver et al., 2010; Slutske et al., 2005 (in Hanssen et al., 2015) although there are some obstacles in the world of obstetrics, such as their intense job competition, low number of midwifery with Strata level of 1, 2, and 3, the slow process of spending STR, and the possibility of experiencing trauma for failure in providing help (Circular of the Directorate General of Higher Education No. 1643, 2011; Pramudiarja, 02 February 2012; majalahbidan.com, 2012 February 20; Augers, 2011).

While optimism is perceived important and can help midwifery students in achieving their goals in the future, there are internal factors (experience and genetic) and external (socio-economic status, race/culture, and social resources that can influence individual's optimism. Some studies mentioned that these factors



may affect the level of optimism possessed by an individual. One of the factors that may affect the level of optimism is cultural factor, which is external factor. One cultural factor that highly affects an individual's optimism is associated with habits and rules that apply to daily life in the neighborhood he/she lives in. In one study, the results of the calculation of internal consistency with LOT-R as measuring instrument was not found in Afro-American and Hispanic as racial minorities nor in individuals with low education. Therefore, it is concluded that optimism was low in racial minority and low education groups (Hirsch, Britton, & Conner, 2010). This happened because in the United States, racial minorities such as African-American race are often discriminated by racial majority (Hirsch, Britton, & Conner, 2010).

The findings from these studies attract and encourage the researcher to conduct a research on the relationship between optimism and cultural aspects such as ethnicity. Given Indonesia is known as a country with diversity or heterogeneity with diverse ethnicities, cultures, religions, and customs (tradition), it is possible that these factors have great impact on the level of optimism, particularly, in this study, among midwifery students. Based on this background, the question to answer through this research is "Is there any relationship between optimism and ethnicity on midwifery students?"

### **Tribes**

Ethnicity is generally defined as a sense of group belonging to the core characteristics of same origin, history, culture, language, experience, and values are the same (Baumann, 2004; Ratcliffe, 2010). In addition, tribe is also the result of self and group identities made in the context of extrinsic and intrinsic as well as social interaction (Baumann, 2004). It can be concluded that identity of tribes will be

upheld by every individual and the underlying values of life in it as it is internalized.

### **RESEARCH METHODS**

This is a quantitative and correlational research. The purpose of this study was to determine whether there is relationship between an individual's optimism and his/her tribe. Method of sample selection (sampling) conducted by the researcher is the non-probability or non-random sampling of convenience sampling.

Participants of this study were diploma program students of midwifery sitting on semesters 4 and 6 in the province of DKI Jakarta, West Java, Banten and West Sumatra, which have the characteristics of ethnic groups according to region of residence and college. The selection of the participant aimed to improve the purity of ethnic identity of the individual who is also in line with the cultural environment in the home or college environment. Based on the sorting carried out, 476 students of diploma in midwifery program whose tribes aligned with their provincial midwifery academy were taken as participants.

The data were collected and processed quantitatively by using Statistical Package for Social Science (SPSS) with descriptive statistical technique and Pearson correlation to see the significance of the linear relationship between the variables. The hypothesis of this study is (Ha) is There is relationship between optimism and ethnicity among midwifery students and (Ho) There was no relationship between optimism and ethnicity among Midwifery students.

### **Measurement**

**Optimism** Optimism measuring tool used is a LOT-R measuring tool developed by Scheier, Carver and Bridges (1994) adapted in Indonesia by Isma (2013)

along with some tests by the researcher including test of legibility (n = 12), test of reliability and validity (n = 153;  $\alpha = 0.51$ ; validity > 0.2).

**Ethnicity** was recognized based on the participants' demographic data at the beginning of the study questionnaires filling.

## RESULT AND DISCUSSION

In this study, the researcher obtained 476 participants from students of Midwifery Diploma Program. Table one indicates presentation of participants' demographic data based on the questionnaires used in the study.

Table 1. participants overview (n = 476)

Characteristic	F	P
<b>Age</b>		
18 yr	15	3.1
19 yr	189	39.7
20 yr	185	38.9
21 yr	64	13.4
22 yr	19	4.0
23 yr	3	0.6
25 yr	1	0.2
<b>Provinces</b>		
West Sumatera	260	54.6
DKI Jakarta	180	37.8
Banten	27	5.7
East Java	9	1.9
<b>Ethnicity</b>		
Minang	260	54.6
Multicultural*	180	37.8
Sunda	36	7.6

\* Multicultural are individuals from various ethnic groups who live in the capital city (Jakarta)

Most (189) of the participants aged 19. Based on the identity of ethnic groups, the largest number of participants came from Minang ethnic (260 participants). In this study, because it took participants of

students who attend college in the capital city of Jakarta with wide diversity of ethnic identity, the researcher used the multicultural identity term, which means their diverse ethnic mix in the region.

Table 2. General overview of Optimisme

Scor Category	Score Range	F	P
Rendah	8-14	84	17.6%
Sedang	15-21	353	74.2%
Tinggi	22-24	39	8.2%

The mean value of participants' optimism is 17.55 with standard deviation (SD) of 3. From the distribution of optimism total score, the distribution of optimism scores were divided into three categorizations including low, moderate, and high. 353 participants (74.2%) had moderate level of optimism.

The main results of this study indicated that there was no positive and significant relationship between the variables of optimism with ethnicity among midwifery students. The absence of significant correlation makes null hypothesis (H<sub>0</sub>) is received and alternative hypothesis (H<sub>a</sub>) is rejected, with interpretation that there was no linear significant and positive relationship between optimism with ethnicity.

### Correlation

Based on the research question, to answer whether there is a relationship between variabe of optimism and ethnicity, the researcher calculates the correlation between the two variables.

Table 3. Results of Correlation Calculation

Variabel	r	Sig (p)	r <sup>2</sup>
Optimism and ethnicity	0.064	0.164*	0.004

\*Not significant on L.o.S .01 (two tailed)

The results of the correlation calculation of tribes and optimism variables showed that the variables of optimism and ethnicity were not correlated and insignificant.  $r^2$  value indicates large effect size between ethnicity correlation and optimism score of midwifery students.  $r^2$  calculation results indicated that 0% variance of ethnic identity on midwifery students cannot be predicted score of optimism, which means that there are factors other than ethnicity that is able to predict optimism. Moreover, the significance value was not at 0.00. Therefore, it can be concluded that the relationship between optimism and ethnicity only happen by accident.

### One-Way ANOVA

Table 4. Calculation result of One-Way ANOVA

Variabel	ANOVA	
	F	Sig.
Optimism and ethnicity	1.040	0.354

The calculation of the mean score of optimism and ethnic group was carried out by using statistical technique of One-way ANOVA. The result showed that there was no difference in the mean score of optimism based on ethnicity ( $F = 1.040$ ,  $p > .05$ ). It means that ethnicity played no role in determining the difference in mean score of optimism in the group of study participants.

### CONCLUSION

Based on the results, optimism is not associated with ethnicity, that an increase or decrease in optimism score has nothing to do with the differences in individual ethnic groups. The results differs from the previous research stating that optimism was low in minority ethnics group and

low education participants (hirsch, britton, & conner, 2010), and a research conducted by chang (1996) about the influence of culture on optimism on Asian American and Caucasian Americans students. The difference results of these studies is likely to occur because Indonesia is the largest archipelago in the world (Portal Nasional RI, n.d). Each of islands in Indonesia is generally inhabited by tribes or a particular social group, thus certain ethnic groups makes up the majority in their respective territories. Meanwhile, according to the previous research, only racial minorities have lower optimism (hirsch, britton, & conner, 2010).

Samples taken from midwifery students in each region make them feel as the majority, that the results of this study is different from the results of researches conducted by Hirsch, Britton, and Conner (2010) and Chang (1996). The understanding of race in western states is different from that in Indonesia as ethnic identity is only cultural diversity in Indonesia

The differences that arise is in the form of cultures such as those related with custom or procession of a sacred event, ethnicity, and religion. They do not label attribute on certain ethnic groups related with capabilities (such as smart or stupid), or discriminate against certain groups because of ethnic or cultural differences. This is because the state of Indonesia still holds strong sense of unity despite different cultural ethnic groups manifested from their understanding of unity in diversity embraced by the Indonesian people. Therefore, it is important for the people of Indonesia to uphold and maintain understanding of national unity in order to realize the 3<sup>rd</sup> principle of Pancasila as the state ideology saying "Unity of Indonesia".

The results of this study indicate that there is no correlation between optimism and

ethnicity on the participant of midwifery students in Indonesia. This is as the result of characteristic factor of Indonesian society that does not discriminate one tribe against other tribes and their understanding of national unity that underlies the lives of the people of Indonesia until the current generation and their sense as the majority ethnic group while in its own territory.

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# FACTORS AFFECTING COMPLIANCE WOMEN IN PREGNANT TO CONSUME IRON TABLETS YEAR OF 2016

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## ABSTRACT

Maternal mortality in Indonesia is still very high, the greater the risk of death with the prevalence of anemia among pregnant women of 37.1% with provision coverage of 85% Iron tablet (Kemenkes, 2012). Number of pregnant women with anemia at 28% (Dinkes Kab. Bekasi, 2015), so we need to do research to determine the factors associated with compliance of pregnant women in consuming Iron tablet in order to reduce the prevalence of anemia in pregnant women.

The study design was cross sectional. With a sample of 45 pregnant women at term gestation, which was taken by accidental sampling method.

The research found 32 (71.1%) were adherent in consuming Iron tablet, 71.1% of highly educated, 51.1% of working mothers, family support and as much as 51.1% of pregnant women who do not experience as many drug side effects 64.4%. Statistical test results found no relationship between education ( $P = 0.030$ ), family support ( $P = 0.039$ ) and adverse events ( $P = 0.037$ ) with compliance to consume iron tablet, whereas no association was job ( $P = 0.451$ ).

Conclusion of the study stated that the necessary efforts to counseling, information and education, better health worker to pregnant women or families that Besi tablet consumption could be optimized as an effort to prevent anemia in pregnant women.

**Keywords:** Compliance, Iron Tablets, Anemia, Pregnant women

## INTRODUCTION

Effect of anemia in pregnancy can cause low birth weight include, bleeding and death. Anemia in pregnancy is a national problem because they reflect the economic value of social welfare of the community and has had enormous influence on the quality of human resources. The government and the medical staff have been trying to take preventive action by giving blood supplementation in pregnant women were distributed at their checkups. Pregnant mothers who are highly susceptible to anemia and this is because the amount of iron needed during pregnancy is much greater than in non-pregnant. (Manuaba, 2010).

Anemia due to iron deficiency with a prevalence of 24.5% in 2013 is still a major public health problem in Indonesia (MOH), it can be seen that the health profile by Indonesia in 2010 the prevalence of anemia among pregnant women of 24.5%. These circumstances indicate that.

Overcoming the problem of iron deficiency anemia is currently focused on providing iron tablet 90 tablets during pregnancy. (MoH RI, 2011).

Maternal health care coverage that is at K1 Indonesia in 2012 reached 96.84% decline in 2013 to 95.25%. And maternal health care coverage at K4 in 2012 reached 90.18%, but a significant decrease in 2013 to 86.85%. (MoH, 2013)

Based on Riskesdas results in 2013, there were 37.1% of pregnant women are anemic pregnant women with hemoglobin levels less than 11.0 g / dl, the proportions were almost equal in urban areas (36.4%) and rural areas (37.8%). The prevalence of anemia in West Java is currently 51.7%. District Bekasi prevalensi in anemia among pregnant women by 35% in 2014, slightly decreased in 2015 by 31.4% (Dinkes Kab. Bekasi). Whereas in PHC of Kedungwaringin anemia prevalence of anemia in 28% of pregnant women in 2015.



Mother's perception of the tablet Iron is one of the important factors that influence maternal behavior in consuming drinking iron tablet. Mom would be obedient in drinking enough if a mother's perception of the tablet Iron and mothers may be drinking it the right way.

Number of pregnancies in Kedung Waringin Public Health Center in 2014 was 2050 pregnant women, from that number 24% of pregnant women are in anemic. And in 2015 was 1134 pregnant women, that 28% who are anemic in. (PHC medical records., 2016)

## RESEARCH METHOD

This research is kind of a cross sectional study to find a correlation between risk factors with effects, with the approach, observation or data collection at once at a time (point time approach). The population in this study were all pregnant women who had antenatal care in PHC Territory Kedungwaringin. 2016. With a sample is partially pregnant women checkups at primary health centers Kedung Waringin 2016.

## RESULTS AND DISCUSSION

Table 1  
Relation Between Education Compliance In Pregnant Women With Eating Iron Tablet

Education	Compliance				Total N	P Value	OR 95% CI
	Not	%	Y E S	%			
Low	7	53,8	6	18,8	13	0,030	5,056 1,239- 20,626
High	6	46,2	26	81,2	32		
Total	13	100	31	100	45		

Source: Kedungwaringin PHC, March 2016

Respondents with lower education most experienced non-compliant behavior in consuming iron tablets of 7 respondents (53.8%). 81.2% respondents with higher education showed submissive

behavior in consuming iron tablets as many (26 respondents). Based on the above table can be concluded that mother with low education 4.929 times greater risk for a non-compliant in taking iron tablets as compared to highly educated mothers.

Table 2  
Relation Between Maternal Employment Compliance In Consuming Tablet With Iron

Jobs	No t	Compliance			N	P value	OR (95% CI)
		%	C	%			
Not wor king	8	61,5	14	43,8	22	0,451	2,057 (0,551- 7,683)
Wor king	5	38,5	18	56,2	23		
Tota l	13	100	32	100	45		

Source: Kedungwaringin PHC, March 2016

The above data indicates that respondents with no work at most shows non-compliant behavior in consuming iron tablets as much as 8 respondents (61.5%). Respondents who work at most showed submissive behavior in consuming iron tablets as many as 18 respondents (56.2%). With OR 2.057, the mother who does not work 2,057 times greater risk for a non-compliant in taking iron tablets compared to working mothers

Table 3  
Relation Between Family Support Compliance In Pregnant Women With Eating Tablet Iron

Family Suppo rt	Compliance				N	Nilai P	OR (95% CI)
	Not	%	Comp	%			
Not Support	10	76,9	12	37,5	22	0,039	5,556 (1,270- 24,293)
Support	3	23,1	20	62,5	23		
Total	13	100	32	100	45		

Source: Kedungwaringin PHC, March 2016

Respondents who do not have family support at most shows non-compliant behavior in consuming iron tablets as much as 10 respondents (76.9%). Respondents who have the support of most families showed submissive behavior in consuming iron tablets as many as 20 respondents (62.5%). With OR 5.556, the mother who did not have the support of families at risk of 5.556 times more likely to disobey the iron tablet consumption compared with mothers who receive family support ..

Table 4  
Relation Between Drug Side Effects Experienced Compliance In Pregnant Women With Eating Tablet Iron In PHC of Kedungwaringin Year of 2016.

Drug Side Effect	Compliance				Nilai P	OR (95% CI)
	Not	%	C	%		
Experience	8	61,5	8	25	16	4,800
Not Experience	5	38,5	24	75	29	0,037 1,214- 18,971
Total	13	100	32	100	45	

Source: Kedungwaringin PHC, 2015

Respondents who experienced drug side effects showed most non-compliant behavior in consuming iron tablets as much as 8 respondents (61.5%). Respondents who did not experience the side effects of drugs most widely showed submissive behavior in consuming iron tablets as 24 respondents (75.0%). With OR 4.800, the mother who experienced side effects of drugs are at risk 4,800 times greater for non-compliant in taking iron tablets compared with women who did not experience the side effects of drugs.

## CONCLUSION

The results showed that out of 45 pregnant women at health centers Kedungwaringin year of 2016, showed that 71.1% patient compliance in taking

iron tablets. Where such compliance is related to education, employment, and family support. But in addition it also showed that the side effects of iron tablets if consumed in the long term cause for concern for pregnant women will cause things considered unfavorable.

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# HYPNOBIRTHING EFFECT ON THE LEVEL OF ANXIETY PRIMIGRAVIDAE THIRD TRIMESTER IN SURABAYA

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## ABSTRACT

Pregnancy is something that is awaited by a woman. Mother who is expecting her first child often experience anxiety. Anxiety in pregnant women present as feelings of fear and unpleasant. Anxiety will increase when approaching childbirth. Increased anxiety can be handled at risk of pregnancy and childbirth. Indonesia has been growing in non-pharmacological methods to deal with labor that is hypnobirthing. Hypnobirthing techniques is a natural method used to eliminate the fear and panic that often faced by a mother during labor that can be done by the mother during pregnancy until delivery.

The purpose of this study was to determine the hypnobirthing effect on the level of anxiety primigravidae third trimester in the city of Surabaya. This study is pre-experimental design with one-group prepost - posttest design using a quantitative approach. The data were obtained using a questionnaire HARS. Samples were 19 pregnant women primigravidae. Statistical test using the Wilcoxon Signed Rank Test of significance  $\alpha = 0.05$ . Statistical analysis showed that the technique hypnobirthing effect on maternal anxiety levels with  $p = 0.000$  ( $p < 0.05$ ). The conclusion of this study is hypnobirthing techniques influence the level of maternal anxiety primigravidae third trimester of pregnancy in Surabaya

**Key word:** Hypnobirthing, Anxiety, Primigravidae

## INTRODUCTION

Pregnancy is the intrauterine fetal growth and development since its conception and ends until the onset of labor. During pregnancy there is a change to mother both physically and psychologically. In general, physical changes during pregnancy is, no menstruation, breast enlargement, changes in the shape of the uterus, changes in the working system of organs, abdominal swelling, weight gain, weakening of the relaxation of the muscles of the digestive tract, the sensitivity of the senses, as well as the legs and arms began to swell (Manuaba, 2010).

While the psychological changes that often occur are anxious, Zamriati research results in 2013 showed that 62% of pregnant women experience moderate levels of anxiety associated with the pregnancy until delivery. Anxiety is an unpleasant emotional reaction, which is characterized

by fear, given the barriers to personal desires and feelings of distress that arise in consciousness.

Forms of anxiety are divided into two levels, namely: 1) the psychological level; anxiety manifests as psychiatric symptoms, such as tension, confusion, anxiety, difficulty concentrating, feelings of uncertainty and so on, 2) the physiological level; anxiety already affects or is expressed in physical symptoms, especially in the nervous system, for example, can not sleep, heart palpitations, trembling, stomach nausea, and so forth (Kartono, 2007).

Next Kartono in 2007 said that the manifestation of anxiety manifested in three things: 1) the manifestation of cognitive, manifested in one's mind, often thinking about the catastrophe or bad things will happen, 2) the behavior of the motor, one's anxiety manifested in the movement erratic as diarrhea, frequent urination, muscle tension, increased pressure blood and others. Almost all patients with anxiety showed

increased heart rate, increased respiration, muscle tension, increase blood pressure and others, 3) Affective, manifested in feelings of anxiety, feelings of excessive tension.

Anxiety before delivery is often experienced by the mother. Although childbirth is a matter of physiological, but in the face of the delivery process in which a series of physical and psychological changes starting uterine contractions, dilatation of the birth canal, and spending a baby and placenta, which ended with bonding beginning between mother and baby (Manuaba, 2007) ,

The cause of anxiety in primigravidae who will face labor for the first time, include among others: 1) anxious as a result of labor pain, 2) the physical condition of the mother, 3) a history of prenatal care (history ANC), 4) lack of knowledge about the process labor, 5) support from the social environment (husband / family and friends) as well as other psychosocial background of the woman concerned, such as education level, marital status, unwanted pregnancy, socioeconomic (Roziyani, 2014).

Epidemiologically, anxiety can occur at birth either in labor or multigravida primigravidae. Hidayat in 2011's research found that more than 12% of women who have given birth said that they had experienced anxiety during childbirth where the experience is unpleasant moment in his life. Fear and pain cause stress resulting adrenaline spending. This resulted in a narrowing of blood vessels and reduce blood flow that carries oxygen to the uterus resulting in decreased uterine contractions that will lead to an increased time of delivery. This is disadvantageous for both mother and fetus in the womb of the mother.

Indonesia has developed in non-pharmacological methods to deal with labor that is hypnobirthing which has been widely known and practiced by society. Hypnobirthing is a natural method used to eliminate the fear, panic, tension and other pressures that haunt the mother during labor by encouraging mothers to positive thinking and affirmations administration. Effective

done since the beginning of pregnancy until late delivery (Adriana, 2010).

## RESEARCH METHODS

This study design using pre-experimental design with one-group pretest posttest design with a quantitative approach. The data were obtained using a questionnaire filled HARS given to the mother while before hypnobirthing and given to re-filled after the mother did hypnobirthing directly on the spot. Samples were 19 pregnant women primigravidae third trimester. Data taken starting from April to June 2016. The statistical test used Wilcoxon Signed Rank Test of significance  $\alpha = 0.05$ .

## RESULTS AND DISCUSSION

Table 1.1 Distribution of respondents by age

No.	Age	N	%
1	19-21	2	10,5
2	22-24	7	36,8
3	25-27	7	36,8
4	28-31	3	15,7
<b>Total</b>		<b>19</b>	<b>100</b>

In Table 1.1 can be obtained information that the respondents aged between 19-21 years are as much as 10.5%. Respondents age 22-24 years and 25-27 years of age is as much as 36.8%, respectively. While respondents aged 28-31 years by 15.7%.

Table 1.2 Distribution of respondents by last education

No.	Last Education	N	%
1	Middle School	1	5,2
2.	High School	14	73,6
3	College	4	21,2
<b>Total</b>		<b>19</b>	<b>100</b>



Based on the above table it can be seen that most respondents have an education past high school as much as 73.6%. Then the respondents who have a Bachelor of as much as 21.2%. While respondents have a junior high school education last at least that is only 5.2%

Table 1.3  
Distribution of Respondents by their Job

No.	Jobs	N	%
1	Civil servant	1	5,2
2	Private sector	16	84,4
3	Self	1	5,2
4	Housewife	1	5,2
<b>Total</b>		19	100

From the table above shows that most respondents or 84.4% work in the private sector. Respectively while the remaining 5.2% are working as civil servants, Self and Housewife

Table 1.3 Levels of anxiety respondent before Hypnobirthing

No.	Level of anxiety	N	%
1	Not Anxiety	0	0
2	Light Anxiety	3	15,7
3	Moderate Anxiety	15	78,9
4	Heavy Anxiety	1	5,2
<b>Total</b>		19	100

According to the table above shows that the majority of respondents, or as much as 78.9% had moderate anxiety. While mamiliki mild anxiety as much as 15.7%. Only one of the respondents, or 5.2% had severe anxiety. And no respondents who do not have anxiety.

Based on the above table it can be seen that after hypnobirthing respondents who have mild anxiety is as much as 63.1%. While respondents have moderate anxiety as much

as 31.5%. Then the respondents who do not have existing anxiety 5.2%. And no respondents who have severe levels of anxiety.

The bivariate analysis to see if there is significant influence between the dependent variable is the level of anxiety and the independent variables are hypnobirthing, the Wilcoxon statistical test and the 95% confidence level and the level of significance was  $p < 0.05$ , so it can be inferred when  $p < 0.05$  then  $H_0$  and  $H_1$  accepted meaning no statistically significant effect between dependent and independent variables

Based on the results of the calculation Wilcoxon Signed Rank Test, then the value of Z obtained at 2.731 with p value (Asymp. Sig 2 tailed) of 0.006 which is less than the critical limit of 0.05 so the research hypothesis decision is to accept  $H_1$  or significant effect on the hypnobirthing maternal anxiety levels.

#### 1. The level of anxiety primigravidae before Hypnobirthing

Prior to hypnobirthing, there were 78.9% (15 people) of mothers who had a moderate level of anxiety. Mothers who have severe anxiety level there is one person (5.2%). While those with mild anxiety level there are three mothers (15.7). Primigravidae cause of anxiety of which this is the age and mother's perception of the process is consistent with research Zamriati in 2013 which states that there is a significant relationship between age, parity and maternal perceptions that influence anxiety pregnant women before delivery.

#### 2. The level of anxiety primigravidae after Hypnobirthing

After hypnobirthing turned out to be an increasing number of pregnant women who have mild anxiety level that is 12 people (63.1%). Then mothers anxiety levels were also decreased ie there are 6 people (31.5%). And no bu who had severe anxiety level. This is according to research conducted by Ilmiasih in 2010 stating that after hypnobirthing for 3 months will reduce maternal anxiety levels up to 50%



## CONCLUSION

Hypnobirthing well done on pregnant women. Anxiety in third trimester pregnant women can be reduced by regularly hypnobirthing techniques

Suggestions can be given are:

1. Promoting hypnobirthing
2. Midwives increase knowledge and skills about hypnobirthing
3. This study takes the data directly before and after hypnobirthing, thereby potentially bias the study. So hopefully in the next research data retrieval time span is extended to be able to eliminate bias.

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## CONTINUUM OF CARE TO REDUCE MATERNAL AND CHILD MORTALITY

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### ABSTRACT

Mother and child mortality rate in Indonesia are still high compared to some countries in Southeast Asia . Various interventions made to reduce the maternal and neonatal mortality rate. One of the interventions proven to reduce maternal mortality is the care with a continuum of care approach . The purpose of writing this article is to examine more deeply about the implementation of the principle of continuum of care to reduce maternal and infant mortality . The method used is a review of the literature . The result of midwifery care with a continuum of care approach is proven to reduce maternal and child mortality . Conclusion. care with a continuum of care approach should be applied and optimized for the purpose of lowering maternal and child mortality can be achieved.

**Key Words: Continuum of Care, Maternal and child mortality**

### INTRODUCTION

Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) in Indonesia are still high compared to some countries in Asia. Various attempts were made to reduce maternal and child mortality. One of them by increasing the quality of midwifery care. Based on the publication of The Lancet, the care can reduce infant and maternal mortality is the continuous care (continuum of care). Continuity of care is necessary throughout the lifecycle (adolescence, pregnancy, childbirth, the postnatal period, and childhood) and also between places of caregiving (including households and communities, outpatient and outreach services, and clinical-care settings).

The purpose of writing this article is to examine more deeply about the principle of the implementation of the continuum of care in midwifery care to reduce maternal and child mortality.

Research for sustainability, et al showed that high coverage and quality of care are essential in the care of a sustainable package can prevent 67% of deaths of infants and children in 60 countries worldwide.

Based on journal, entitled Continuity of care by a midwife team versus routine care during pregnancy and birth: a randomized trial written by Rowley MJ, Hensley MJ, Brinsmead MW, Wlodarczyk JH in The Medical Journal of Australia, care sustainable given by a small team of midwives improve patient satisfaction in the experience of childbirth and smaller costs compared to routine care, continuous care as it also gives very little side effects of the products of conception are less good. The results also showed that continuous care is safely applied.

### RESEARCH METHODS

This article is an literature review. Resources to make this literature review included studies of systematic search of computerized databases, forms of literature articles, studies, and reports. Keywords used in the search for a journal is a 'continuum of care', 'Midwifery'.

### RESULT AND DISCUSSION

The term was initially applied in the 1970s to the integration of research and practice for provision of a continuum of care for elderly people. In subsequent decades, use of the term has broadened, although it most commonly refers to individual patient care and case management, and to promotion of appropriately directed care with a series of

linkages to ensure that no patient is lost to follow-up. A systematic review showed that most of the 638 papers on the continuum-of-care approach between 1995 and 2002 focused on health systems for nursing, palliative care (58%), and mental health (19%). Others assessed the continuum within biomedical care (11%) and health-service administration (8%). Fewer than 1% of the identified papers related to public health or health promotion. These papers emphasised the connections between components along a continuum of care—including people, places, and times.

Should facilitate the care of postpartum family planning services and health of children. Adolescents require nutrition-related services, sexual and reproductive health. If women, infants, children, or adolescents experiencing complications or disease in every phase, continuity of care from home to hospital, referral and emergency management with timely, very important.

Current conditions, mothers and children were targeted program of related sectors such as maternal and neonatal health, family planning, nutrition, and others. The lack of integration between these programs can result in fragmented care, quality and patient care are unsatisfactory. Every contact with a patient is a good opportunity not only to provide care promotive, preventive and curative but also make an appointment for the next visit. Each phase in the life cycle need access to health care.

Continuum of care for mothers, newborns and children need access to the services provided by families and communities, with outpatient and outreach assistance (outreach), and by clinical services throughout the life cycle, including adolescence, pregnancy, delivery, the immediate postnatal period, and childhood. Salvation of the soul depends on the high coverage and quality of service that is integrated in the continuous care packages with the functional relationship between the level of care in the health system and the service packs, so that care can be provided

at any time and place for the effectiveness of the service package.

*“Programs succeed best when they provide a package of services, including community-based family planning, health and nutrition services. Substantial—and sustained—reduction of the risk of dying once pregnant, however, requires an effective continuum of care from the community to the first-referral level, supported by a public education program.”*

-World Bank, 1993-

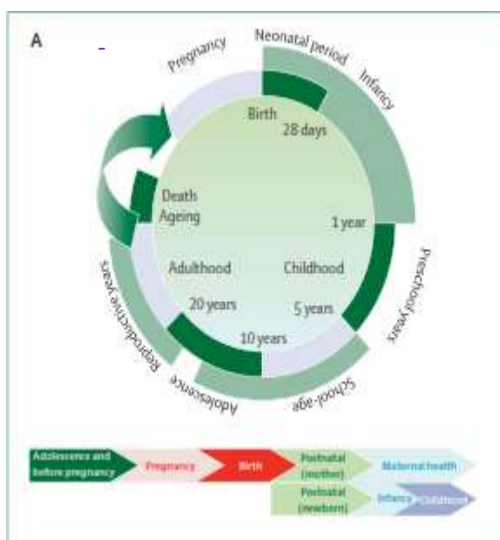
*“The right person, at the right time, in the right place, providing the right care.”*

-Centers for Disease Control/CARE International, 2001-

*“The core principle underlying the strategies to develop MNCH programmes is the ‘continuum of care’. This expression has two meanings. First it means care has to be provided as a continuum throughout the lifecycle, including adolescence, pregnancy, childbirth and childhood. Second it indicates that care has to be provided in a seamless continuum that spans the home, the community, the health center and the hospital.”*

-World Health Report 2005-

*“The time has come for these health interventions for newborn babies to be integrated into maternal and child health programmes...The continuum-of-care approach promotes care for mothers and children from pregnancy to delivery, the immediate postnatal period, and childhood, recognising that safe childbirth is critical to the health of both the woman and the newborn child—and that a healthy start in life is an essential step towards a sound childhood and a productive life. Another related continuum is required to link households to hospitals by improving homebased practices, mobilising families to seek the care they need, and increasing access to and quality of care at health facilities.”-The Lancet Neonatal Survival Series, 2005-*



Adopted by Kerber, et al, 2007

**Figure 1: Continuum of care**

Connecting care during the lifecycle (A) and at places of caregiving (B). Adapted from Partnership for Maternal, Newborn and Child Health, with permission.

The above picture shows that continuous care can be defined as the dimension of time (during life cycle) and as the dimensions of the place and level of care. Upbringing is sustained throughout the life cycle, including care before pregnancy (family planning, education, and empowerment of adolescent girls) and during pregnancy. During labor and a few days after delivery, mothers and babies are at the highest risk of death, more than half of maternal and neonatal deaths occur during this period. An estimated 3.2 million

stillbirths each year, 30% during labor, even now every year 50 million women give birth at home. Upbringing postnatal effective for mothers and babies will facilitate the transition between the mother preventive care and curative care to improve child survival.

Continuum of care based on the dimensions or levels, including houses, first-level health facilities, and hospitals. Continuous effective upbringing will ensure proper care is provided wherever it is needed, and have access to referral. In many developing countries, the majority of maternal, infant and children occur in the home, usually because of the delay in reaching a health facility. Mothers and babies are very susceptible to death, women with postpartum hemorrhage or newborn with asphyxia, sepsis, or complications of premature birth can die within hours or even minutes if appropriate care is not provided. The lack of attention to the complications of labor not only death but also lead to bad outcomes like stillbirths, neonatal disease and disability, and other complications. Financial constraints, poor communication, transportation, access to reference the weak, poor quality of care in health facilities, may restrict the access of care to those most in need.

Continuum of care based on the dimensions of the defined physical locations where care is given. Operational level health system vary, but can be distinguished by three different approaches, namely the basic skills, intensity of services and barriers to service. The first approach to clinical care, consisting of individual case management-oriented mothers, infants and children with the disease or complications, which are usually given at primary health facilities and referral. These services such as obstetric emergencies. Clinical upbringing must be available for 24 hours by trained personnel. Normal delivery care also requires skilled clinical management and sustainability of health care professionals.

The second approach, outpatient services include population-oriented services, delivered on a regular basis and scheduled through care in health facilities (eg, routine antenatal or postpartum care) or via mobile services (eg immunization campaigns or child health days). Service is usually standard, the client receives the same care, so that the skills required officers easier to learn as a clinical case management.

Third, care in the family and community, made up of home-based care practices. Programs to improve the care of families and communities, with the promotion of healthy behavior and empowering individuals and families to obtain quality services, should be adapted to the social and cultural environment through the formative research. Officers in communities should have the ability to negotiate (for example to promote breastfeeding or the use of oral rehydration salts) and skills to address basic health needs in their life cycle.

Research shows that high coverage and quality of the essential package could prevent 67% of deaths of infants and children in 60 priority countries in the world.

#### **Reproductive health clinical-care package**

Women of reproductive age might need clinical case management, especially for complications of sexually transmitted infections or HIV, other gynaecological emergencies, safe abortion, or post-abortion care. Unsafe abortion is the fifth most common cause of maternal death globally, and accounts for 30% of all deaths in some Latin American countries.

#### **Childbirth clinical-care package**

This package includes the skills of a normal delivery care and emergency obstetric care. Skilled care at birth and immediately after birth may determine the survival and health of mothers and babies.

#### **Newborn baby and child clinical-care package**

Clinical upbringing primary level should be readily accessible, most often through the Integrated Management of Childhood Illness (IMCI), with communication and access to referral. Continuous care must be available to manage sick children and infants, including the treatment of malnutrition. Clinical skills of health workers must be improved, strengthened health systems, for example for the provision of medicines and equipment. In some countries 4 million neonatal deaths occur due kegawatdarutan either immediately after birth (such as asphyxia or complications due to premature birth) or slow (such as tetanus or infection). Nevertheless the majority of low-income countries do not provide emergency service neonatal although in place of reference.

#### **Reproductive health package delivered through outpatient and outreach services**

Outpatient services can be used to give a lot of intervention, including education and health promotion for adolescent girls and adults. Contraception and family planning are effective for preventing maternal mortality. Reproductive health is closely related to education, nutrition and health care of women throughout their life cycle.

#### **Antenatal care package delivered through outpatient or outreach service:**

Pregnant women need a minimum of four antenatal visits with specific timing and content-based evidence. Orphanage during pregnancy increase preventive services, rapid detection and management of complications. Important components of the focus of antenatal care includes screening and treatment (such as anemia, hypertension, diabetes, syphilis, tuberculosis and malaria), the provision of preventive interventions (such as immunizations and insecticide mosquito nets); and counseling on diet, hygiene,



prevention and management of HIV, labor, emergency.

### **Postnatal care package delivered through outpatient or outreach services**

Postnatal care necessary to reduce maternal and neonatal mortality and to support the implementation of healthy behaviors. Packages of care for postpartum mothers can not separate the newborn care, and this should include regular visits in the first day, where the risk of death is high, to increase healthy behavior, identify complications, and to facilitate referrals. Some mothers and babies need extra support, especially for premature babies or mothers with HIV-positive.

### **Child health package delivered through outpatient or outreach services**

The high coverage of preventive services such as immunization for children has brought progress for child survival. But nutrition is still a major risk factor for child mortality. Some interventions have been integrated in a package of outpatient services, especially vitamin A. The effectiveness of breastfeeding has long been known, but the coverage breastfeeding early and exclusive breastfeeding is still low. Promotion of breastfeeding depends on interpersonal interactions in the early postpartum period, during childbirth, during home visits, and the peer group.

### **Family and community care package**

The main objective of this care package is to improve home health and healthy behaviors and increase demand for outpatient services. Preventive interventions that can be delivered through this package includes hygiene promotion; exclusive breastfeeding; reduction in workload during pregnancy; demand for skilled delivery care.

## **CONCLUSION**

Continuum of care highly recommended to reduce the death of mothers and children so that there is no gap in the life cycle of women not to receive care.

Continuous care package recommended is as follows:

1. Reproductive health clinical-care package
2. Childbirth clinical-care package
3. Newborn baby and child clinical-care package
4. Reproductive health package delivered through outpatient and outreach services
5. Antenatal care package delivered through outpatient or outreach service
6. . Postnatal care package delivered through outpatient or outreach services
7. Child health package delivered through outpatient or outreach services
8. Family and community care package

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# THE PAST, PRESENT, AND FUTURE OF MIDWIFERY EDUCATION IN INDONESIA

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## ABSTRACT

There is evidence that having more midwives, and better quality of midwives through the investment in midwifery education would enhance women's access to midwifery services and quality maternal and newborn care in low and middle-income countries (ten Hoop-Bender et al., 2014), of which Indonesia is one. In response, the Indonesia government has made an initiatives and strategies effort by the proliferation of midwifery schools to producing the fully qualified midwife for addressing the high maternal and newborn mortality rate. Even though enhancements have been made, needs more effort to dealing with existing issues. This article reviews the development of midwifery education in Indonesia from a historical perspective and midwifery education today.

There are many factors influencing the establishment of midwifery education in Indonesia which not only a single way.

**Keywords:** midwifery, development, midwifery education, Indonesia

## INTRODUCTION

The literal meaning of midwife comes from the Anglo-Saxon "with woman", "wise woman", "the sage femme" who immerse women's rhythms and the live experience of birth (Kitzinger, 1988). The word "midwife" also defined "mid" which meant "with" and "wif" which said "wife" or "woman" and most widely understood as "to be with a woman during childbirth" (Ament, 2007). The Indonesian word for midwife is "bidan" (Indonesian Midwives Association, 2007) which means women who have the skill to care for women in childbirth and caring for a baby.

The Indonesian Midwives Association became a member of the International Confederation of Midwives in 1956, so all the policies and development of midwifery in Indonesia refers to the guidelines set out by the International Confederation of Midwives. Indonesia adopted the definition of midwife from the

International Confederation of Midwives (ICM), which states that a midwife is typically a woman who completed a midwifery educational programme, has fulfilled the requisite qualifications to be registered or legally licensed to practise midwifery as a midwife, and is legalised in the country where the midwife is located (Indonesian Midwives Association, 2007; International Confederation of Midwives, 2012; Keputusan Menteri Kesehatan Republik Indonesia, 2007). Midwives are professionals who are responsible and accountable to enhance midwifery care and conduct supervision during pregnancy, labour, postpartum, have autonomy during the childbirth and facilitate care to newborns and infants.

Midwives in Indonesia have autonomy to demonstrate competency in counselling preconception care, antepartum care, birth management, postpartum care, newborn assessment, breastfeeding support, family planning, and advice transition pregnancy

(Keputusan Menteri Kesehatan Republik Indonesia, 2010).

The philosophy behind the midwifery practice model in Indonesia is that midwives are partners of women that professionally provide comprehensive midwifery care throughout their life-cycle. The partnership model means that the midwife and the woman are equal decision-makers regarding choices in health care, that midwives provide continuity of care, and midwifery care is evidence-based (Keputusan Menteri Kesehatan Republik Indonesia, 2007).



**Figure 1**  
**Model midwifery practice**

Adopted from Health Professional Education Quality Direktorat Jendral Pendidikan Tinggi (2012)

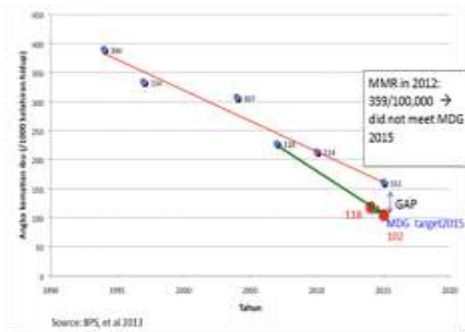
### The Problem Of The Maternal And Newborn Mortality Rates In Indonesia

Indonesia is one of the countries that contributes to over two-thirds of all maternal deaths worldwide (Hogan et al., 2010). According to the World Health Organization, UNICEF, UNFPA, and The World Bank (2012), the maternal and infant mortality rate in South East Asian countries is ranked high in the world.

**Table 1 Maternal Mortality Rates (MMR) across worldwide (World Health Organization et al., 2012)**

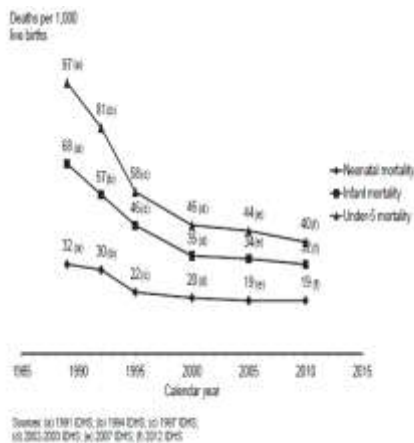
Region	MMR <sup>a</sup>						% change in MMR between 1990 and 2013 <sup>b</sup>	Average annual % change in MMR between 1990 and 2013 <sup>b</sup>
	1990	1995	2000	2005	2010	2013		
World	380	360	330	270	230	210	-45	-2.6
Developed regions <sup>c</sup>	26	20	17	15	18	16	-57	-2
Developing regions	430	410	370	300	250	230	-46	-2.6
Africa	670	640	750	620	510	460	-47	-2.7
Northern Africa <sup>d</sup>	160	130	110	87	74	69	-57	-3.6
Sub-Saharan Africa	990	930	830	680	560	510	-49	-2.9
Eastern Africa <sup>e</sup>	1000	920	790	690	500	440	-57	-3.6
Middle Africa <sup>f</sup>	1100	1100	1100	680	750	660	-38	-2.1
Southern Africa <sup>g</sup>	200	180	200	200	170	160	-22	-1.1
Western Africa <sup>h</sup>	1000	950	850	700	590	540	-47	-2.8
Asia	330	300	250	190	150	130	-61	-4
Eastern Asia	95	74	63	51	37	33	-66	-4.5
Eastern Asia excluding China	47	46	66	60	56	54	15	0.6
Southern Asia	530	440	360	270	210	190	-64	-4.4
Southern Asia excluding India	450	400	350	270	200	170	-63	-4.2
South-eastern Asia <sup>i</sup>	320	270	220	180	150	140	-57	-3.6
Western Asia <sup>j</sup>	130	110	97	88	78	74	-45	-2.4
Caucasus and Central Asia <sup>k</sup>	70	78	66	52	45	39	-44	-2.5
Latin America and the Caribbean	140	120	110	93	86	85	-40	-2.2
Latin America <sup>l</sup>	130	110	96	84	79	77	-40	-2.2
Caribbean <sup>m</sup>	300	270	230	230	210	190	-36	-1.9
Oceania <sup>n</sup>	380	320	290	240	210	190	-51	-3

With 359/100,000 births, the maternal mortality rate in Indonesia in 2012 was ranked the highest level in South Eastern Asia comparing with Malaysia 170/100,000 births; Myanmar 330/100,000 births; and Brunei Darussalam 40/100,000 births (BPS, BKKBN, Kemenkes, & ICF International., 2013; World Health Organization, 2012). Despite the fact that the maternal mortality rate decreased from 390 in 1991 to 228 in 2007 and 220 in 2010, the range of maternal mortality rate in Indonesia can be from 239 to 478/100,000 live births (BPS et al., 2013). This number may not reveal the actual deaths that are more likely underreported than overreported (BPS et al., 2013).



Red line: Maternal Mortality Rate (MMR) prediction  
Green line: Millennium Development Goals (MDG) target

**Figure 2**  
**Maternal Mortality Rate (MMR)**  
Adopted from BPS et al. (2013)



**Figure 3 Newborn Mortality Rate**  
(BPS et al., 2013)

In the Indonesia setting, predominantly the cause of maternal mortality is due to postpartum haemorrhage, followed by hypertensive disorders. Despite this, assessment of midwives competency with postpartum haemorrhage and hypertensive disorders, are not included as midwifery competencies (Kementerian Kesehatan Republik Indonesia, 2014). The causes of the maternal mortality rate in Indonesia is in accordance with the cause of maternal mortality globally (Naghavi et al., 2015). In this setting, women and family tend to

delay seeking, reaching and receiving midwifery care (Scott, Chowdhury, Pambudi, Qomariyah, & Ronsmans, 2013).

In Indonesia, 68.6% of maternity services at childbirth are provided by midwives, followed by doctors (18.5%) and non-health workers (11.8%). Indonesia has made an intensive effort to address the high maternal and infant mortality rate in Indonesia by increasing the number of trained midwives attending childbirth in villages. Deploying midwives in rural and remote villages in Indonesia had managed to increasing the number of births attended by skilled midwives from 20% in 1991 to approximately 85% in 2012. Despite the growing number of midwives, the maternal and perinatal mortality rate has not reduced significantly (Kementerian Kesehatan Republik Indonesia, 2014; Shankar et al., 2008; Van Lerberghe et al., 2014). Research in Indonesia found that the vast expansion of the number of midwives per 100,000 people is not correlated with improvements in quality and health care outcomes (Rokx et al., 2010). However, Indonesia did not reach the Millennium Development Goals target of maternal and child mortality rate in 2015.

### Midwifery Education In Indonesia

Indonesia has a long history of midwifery education. The development of midwifery education in Indonesia divided into two stages which are during Dutch and Japan colonial government and after Indonesia gained Independence Day.

### Midwifery education during Dutch and Japan colonial government

Prior to 1800s, the traditional birth attendant or *dukun bayi* was the person who was specialised and accompanied women in childbirth. Hesselink (2011) pointed out that the traditional birth attendant was also tasked with providing contraception, assisting with fertility and inducing

abortion (Hesselink, 2011). In the early 19th century (1809), the Dutch governor had an idea regarding the importance of training Indonesian women as midwives. In 1817, European midwives were obliged to train Indonesian and European women as midwives. In June 1850, Dutch head of the medical service, Dr Williem Bosch proposed to establish a midwifery school with hopes of reducing the high risks for women in childbirth and the high maternal mortality rate in Java, which was associated with the use of the traditional birth attendant. In October 1851, a midwifery school opened in Jakarta with twenty Indonesian female students. The program was intended to take one and half years but in practice took two and a half to three years because the students had to learn to read and write. In 2nd September 1875, the midwifery school for Indonesian women closed for reorganisation because of the lack of trust among the population. It was believed that among the population would prefer to be helped by Western-trained midwives. The Indonesian midwives did not succeed in winning the trust of Indonesian women. It had produced about one hundred graduates who worked in twenty-one regions where they knew the language and customs of Indonesia. In 1893, the midwifery school was re-opened and remained open until 1915. Its program consisted of one year of midwifery training under the Netherlands leaderships. In 1911, the nursing school opened admitted students from the primary level and four years nursing program. Only accept male students. In 1914, the nursing school accepted female students and continued midwifery program for two years.

### **Midwifery Education In Indonesia After Independence Day**

In the 1950s, the midwifery school admitted students from junior high school to a three-year program. After Indonesia had gained Independence Day on 17<sup>th</sup> August 1945, the graduate midwife from the program junior high school plus three-year was called first-class midwives. On the other hand, the graduates midwife from junior high school

and three-year nurse program called second-class midwives. In 1954, the midwifery school only educated midwifery teachers. A community midwifery education program opened in the same year which led to the training of midwives who have then placed in villages because the recognition of the need for more Indonesian midwives. In 1974, the ministry of health open nursing school admitted students from junior high school to a three-year program. During 1975 to 1984, midwifery school was closed. In the 1990s, some nurses were educated to be midwives, as part of the response to the international safe motherhood conference in Nairobi. In 1996, the diploma of midwifery education from senior high school for three years which finally started which the Indonesian Midwives Association fought for forty-five years since the 1950s. The midwifery program became a direct entry; the course offered to a female student without a nursing background.

The Indonesian Midwives Association thought that the minimum entry to become midwives was from senior high school, not enough from junior high school because of international recognition, strong demand from the stakeholder, and the strong emphasis government policy on placing midwives in rural areas through the village midwife program. The primary focus of the village midwife program initially was expected to have sufficient partnership with women and family to increased the professional delivery care and imbalance in service provision which contributes to reducing the maternal and newborn mortality rate.

### **Midwifery Education In Indonesia Today**

Since 2000, Indonesia has had several routes to midwifery education. Midwives can be registered if they have completed either a diploma, advanced diploma, bachelor of midwifery, or a master of midwifery. The Indonesia government has taken the initiatives some years ago to build a system of midwifery schools producing



fully qualified midwives to address the high maternal and newborn mortality rate.

**Table 2**  
**Number of midwifery schools in Indonesia**

Category of midwifery school	Number of schools
<b>Vocational programme:</b>	
- Diploma of midwifery (three years midwifery programme after 12 years of primary education)	679
- Advanced diploma of midwifery (four years midwifery programme after 12 years of primary education or one year midwifery programme after graduated from diploma of midwifery programme)	69
<b>Academic programme:</b>	
- Bachelor of midwifery (five years midwifery programme after 12 years of primary education or two and half years midwifery programme after completed diploma of midwifery programme)	3
- Master of Midwifery (two years midwifery programme with matriculation programme after graduated from advanced diploma of midwifery or two years midwifery programme after completed bachelor of midwifery programme)	4
- Doctor of Midwifery (three years midwifery programme after finished master of midwifery programme)	0

The Indonesian midwifery education curriculum emphasises that the body of knowledge of midwifery be unique which focuses on the normal and physiologic life cycle of a woman. The curriculum contains human ecology, social, behavioural sciences, and reproductive and developmental biology (Ikatan Bidan Indonesia, 2010). It also has practical lessons, where a mannequin as well as a

simulated patient are used to practice the midwifery skills.

However, research in Indonesia by Hennessy, Hicks, Hilan, and Kawonal (2006) and Rokx et al. (2010) pointed out the evaluation and development of midwifery education in Indonesia should be undertaken in order to inform the performance that accords with the required competency of a midwife. The proliferation of midwifery schools to address the quality of health professions still faces a persistent problem with the competency of midwives, and the framework of education (Anderson, Meliala, Marzoeki, & Pambudi, 2014; Farooqi, 2009; Rokx et al., 2010). Amidst the growth of midwifery schools certain elements have been identified such as education curriculum, competency criteria, and clinical standards that need to be strengthened in order to close the gap and provide sufficient quality as well as the quantity of midwives (Anderson et al., 2014; Hennessy, Hicks, & Koesno, 2006; Rokx et al., 2010). Therefore, strengthening midwifery education is the first critical step along with legislation and accreditation in accordance with an agenda of midwifery education globally (Bharj et al., 2016).

Efforts to deliver high-quality education have to deal with various challenges and a broad coalition of national authorities, professional associations, communities, development partners, health services, and educational institutions (World Health Organization, 2011). The midwifery association internationally is a significant catalyst to work together with midwifery education in the promotion of women's health care (Chamberlain, McDonagh, Lalonde, & Arulkumaran, 2003)

Strengthening midwifery education involves more than midwives and needs other interested parties. The complexity of making a difference to maternal and neonatal mortality rate involves a broad collaboration of certain elements such as obstetricians, doctors (Siassakos et al., 2010), midwifery educators, midwifery students, newly graduated midwives, and



other stakeholders such as women (Lassi, Haider, & Bhutta, 2010; Persson et al., 2014; Prost et al., 2013). The clinical mentor together with the midwifery educator in the midwifery school has a unique contribution. They prepare midwifery students and boost confidence to work competently and confidently in midwifery practice by delivering a dynamic range of topics, demonstrating skills in sessions in the laboratory as well as in practice (Skirton et al., 2012). The midwifery educator has a significant capacity to support the curriculum as an essential element and play a pivotal role in midwifery education because they are responsible for midwifery content in curriculum-based competency and clinical courses (Collington, Mallik, Doris, & Fraser, 2012; Way, 2016). In the context of Indonesia, the partnerships and collaboration to deliver high-quality midwifery education involve midwifery educators, midwifery students, the midwifery association, midwifery clinical mentors in a clinical setting, women, and other stakeholders. Each element has an important role in enhancing midwifery education. The whole process requires the collaboration between midwifery students, women, midwifery educators, and clinical mentors. On the other hand, collaboration in most clinical practices in midwifery schools is not managed well (Health Professional Education Quality, 2014).

### **Midwifery Education Issues In Indonesia**

Indonesia government and private organisations, such as the education foundations, Muhammadiyah societies, Nahdlatul Ulama societies have made a significant investment in educating student midwives since 1996. As a result, the midwives who graduate each year doubled from 8,264 in 2006 to 17,828 in 2010. There are currently 753 midwifery schools of which 328 are situated in Java and these are run by universities, institutes of health science, polytechnics of health science, and academies (Health Professional Education Quality Direktorat Jendral Pendidikan Tinggi, 2012). In Indonesia, as

well as private organisations, such as Muhammadiyah societies and Nahdlatul Ulama societies, which work under the Ministry of Research, Technology and Higher Education, there are two ministries, which run midwifery schools: the Ministry of Health and the Ministry of Research, Technology and Higher Education. The Ministry of Health runs vocational education courses with a diploma and an advanced diploma, in midwifery. The Ministry of Research, Technology and Higher Education also offer vocational education and academic education with an advanced diploma, bachelor, and master's in midwifery. Also, the private organization offer similar range of qualifications. The proliferation of midwifery schools and graduated midwives is designed to provide an excellent service for women and families in Indonesia (Anderson et al., 2014). On the other hand, Rokx et al. (2010) and Anderson et al. (2014) pointed out that the limited education standard, such as accreditation process, midwifery teaching, infrastructure, curriculum based competency, and a regulatory body for midwives is alarming. In addition, the low-level quality of midwives in Indonesia needs urgent attention by improvement of midwifery education, certification, and accreditation. In fact, the proliferation of midwifery schools in Indonesia creates the situation that makes it difficult to ensure accountability, assurance processes, graduate support, supervision, and the quality of the midwifery education (Health Professional Education Quality, 2014). Also, at present, the research pointed out that midwifery students in Indonesia may graduate with limited knowledge (Health Professional Education Quality, 2014; Yanti, Claramita, Emilia, & Hakimi, 2015).

Midwifery education envisaged by the International of Confederation Midwives that midwifery education in Indonesia is recognised internationally. Western countries educational models such as the Netherlands, the United Kingdom, New Zealand have influence on the

development of midwifery education in Indonesia (De Vries, 2001; Gilkison, Pairman, McAra-Couper, Kensington, & James, 2015; Health Professional Education Quality, 2012; Holland et al., 2010; Mivšek, Baškova, & Wilhelmova, 2016). For example, the direct entry program, competency based curriculum, having qualified midwifery educators, qualified clinical mentors, the components of the practice/ theory ratio (60%:40%), and achievement of a minimum standard for clinical competencies, such as conducting 50 births (Badan Pengembangan Pemberdayaan Sumber Daya Manusia Kesehatan, 2011; Departemen Kesehatan Republik Indonesia, 2002; Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan, 2011; Health Professional Education Quality Direktorat Jenderal Pendidikan Tinggi, 2012).

After successful completion of a midwifery program, the graduate midwives have to register as midwives. Registered midwives achieve registration by passing a national examination and gaining a certificate to practice as a midwife (Keputusan Menteri Kesehatan Republik Indonesia, 2010). The Ministry of Health of the Republic of Indonesia determines the standards of midwifery competence required for an Indonesian midwife to work within the scope of midwifery practice, including fulfilment of certain elements and minimum standards that are expected to be present in order to be a competent midwife in a midwifery practice (Keputusan Menteri Kesehatan Republik Indonesia, 2007). Furthermore, the ministry of health states that the graduate midwives' profile in Indonesia has to show that a graduate is a qualified midwifery care provider, decision maker, communicator, community leader, and manager (Keputusan Menteri Kesehatan Republik Indonesia, 2007).

Indonesia has no Midwifery Council that regulates midwifery education, but it has a robust Midwifery Association scattered in 33 provinces that has the vision to educate

professional midwives in accord with global standards. On the 28th October 2008, the Indonesian Midwifery Education Association was formed to improve the quality of midwifery education within Indonesia. Based on their data, 693 out of 753 midwifery schools joined the Indonesian Midwifery Education Association (Asosiasi Pendidikan Kebidanan Indonesia, 2015; Health Professional Education Quality Direktorat Jenderal Pendidikan Tinggi, 2012). For the rest, the reason for not joining is unknown or might be due to no obligation on enrolment. The Indonesian Midwives Education Association made an effort to establish a policy regarding quality assurance for midwifery education in Indonesia. Variations in curriculum used in the midwifery diploma program in Indonesia underlying this association to formulate diploma midwifery education curriculum. They received input from stakeholders as well as representatives from educational institutions and a diploma midwifery lecturer. The diploma curriculum includes learning outcomes, the graduate profile, study materials, the structure and an outline of teaching that can be exploited by a diploma midwifery school (Asosiasi Pendidikan Kebidanan Indonesia, 2015).

The Ministry of Research, Technology and Higher Education has the mandate to support the development of competent midwives through the Health Professional Education Quality Project (Health Professional Education Quality, 2014). With the world bank loan agreement, this project is expected to contribute to the improvement of health services by improving the quality of health professionals in Indonesia such as midwives. This aim will be achieved through strengthening systems and institutions accreditation, ensuring competency, developing national competency standards, certification and licensing, and the development of school quality. Together with the midwifery association and other health professions, the Health Professional Education Quality

Project made an effort to create an independent body to accredit health institutions. In March 2015, professional organisations, including medicine, midwifery, dentistry, nursing, and pharmacy in Indonesia formed the Indonesian Accreditation Agency for Higher Education in Health, which regulates the high demands of accreditation, especially for health institutions (Perkumpulan LAM-PTKes, 2015). This agency ensures health organizations including midwifery schools in Indonesia meet standards for accreditation to ensure competent graduates work in midwifery services (LAM-PTKes, 2015).

In 1994, the National Accreditation Body Colleges was formed by the Ministry of Education and Culture. This agency aims to accredit colleges and universities (Badan Akreditasi Nasional Perguruan Tinggi, 2014). So, in Indonesia, there are two bodies, which aim to monitor the accreditation of higher education programmes.

#### **Future of midwifery education in Indonesia**

In order to transform of midwifery education in the 21<sup>st</sup> century, the midwife's competence are inevitable. The Indonesian Midwives Association together with the Indonesian Midwifery Education Association proposed a model of autonomy in midwifery education and the framework of midwifery education to the government of Indonesia (Ikatan Bidan Indonesia, 2010). The writers believe that midwifery education will move toward to academic higher education such as bachelor's, master's and doctoral degrees in midwifery. The Indonesia government realise further tighten the opening of the midwifery schools. The advancement of technology, the culturally diverse population in Indonesia, regulation from policy makers, legislation, and other stakeholders would create high demand of competent midwife.

#### **CONCLUSION**

Indonesia has been made significant progress in midwifery education within the proliferation of midwifery schools. Despite the growing number of midwives, the maternal and perinatal mortality rate has not reduced significantly as showed by the report of Indonesia Demographic and Health Survey 2012. The midwifery association have to deal with the various of midwifery education programmes and still struggling with Midwives Act also Midwifery Council. This effort would further lead to one of an element which strengthening midwifery education in Indonesia and plays a significant role in the national development of midwifery education to enhance maternal-neonatal health outcomes. The writers believe that fully graduated competent midwives who completed from high-quality midwifery education with adequate supports are the vital key to the reduction of maternal and neonatal mortality rates in Indonesia.

#### **Conflict Of Interest**

Authors declare no conflict of interest

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# EFFECT OF YOGA DYSMENORHEA ON THE DIII MIDWIFERY STUDENTS HEALTH SCIENCE INSTITUTE OF KUNINGAN IN 2013

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## ABSTRACT

**Background:** Dysmenorhea is cramping pain in the abdominal area began about 24 hours before the onset of menstrual bleeding and can last for 24-36 hours. 75% of girls have some of the problems associated with menstruation. One the causes of dysmenorhea is psychological factors, it's Commonly happen in young women who are experiencing stress, usually when studying and being in a new environment, especially at the level I student. There are several ways to overcome dysmenorhea, one of them is yoga that teaches a set of techniques such as breathing, meditation and postures to improve strength and balance.

**Methods:** The study was conducted by using quasi-experimental design with pretest and posttest. The number of respondents is 60 people, consisting of 30 control group and 30 treatment groups using total sample technique. The treatment group were trained and observed to do yoga as much as eight times during the month. Univariate analysis of the data is a frequency distribution table, bivariate analysis using paired t-test and Mann-Whitney test.

**Results:** The average pain level dysmenorhea in the treatment group before being given yoga is 5 in pain scale and an average after being given yoga is 3 in pain scale. The average decrease in pain level dysmenorhea in 30 respondents having supplied yoga at 40.90. From the results of t test with significance level of 5% was obtained *p value* 0.000 <0.005, which means there is significant influence between yoga with a decrease dysmenorhe pain level

**Conclusion:** Yoga affected to the level of pain dysmenorhea.

**Suggestions:** Young women need to do yoga because yoga is not only the muscles are trained, but no movement if the breath is very useful for relaxation in adolescents while experiencing dysmenorhea.

**Keywords:** Dysmenorhea, yoga, teen

## INTRODUCTION

Adolescence is a period marked by rapid growth and developing physical, emotional, cognitive and social. Physical changes that occur in women such as enlarged breasts and hips, the body grow taller, growing hair in the armpits and genitals, as well as menstruation (Hendrik, 2006).

Physical disturbance which very prominent when menstruation is dysmenorhea. Dysmenorhea is cramping pain (strained) abdominal region started about 24 hours before menstrual bleeding and can last for 24-36 hours despite weighing only lasts for the first 24 hours (Bobak, 2005).

One of the causes of dysmenorhea is a psychological factor. In adolescents which an emotionally unstable, especially if they do not get good information about the

process of menstruation, easily arise dysmenorhea.

Unpreparedness of young women in facing the development and the growth on her, resulting in psychological disturbances that eventually lead to physical disorders, such as menstrual disorders like a dysmenorhea. this often occurs in young women who experience stress, usually at the time of study and are in the new environment, especially in the new first year students taking courses and self-adjusting live in a dorm which is new environment for them.

The way to reduce dysmenorrhea can be done in two ways: pharmacological and non-pharmacological. non-pharmacological can be doing by warm compress or a warm bath, Massase, physical exercise, enough sleep, hypnotherapy, distractions such as listening to music and relaxation such as

yoga and deep breathing (Anugroho, Wulandari, 2011).

Yoga is a relaxation technique that teaches a set of techniques such as breathing, meditation and postures to improve strength and balance. Relaxation techniques in yoga can stimulate the body to release endorphins and endogenous opioids that encephalin (compounds that function to inhibit pain). Yoga is easy and requires no tools, only involves the muscles and respiratory system and does not require any other tool so easy to do at any time or from time to time (Shindu, 2011).

Dysmenorrhea prevalence is highest happen on teenage girls, about 20-90% depending on the measurement method used. Approximately 15% of teenage girls reported experiencing dysmenorrhea severe and is the leading cause teenage girls do not attend to the school in the US (French, Linda, 2005).

There are no exact figures on the prevalence of dysmenorrhea Indonesia. However, research conducted by Novia and Nunik (2008) in the village of Banjar Kematren with 100 respondents, women of childbearing age (15-30 years), founded 71% of respondents experienced a primary dysmenorrhea. In that study, there are many differences between the existing theories with research results.

The variables that influence of dysmenorrhea primary in this study was age, marriage and family history and variables that have no effect on the incidence of dysmenorrhea primary is the age of menarche, duration of menstruation, childbirth experience, nutritional status, exercise habits and smoking habits (Anugroho, Wulandari, 2011).

## RESEARCH METHODS

This research was conducted by using quasi-experimental design with pretest and posttest. Is a research that aims to determine the effect of yoga on the level of

pain dysmenorrhea. This research was conducted in STIKes Kuningan in December 2013 to January 2014. The treatment group were trained and observed to do yoga as much as eight times during the month.

The population in this study were all sophomore I DIII midwifery experience in STIKes Kuningan dysmenorrhea of 60 people, of which 30 respondents were the control group and 30 respondents treatment groups.

The variables of this study consisted of yoga and dysmenorrhea. The analysis consisted of univariate and bivariate. Univariate analysis of the data by the frequency distribution table, bivariate analysis using paired t-test and Mann-Whitney test.

## RESULTS AND DISCUSSION

Dysmenorrhea prevalence measurement results on the level I students DIII Midwifery STIKes Kuningan.

Table 1 Distribution of frequency prevalence dysmenorrhea on the level I students DIII Midwifery STIKes Kuningan

Dysmenorrhea pain level	N	%
Light (0-3)	18	30
Moderate (4-6)	29	48,3
Weight (7-10)	13	21,7
TOTAL	60	100

In Table 1 indicated that most respondents who experienced pain level dysmenorrhea were as many as 29 people (48.3%), light pain level of dysmenorrhea are 18 people (30%), and were experiencing severe pain level dysmenorrhea are 13 people (13%).

Table 2 Distribution of the frequency of the control group respondents based dysmenorrhea pain level before and after the intervention in STIKes Kuningan on 2013

Dysmenorrhea pain level	Intervensi pre		Intervensi post	
	n	%	N	%
Light (0-3)	11	36,7	12	40
Moderate (4-6)	15	50	14	46,7
Weight (7-10)	4	13,3	4	13,3
Total	30	100	30	100

In Table 2 indicated that prior to the yoga intervention majority of respondents who experienced pain level dysmenorrhea were as many as 15 people (50%), mild as many as 11 people (36.7%), and the weight of as many as four people (13.3%) , After the yoga intervention is experiencing pain level dysmenorrhea were as many as 14 people (46.7%), mild as many as 12 people (40%), and the weight of as many as four people (13.3%).

Table 3 The frequency distribution of respondents treatment groups based on the level of pain dysmenorrhea before and after the intervention in STIKes Kuningan on 2013

Dysmenorrhea pain level	Intervensi pre		Intervensi post	
	n	%	N	%
Light (0-3)	7	23,3	17	56,7
Moderate (4-6)	14	46,7	10	33,3
Weight (7-10)	9	30	3	10
Total	30	100	30	100

In Table 3 indicated that prior to the yoga intervention majority of respondents who experienced pain level dysmenorrhea were as many as 14 people (46.7%), weigh as much as 9 people (30%), and light as many as 7 people (23.3%), After the yoga intervention is experiencing mild pain level dysmenorrhea as many as 17 people (56.7%), while as many as 10 people (33.3%), and the weight of as many as three people (10%).

Table 4. The average value of the control group dysmenorrhea pain level pre and post treatment in STIKes Kuningan 2013

Control Variabel	Mean	Median	SD	N	<i>P value</i>
Pre Pain Level	4,37	4,00	1,884	30	0,103
Post Pain Level	4,23	4,00	1,851	30	

In Table 4 known from 30 respondents before treatment average was 4.37 and the median was 4.00 with a standard deviation of 1.884 and the average after treatment was 4.23, median is 4.00 with a standard deviation of 1.851, Statistical test results obtained *p value* of 0.103 means that the  $\alpha = 0.05$  (5%) seen no difference.

Table 5 The average value of the treatment groups dysmenorrhea pain level pre and post treatment in STIKes Kuningan 2013

Variable treatment	Mean	Median	SD	N	<i>P value</i>
Pre Pain Level	4,97	5,00	2,341	30	0,000
Post Pain Level	3,37	3,00	1,974	30	

In Table 5 it can be seen that out of 30 respondents on average before treatment was 4.97, median is 5.00 with a standard deviation of 2,341 and the average after treatment was 3.37, the median value of 3.00 with a standard deviation of 1.974 , Statistical test results obtained *p value* of 0.000 means that the  $\alpha = 0.05$  (5%) seen no difference.

Table 6 Analysis of the effect of yoga on the level of dysmenorrhea pain in STIKes Kuningan in 2013.

Variabel	MR	SU	U	<i>P value</i>
Control	20,10	603	138,000	0,000
Treatment	40,90	1227		

In Table 6 it can be seen that out of 60 respondents, the average difference between the level of pain dysmenorhea prior to intervention with dysmenorhea pain level after the intervention in the control group was at 20.10 and at 40.90 for the treatment group, the change in pain level dysmenorhea more effect on the students who do yoga than those not doing yoga.  $p$  value = 0,000 with a value of  $\alpha = 0.05$  (5%), then the  $p$  value  $< \alpha$ , so  $H_0$  is rejected, which means there are significant differences that affect the level of pain dysmenorhea against students who do yoga than not doing yoga.

Menstrual disorders are common problems during adolescence. This disorder can cause significant anxiety for patients and their families. Physical and psychological factors in the problem. In order to treat menstrual disorders, become familiar with the normal menstrual cycle is important. Dysmenorhea is a very common complaint and can be primary or secondary, but primary dysmenorhea occur more frequently. Symptoms include lower abdominal pain like cramps and pelvic pain that spreads to the thighs and back without pelvic pathologic picture. Dysmenorhea caused by prostaglandins and leukotrienes during ovulatory cycles. Endometrial prostaglandin level increases during the luteal phase and menstrual cycles, cause uterine contractions (Chandran, 2012).

Based on the data in Table 4 it can be concluded that there are no significant differences that affect the level of pain dysmenorhea between pre and post in the control group. These results can be affected by several factors, including psychological factors, stress raises pressure sensation hip nerves and muscles of the lower back, causing dysmenorhea. Factors relating to the constitution of psychological factors as the cause of dysmenorhea which can lower one's resistance to pain, and the possibility of endocrine factors that allow the excess production that causes the secretion of prostaglandin  $F_{2\alpha}$  contracting smooth muscles. It can also be caused by the length of which is more than normal menstruation,

menstrual cause uterine contractions. Menstruation occurs longer result in more frequent uterus to contract, and the more prostaglandin released. Excessive production of prostaglandins that cause pain, while the pillar continuous uterine contractions cause the blood supply to the uterus stops and occurs dysmenorhea. there are other opinions say one risk factor dysmenorhea are never exercised. Dysmenorhea incidence will increase with the lack of activity during menstruation and lack of exercise, this can lead to decreased blood circulation and oxygen. The impact of the uterus is the flow of blood and oxygen circulation was reduced and cause pain.

Based on data in Table 5 it can be concluded that there are significant differences that affect the level of pain dysmenorhea between pre and post in the treatment group, mean that the level of pain dysmenorhea in pre more likely to have dysmenorhea being and at the time post-treatment decreased to dysmenore light. According to some theories which found that yoga had a major impact on the reduction in pain dysmenorhea. According to Sindhu (2010), doing yoga at least 10 minutes can change the pattern of acceptance of pain to a more calming phase by stimulating the body to release of endogenous opioids (compounds that function to inhibit pain)

Based on data in Table 6 it can be concluded that there are significant differences that affect the level of pain dysmenorhea with a  $p$  value  $0,000 < \alpha = 0.05$  (5%) between the control group and the group treated with the average value was greater in the treatment group is 40, 90. The results of this study are consistent with previous studies on the influence of gymnastics dysmenorhea effectiveness in reducing dysmenorhea in adolescent girls. Gymnastics dysmenorhea in principle the same as for dysmenorhea yoga is a relaxation technique that can producing endorphin hormone endorphin which neuropeptide hormone produced by the body when relaxed/quiet. Endorphin



hormone produced in the brain and spinal cord. This hormone can serve as a natural tranquilizer produced by the brain which spawned a sense of comfort and increase levels of endorphins in the body to reduce pain during contractions.

Dysmenorhea or menstrual pain is normal, but can be excessive if it is affected by physical and psychological factors such as stress and the influence of the hormone prostaglandin and progesterone. During dysmenorhea, uterine muscle contraction occurs due to increased prostaglandin that causes vasospasm of arterioles uterine causes ischemia and cramps in the lower abdomen that will stimulate pain at the time of menstruation (Nag, 2013). Prostaglandin F2 $\alpha$  expenditure is influenced by the hormone progesterone during the luteal phase of the menstrual cycle and reaches its peak level during menstruation (Wiknjosastro, 2002).

Young women who have dysmenorhea stating they are taking medications or herbs to treat pain during menstruation/dysmenorhea. For that we need an alternative preventative to overcome dysmenorhea. After doing yoga dysmenorhea proved most students to report any changes in pain that they feel.

Yoga for dysmenorhea this is one of the relaxation techniques. Yoga is a relaxation technique that teaches a set of techniques such as breathing, meditation and postures to improve strength and balance. The mind is quiet, peaceful, and relaxing can influence the consequences caused by the negative stress. So that yoga gives relaxation, calmness, clarity of mind, happiness, self-confidence and develop intuition and can reduce stress. Relaxation techniques in yoga can stimulate the body to release endorphins and endogenous opioids that enkephalins (compounds that function to inhibit pain) (Shindu, 2013).

When the body reacts to stress. These stress factors can reduce resistance to pain. The first sign that shows the state of stress is their reactions to the individual's body is

strained muscles filled with stress hormones that cause your blood pressure, heart rate, body temperature, and respiration increases. On the other hand in times of stress, the body produces the hormone adrenaline, estrogen, progesterone and prostaglandin excessive. Estrogen can cause excessive increase uterine contractions, while progesterone is inhibiting contraction. Increased excessive contraction is causing pain. In addition adrenal hormones also increased, causing muscle tension body including muscles of the uterus and can make pain during menstruation (Sparrowe, 2013).

## CONCLUSION

1. Statistically there is a relationship between yoga with dysmenorhea with  $p = 0.000$  which include that if  $p > 0.05$  then  $H_0$  is rejected.
2. There is the influence of yoga on dysmenorhea with results greater influence on student groups who do yoga than students who did not do yoga.

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# DIFFERENCES MUROTAL THERAPY AND MUSIC THERAPY CLASSIC MOZART TO THE DURATION OF THE FIRST STAGE OF LABOR IN ACTIVE PHASE AT PKU MUHAMADIYAH HOSPITAL OF YOGYAKARTA

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## ABSTRACT

Active phase in the first stage of labour is a period when mostly mothers were experience the pain during labour due to the contraction. These contractions were increased significantly; it was rising up the anxiety of the mother. This condition will be depending on the coping process from the mother. If the mother has a good cope, birthing process will run smoothly. In contrast, if the mother has a bad cope, birthing process will run slowly. Consequently, the mother will experience prolonged labour. There are some methods to relief pain during labour, musical therapy is one of them. The aim of this study was to investigate the effect of Murottal and classical Music Therapy on the length of progress of labour in the first stage. The subjects were mothers who are in the first stage of labour (active phase). A murottal therapy was performed of the first group (n=5), while musical therapy was performed of the second group (n=5) during first stage of labour. A One Way Anova was applied and intergroup of differences were observed ( $10 < 4.98$ ). The present findings have suggested that Murottal therapy has effectively to be given for mother during the first stage of labour in active phase than classical music therapy.

**Keywords:** first stage; murottal; classical music; length of labour

## INTRODUCTION

The length of active phase in labour has been significantly influencing by demographic, clinical intervension and psychological factor. However, the anxiety has been identified as one of the psychosomatic experience during labour. Labour pain is the one of the ruthless form of pain that each women experience during childbirth period. Pain during labour process is due to the contactions. These contractions last 40-50 seconds in average and are repeated alternatively for 1-2 minutes which make the cervix opened. Anxiety and pain are closely interconnected with each other. Pain and anxiety together can eventually become harsh, in turn, cause for panic and consequential maternal and fetal difficultys. Nevertheless, pain during labour is the natural process when it caused by regular contractions.

In Indonesia, based on Household Survey in 2001, prolonged labour as the one of maternal mortality has been recognized.

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During labour, anxiety and fearfulness in women is usually noticed. Midwife in this period, playing the important role to serve pain management to the mother and provide psychologycal and physical care. Both, pharmacologic and non-pharmacologic techniques of pain relief advance possibly will good quality for pain administration during labour. Among the non-pharmacologic method of pain management, musical therapy is proved to be effective method for management pain during labour.

Clasical music as an old therapy for release the endorphine hormone to the relaxation process has been documented in the previous study. It explains, how the different types of pitches and sound work on three major energy systems working in our body. Music can stroke the mother intensely and might decrease the anxiety, stress and perception of pain during labour . While, in Moslem believe, Murottal also has the same effect to the body. Luthfi (2012) conducted the project to the patient who will undertake the operation procedure. He serves the patient with Murottal therapy and the anxiety level has been assessed. He noticed the difference of hearth rhythmic and respiration frequency among the patient who

gets the Murottal intervention and none. The rhythmic in the Murottal bring the mind to the alpha phase and consequently will give the calming effect, emotion control, deeper thought, and create the better metabolism. Meanwhile, in the labour process, these positive effect, will change the assumption of pain cause labour and might accelerate the cervix opened.

## RESEARCH METHODS

Having considered the purpose and question, the present study was pre-experimental by using cross sectional method. Analytic comparative to explore the difference of Murottal and Music classic Mozart effectiveness to the duration of labour was established.

The statistical population is the parturient, both primipara and multipara, age range between 20-35 years old, been in a complete of physical and health mental status (proved from medical record), in the active stage of labour, and moslem. In this research, partograf has been record to assess the progress of labour. Among the member of the mentioned population, 10 parturient primipara and multipara were selected and complete the treatment.

When performing the test, relaxation technique also applied to the groups. The first group as Murottal experiment and second group as the Classical Music Mozart were listen the ryhtm at least 60 minutes by using MP3.

## RESULT AND DISCUSSION

**Table 1.**  
**Demographic information**

Demography	Murottal treatment (n = 5)	Music Classic Mozart (n=5)	p
Age	30	29	.000
Parity (%)			
Primigravida	80	80	
Multigravida	20	20	

Based on the table, the mean of mother's age was 30 years old in the Murottal experiment, while in the musical Classic Mozart experiment the mother's age was 29 years old. Next to, the primigravida respondent in the Murottal group was 80%, when in the Mozart Music group also 80%. Then, the multigravida respondents in the Murottal group was 20%, likewise, in the Mozart group also 20%. There was no differences demographic characteristic between two groups ( $p < .01$ ).

**Table 2.**  
**Durasi of treatment**

Respondents	Durasi pemberian terapi Murottal (Minutes)	Respondents	Durasi pemberian terapi Mozart (minutes)
1	30	1	35
2	60	2	45
3	25	3	27
4	45	4	40
5	40	5	30

Some of the respondents were reject the therapy in the last minute before fully servix dilatation. However, based on statistical analysis, in the table 2, there were no differences the duration therapy between two groups. Table 3 has shown the length of labour based on partograf and observation record. In the Murottal group, the mean of duration during labour in the active phase was 350 minutes, while in the Music Clasic Mozart group; the mean of duration during labour in the active phase was 480 minutes.

*One Way Annova* has applied to investigate the difference mean of duration time during labour progress in two groups. Then, the result of statistical analysis found the variation between groups is greater than the variation within the group ( $10 < 4.98$ ). This result indicates if there was a significant difference mean of duration of labour between Murottal group and classical Music Mozart group.

**Table 3.**  
**The progress report of length of labour based on partograf record**

Respondents	Length of servix dilatation (minutes)		<i>p</i> *
	Murottal group	Mozart group	
1	330 (5.5 hr)	360 (6 hr)	0.000
2	210 (3.5 hr)	420 (7 hr)	
3	60 (1 hr)	240 (4 hr)	
4	480 (8 hr)	360 (9 hr)	
5	200 (5 hr)	420 (7 hr)	

\* *One Way Anovva*

Pain management has become clearly understood to overcome discomfort during labour. In Islam, they have Quran as a holy bible. Muslims believe the Quran was verbally revealed by God to Muhammad through the angel Gabriel (Jibril), gradually over a period. The way how people to read Quran in record with peaceful and slow called Murottal. Murottal, physically, contain the human voice rhythmically, while philosophy contain the relationship between human and God. These voice, might release the hormone to control relax feeling (Sherwood, 2014). Therefore, Murottal having tremendous positive impact on mind.

Handayani *et all* (2014) finding the effectiveness of Murottal to reduce the level of nervousness during labour process in the active phase. This study also supported by other research, Asty (2009) mentioned Murottal could stimulate the parasympathetic that has an adverse effect to the nerve. As a result, there is a balance in both to the autonomic nervous system. This is the basic principle of the onset of response relaxation, which is a proper balance between the sympathetic nervous system and the system the parasympathetic nervous.

In present study, the group Murottal intervention tends to be shorter in duration during active phase compare with Music Classic Mozart intervention. This has been

supported Faradisi (2012) that the Murottal therapy intervention more effective rather than Musical therapy (any music) to decrease the level of anxiety to the patients. In Moslem believe, hearing Murottal intensively can bring healing psychologist. This suggestion, will be stored in a person's subconscious (limbic brain) who listen to some Murottal, consequently, it will bring the sensation of high-level resignation under any circumstances.

## CONCLUSION

Although the result has reached the aims, there were some unavoidable limitations. First, because of the time restriction, this investigate was conducted only on a small sample size of population who were met the criteria and complete the treatment. Therefore, to generalize the results for larger groups, the study should have involved more participants at different level. Second, there was no ethic examination for respondents in the musical Mozart, since the Music is the old issue in Islam (pros and cons).

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Sherwood, L., (2014). Fisiologi Manusia dari Sel ke Sistem. Translated from Introduction to Human Pshysiology, 8<sup>th</sup> Edition. EGC. Jakarta

# ANTENATAL CARE SATISFACTION ANALYSIS BY USING *CUSTOMER SATISFACTION INDEX* AND *IMPORTANCE PERFORMANCE ANALYSIS* IN BIDAN DELIMA RANTING JAGAKARSA SOUTH JAKARTA 2016

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## ABSTRACT

**Background :** One of attempt to improve antenatal care private practice of midwives through Bidan Delima which has standardized quality according ethic code of profession. **Objective:** to identify level of satisfaction in pregnant women toward quality of service in Bidan Delima. **Method:** This study use quantitative method and utilize quota sampling in 50 respondent who selected from 5 Bidan Delima practice by simple random technique. **Result** showed that majority of pregnant women satisfied eventhough the service was not optimalize yet seen from level of satisfaction by using Customer Satisfaction Index 71,35% and Importance Performance Analysis obtained 8 attributes belongs to quadrant **Conclusion :** Antenatal care in Bidan Delima Jagakarsa appropriate but still have attributes which are needed improved. **Suggestion:** hopefully midwives improve quality of service in antenatal skill and knowledge, and communication through seminar and training.

Key words: Antenatal satisfaction, customer satisfaction

## INTRODUCTION

Antenatal care is a key determination to decline the number of mother's morbidity and mortality (Olufemi Oladapo & Osiberu, 2009) because it becomes as quality of services's achievement overview (Baffour-Awuah et al, 2015). Quality of service influences patient satisfaction. Patient satisfaction is level of feeling compared with expected of performance or result (Supranto, 2006). In this case, quality of antenatal inline with morbidity and mortality level for pregant women.

*World Health Organization* (WHO) has already recommended pregnant women to visit healthcare facilities 4 times to have tetanus vaccination, malaria prevention, Fe, and risk of complication screening (Gupta et al, 2014). However, complication is the main causes of mortality and defect number for women during pregnancy until post partum phase in productive age (Joshi et al, 2014).

Antenatal care as earlier screening for both risk factor and complication so fast intervention could be done. Moreover, antenatal care ensure for normal delivery (Mansur et al, 2014) and needed to improve midwives that playing an important role in reducing maternal mortality (Melaku et al, 2014).

One way to improve the quality of antenatal care called Bidan Delima, quality standardization system for midwives in practice with an emphasis on monitoring and evaluating as well as routine and continuous coaching and training. Bidan Delima represents the service quality meets standards and code of ethics, but research indicated that the performance of Bidan Delima yet achieved standard of service quality, obtained visit coverage declines, mismatch practice schedule, resource use is not maximized, facilitative supervision applied if only there are reports of cases so the purposes of Bidan Delima as a quality health care and as a brand has not yet full realized. (Nisa, 2012).

In order to minimize dissatisfaction of pregnant woman, midwives must improve the quality of services continuously by focusing on pregnant woman. Level of patient overall satisfaction can be measured by Customer Satisfaction Index (CSI), then data plotted into Importance Performance Analysis to determine not-satisfy attributes. Then to identify the gap between performance/perception and expectation/satisfaction by using Service Quality score. Midwife can determined the priority attributes to be corrected and improved antenatal care quality.

## RESEARCH METHOD

This study used quantitative methode by utilized quota sampling technique to pregnant women selected from 5 Bidan Delima practice choosen randomly. Quota sampling is used due to total amount of patient is not clearly defined in every Bidan Delima practice. yang terpilih secara acak. Kuota sampling digunakan dengan alasan jumlah populasi yang belum jelas di tiap praktik bidan delima.

## RESULTS AND DISCUSSION

Tabel.1 shows that there are 3 dimensi that still not get satisfaction label in antenatal care those are *reliability* 69,87%, *assurance* 70,11% dan *responsiveness* 68,66%, karena lebih kecil dari 71,35%.

According Tabel.2 obtained result of 25 antenatal attributes consists of 11 attributes got  $\geq 71,35\%$  (satisfy) and 14 attributes  $< 71,35\%$  (not satisfy yet).

Data identified that there were still a lot of antenatal attributes should be improved through interpersonal communication training so that inline with satisfaction level such as security, comfortness, and loyalty.

**Tabel.1**  
**Customer Satisfaction Index (CSI) of Antenatal Care in Bidan Delima Ranting Jagakarsa South Jagakarsa Tahun 2016**

Dimensi	Attributes	Expectation total score (%)	Reality total score (%)	Level of satisfaction attributes (%)	Level of satisfaction dimensi (%)	Conclusion
Tangible	Clean and comfort enviroment	183	125	68,30	71,88	Most likely satisfied
	Midwives Appereance	178	138	77,52		Satisfied
	Patient Privacy	178	121	67,97		Most likely satisfied
	Using clean equipment	176	136	77,27		Satisfied
	Ventilation and lighting of room	177	121	68,36		Most likely satisfied
Emphaty	Openess attitude of midwife	170	120	70,58	76,27	Most likely satisfied
	Midwife's respond to patient	171	142	83,04		Satisfied
	Attention while providing service	175	130	74,28		Satisfied
	Politeness	177	136	76,83		Satisfied
	Friendly when giving health education	180	138	76,66		Satisfied
Reliability	Good interpersonal relationship with patient	176	130	73,86	69,87	Satisfied
	Providing result information to patient	180	121	67,22		Most likely satisfied
	Midwife has enough time for patient service	178	120	67,41		Most likely satisfied
	accessable	181	136	75,13		Most likely satisfied
	Responsibility of time	184	121	65,76		Most likely satisfied
Assurance	Prosedure assurance	187	123	65,77	70,11	Most likely satisfied
	Medication assurance	181	136	75,13		Satisfied
	Security during examination	182	136	74,72		Satisfied
	Midwife do pregnancy examniation carefully	179	120	67,03		Most likely satisfied
	Giving comfort during examination	187	127	67,91		Most likely satisfied
Responsi-ve-ness	Responsive toward patient complaint	178	136	76,40	68,66	Satisfied
	Responsive toward risk patient	184	121	65,76		Most likely satisfied
	Responsive about patient referral	190	121	63,68		Most likely satisfied
	Responsive in decison making	184	130	70,65		Most likely satisfied
	Responsive about complication	181	121	66,85		Most likely satisfied

## QUADRANT

Quadrant classified according patient preception towards the importance of each attributes and obtain 4 quadrants.

### Quadrant 1 (*Attributes to improve*)

Quadrant 1 is area that contains imporant factors but in reality still need to be improved (low satisfaction). Attributes that belongs to this quadrant are cleanliness and comfortness of enviroment, adequate information, responsibility of time, procedure assurance, comfortness during examination, and responsiveness.

### QUADRANT 2 (*Maintain Performance*)

Quadrant 2 is area that contains important factors and appropriate between expectation and reality. Attributes that belongs to this quadrant are politeness, accessible, assurance during examination, and responsive when decision making to risk patient.

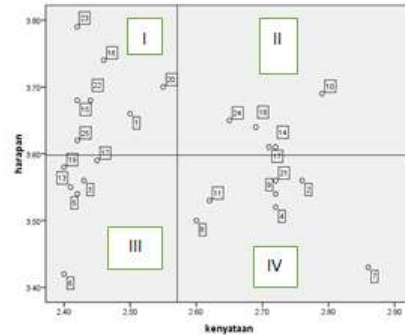
### QUADRANT 3 (*Attributes to Maintain*)

Quadrant 3 is area that contains less important factors and less performance. Attributes that belongs to this quadrant are openness attributes, ventilation and lighting of the room, carefull during examination, service time and privacy.

### QUADRANT 4 (*Attributes to De-emphasize*)

Quadrant 2 is area that contains insignificance factors dan have overwhelming response such as attention, politeness, medication assurance, interpersonal realtionship, caring, responsive towards patient complaint, appearance, and clean equipment. Quality of service is important in antenatal care provided by midwives. This study discuss about 5 dimension that related to antenatal care quality such as tangible, emhaty, responsiveness, reliability, and assurance.

Cartecius Diagram *Impotence Performance Analysis (IPA)*



**TANGIBLE:** Result showed that tangible has 71,88% obtained from 5 related questions. Tangible is visible factors such as facilities and service during antenatal care. Diagram showed that there was a gap between expectation and reality. The appropriate attributes are T2 and T4 showed that appereance (how to dress up) and equipment obtain satisfaction label 77,52% and 77,27%.

Reversely, T1, T3, and T5 need to be improved and inline with Widi, Utomo, dan Wijaya (2015) explained that in UKSW Indonesia got 47% for satisfaction procentage because didn't applied good facilities enviroment to patient.

Facilities improvement is need because hospital in China very concerns about perceived enviroment to patient in order to emphizes patient perception in service (Min le, at all, 2015).

**EMPHATY:** Result showed that level satisfaction in emphaty dimension obtained 76,27%. Emphaty consists of 3 sub dimension those are access, communication, and patient understanding (Widi, Utomo, dan Wijaya, 2013). It describes in each attributes E1-E5. E1 didn't obtain satisfaction label in this case about openness attitude. Openess attitude could influence communication and comfortness during antenatal examniation. The importance of communication could build realtionship between patient and midwife in literature (Butler et al., 2014). Openess attitude was described in diagram cartecius where E1 (70,58%) belongs to maintain performance.

**RESPONSSIVENESS:** Result showed that responsiveness dimension provided by midwife got most likely satisfaction label with percentage about 68,66%. It below compared to total satisfaction score (71,30%). Responsiveness improves acceptance level through service could be seen from procedure, and enviroment that contributes to patient satisfaction (Valentine, Verdes-Tennant, & Bonsel, 2015). Sub attributes should be improved and need midwife awarness during antenatal care.

Responsiveness is important and main duty of midwife from prenatal to post natal. Antenatal qulity as earlier screening on risk of neonatal infection (Mizumoto et al., 2015). Satisfied attributes is RS1 (76,40%) and classified in quadrant 4 indicate that expectation inline with reality in field. RS 2-5 were not achieve satisfaction label eventhough main assignment of midwife to decrease morbidity and mortality and risk of complications in patient. For that circumtance need some evaluation for effective service (Butler et al., 2014) contain special need, antenatal complication, medical condition, pregnancy health, and emotional health (ibid).

**RELIABITILY:** Result showed that responsiveness dimension provided by midwife got most likely satisfaction label with percentage about (68,75%) explained that there was a gap in this dimension reflected on midwife respon when patient was calling. Attribute R4 got satisfaction label (75%) and the other R1, R2, R3, dan R5 still below the standart.

Time, adequate information, and service time, still being patient expectation in antenatal care. Adequate information is needed by patient related to decision making. Educated women generally understand and have capacity to retrieve through health education (Viegas Andrade, Noronha, Singh, Rodrigues, & Padmadas, 2012) provided by midwives. However, time to respond patient could be used as resource health education to patient and direstctly midwife already improve service quality in giving adequate information.

**ASSURANCE:** Result showed that assurance below the standart means that most likely satisfied in antenatal care. Satisfied attributes are A2 about medication assurance (75,13%) and A3 (74,72%) examination assurance (75,13%). The other belongs to most likely satisfied attributes because below 71,35%. Patient perception who comes to health care facilities is to develop and maintain helath condition. Moreover, midwife should assure her patient. Besides, patient ask to health care profesional reagarding procedure related to detected diease and prevention during antenatal care (Kipronoh, 2009).

Attributes A4 dan A5 reviewed about how to midwife doing examination carefully. Assrance attributes obtained according theory in midwife higher education (Pope, Garrett, & Graham, 2000) and certification in this case Bidan Delima. It guarantees stndarized by IBI as midwives organization toward assurance in moidwife's pratice.

## CONCLUSION

- Generally, pregnant women satisfy toward antenatal care provided Bidan Delima by using *Customer Satisfaction Index (CSI)* with procentage 71.35 %
- There were 8 important attributes and need to be improve showed in quadrant 1 diagram *Importance Performance Analysis* such as: cleanliness and comfortness enviroment, adequate result information, responsibily of time, procedure assurance, comfortness in examination, and responsiveness.

## ACKNOWLEDGEMENT

Hopefully, Bidan Delima improve service quality such as skill, antenatal knowledge, and communication through seminar and training. Besides, monitoring and evaluation are needed doing continously in order to quality improvement based on standart and ethic code of profession.



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## THE ANTIFUNGAL ACTIVITY OF *Candida albicans* THE CORIANDER SEEDS FRACTION(*Coriandrumsativum* Linn)

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### ABSTRACT

Candidiasis is a fungal infection in humans the caused by *Candida albicans*. Incorrect use of antifungal can lead to toxicity and resistance. One of the plants that can Become an antifungal is coriander(*Coriandrumsativum* Linn). This study aims at finding out the effectiveness of *Coriandrum sativum* Linn fraction as antifungal of *Candida albicans*. Laboratory experimental study in vitro has been Carried out in PPS Unsri Laboratory from February to May 2014, with the following phases of study: extraction by maceration method, fractionation with liquid-liquid fractionation method (FCC), sensitivity test of *Candida albicans* using nystatin, antifungal activity of fraction test, determination of minimum inhibitory concentration (MIC) of the active fraction, Followed by bioautografi test and class determination of compounds. The Data were Analyzed using unpaired t-test, ANOVA, Posthoc, Linear Regression. The results Showed that the active fraction of coriander seeds is ethyl acetate and the class of compounds found in coriander seeds is phenol. MIC value of ethyl acetate fraction is 0.625%. It can be concluded coriander(*Coriandrumsativum* Linn) have antifungal activity of the ethyl acetate fraction. It is suggested that a study about pure compounds in the antifungal ethyl acetate fraction of coriander seeds need to be Carried out.

**Key Words:** antifungal, coriander(*Coriandrumsativum* Linn), *Candida albicans*

### INTRODUCTION

Whitish pathological can be caused by vaginal candidiasis, vaginal trichomonas, bacterial vaginosis, gonorrhoea or foreign bodies. Several investigators have reported that the cause of vaginal discharge that most of the vaginal candidiasis (Darmani, 2003).

From the results of epidemiological studies on the incidence of candidiasis vaginalis in women of reproductive age in India between 2005 and 2006, from 885 women with active sexual showed 20% were diagnosed with candidiasis vaginalis, 80% of asymptomatic infection (Rathod *etal.*, 2012). In women are expected to suffer from vaginal candidiasis at least once in his life that is about 75%, of which 40-45% of them will experience recurrent infections twice or more (Ratna *in* Setiawati, 2006).

Based on the results of research conducted by Kumalasari mention that in 2002, 50% of women have experienced vaginal discharge Indonesia later in 2003, 60%

had experienced vaginal discharge, whereas in 2004 nearly 70% of Indonesian women have experienced vaginal discharge at least once in his life (Munijaya *in* Kumalasari T, 2005). Estimated annual incidence of mycosis invasive *Candida* is 72 to 228 infections per million population (Chandra *et al.*, 2011).

One of the plant as a potential antifungal is coriander(*Coriandrumsativum* Linn). Based on the results of the study states that the component *linalol and geraniol* in coriander is an antifungal (Tabassum & Vidyasagar, 2013). Essential oil of coriander seeds can be used as an antimicrobial potential to inhibit or prevent infections *Candida* (Begnani *et al.*, 2010). The methanol extract of *Coriandrum sativum* showed activity in inhibiting the growth of *Candida albicans* (Bai & Kanimozhi, 2012). In addition, the research states that extracts of coriander seeds has an activity of inhibiting the

growth of the *Mycobacterium smegmatis*, *Klebsiella pneumoniae*, *Staphylococcus aureus*, *Escherichia coli*, *Enterococcus faecalis*, *Micrococcus luteus* and *Candida albicans* (Simonati & Maria, 2009).

From the above needs to be done research test the effectiveness of antifungal *Candida albicans* from a fraction of coriander (*Coriandrum sativum* Linn) in various concentrations to the inhibition of the growth of fungus *Candida albicans* and equality with fungal drug *nystatin*. Expected results of this test can be used as a new drug and can be used as an alternative medicine to treat various diseases caused by the fungus *Candida albicans*.

## RESEARCH METHOD

This study is laboratory experiments. *invitro* This study was conducted at the Laboratory Joint Graduate Program (PPs) Sriwijaya University. The study lasted from February 2014 to May 2014. This research using *Candida albicans* which is still classified as sensitive obtained from Palembang Health Laboratory.

In this study, the treatment group is the concentration of the solvent in which the concentration gradient 6: 20%, 10%, 5%, 2.5%, 1.25%, and 0.625. For the positive control group used in this study is *Nystatin* and a solution of DMSO as a negative control.

The equipment used in this study include extractor, autoclave, blender glass, hot plate, a bottle of wattle, Bunsen, petri dish, a funnel, a pumpkin erlenmeyer, electric heaters, test tube rack, glass beaker, measuring cups, incubators, vernier caliper, needle ose, megnetik stirrer, water bath, tweezers, pipette, test tubes, calliper, vacuum liquid chromatography.

The materials used in this study include: coriander (*Coriandrum sativum* L.), the test medium, culture *Candida albicans* as the fungustest, distilled water, alcohol,

aluminum foil, H<sub>2</sub>SO<sub>4</sub> 10%, cotton, filter paper, label paper, medium *Sabouraud Dextrose Agar* (SDA), medium *Sabouraud Dextrose Broth* (SDB), the solvent DMSO (*dimethylsulfoxida*), methanol,

solvent ethyl acetate, n-hexane, simplisia (dry powder) coriander (*Coriandrum sativum* Linn) and a plate of silica gel F<sub>254</sub>, *nystatin*, gloves, masks,

## Work procedures antifungal activity test of fraction

Test the antifungal activity of fractions results fractionation was conducted to determine the fraction where the active compound is located. Concentration of fractions tested to *Candida albicans* was 20% (200 mg / ml) with solvent DMSO (*dimethylsulfoxide*). Suspension mushrooms put in a petri dish 0.1 ml, then added SDA medium (*Sabouraud Dextrose Agar*) 10 ml which has not been frozen, with temperatures around 40°C. Furthermore homogenized to freezing. Paper discs measuring 6 mm dripped 20 mL with a micropipette using current from each of the fractions and made as many as five repetitions, then placed on an agar medium and labeled in a petri dish. After it was incubated for 2x24 hours at 37°C. Tests confirmed active antifungal activity when the surrounding discs are clear zone-free growth of *Candida albicans*.

## Test bioautografi

Bioautografi test is performed to determine the antifungal activity of a compound using thin layer chromatography. The test procedure is as beriku bioautografi: the active fraction at a concentration of 1% spotted on a plate of silica gel GF<sub>254</sub>, was then developed with a mobile phase for the separation of the compounds contained in fractions, penotolan active fraction was made double on the chromatogram. The chromatogram was laid in a culture dish containing *C. albicans* and active fraction on the

chromatogram is left attached to the agar medium, then removed carefully. Petri dishes containing cultures *Candida* were incubated for 2x24 hours. Once the medium is incubated observed clear zone that shows growth inhibition *Candida albicans* and is an area of active compounds are located and calculated the value of Rf his (Betina, 1973).

### The determination of the minimum inhibitory concentration active fraction

Determination of minimum inhibitory concentration conducted using agar diffusion method using paper discs (*paperdisc*) diameter of 6 mm. The smallest concentration that inhibits the growth of mold is the value of the minimum inhibitory concentration (MIC). KHM working procedures, namely: active fractions were made with a concentration of 20%, 10%, 5%, 2.5%, 1.25% and 0.625%. Solvents used were DMSO. Suspense mushrooms put into a petri dish 0.1 ml, then added medium (*Sabouraud Dextrose Agar*) 10 ml which has not been frozen, shake it a petri dish so perfectly mixed and then allowed to stand until frost. Paper disc diameter of 6 mm that has been poured with a solution of fractionation as much as 10 mL / disc inserted into the culture medium and then incubated for 2x24 hours in an incubator at 37°C and measured the diameter of inhibition zone is formed.

## RESULTS AND DISCUSSION

### Extraction of crude drugs coriander seeds (*Coriandrumsativum Linn*)

Extraction was done by maceration using methanol. Coriander seeds (*Coriandrumsativum Linn*) has been cleared weighing 250 grams of dried, obtained a dry weight of 250 grams and then blend until smooth in order to get as much as 250 grams of powder bulbs. Simplisia inserted into the Erlenmeyer flask and then added a solution of methanol 1000 ml and allowed to stand for

2x24 hours, then filtered to obtain a liquid extract. Based on the results of extraction with methanol using water to simplisia coriander seeds (*Coriandrumsativum Linn*) showed the extraction of as much as 41.6 grams (16.6%).

### Fractionation extracts of coriander (*Coriandrumsativum Linn*)

Results of the extraction of crude drugs coriander seeds (*Coriandrumsativum Linn*) gained as much as 41.6 grams of methanol extract, the extract is carried fractionation with fractionation methods Liquid-Liquid (FCC) with the solvent n-hexane, ethyl acetate and water methanol each as much as 1 L gradually, then each of the liquid fraction obtained evaporated in a fume hood to obtain each of the fractions in paste form. The results obtained from the fractionation process as in Table 1.

**Table 1.**  
**Results of fractionated extracts of coriander (*Coriandrumsativum Linn*)**

Solvent	Weight fraction (g)	Percent (%)
n-hexane,	12.4	29.8
ethyl acetate	3.6	8.6
methanol water	25.6	61.6
Total	41.6	100

Table 1. it can be seen that the results of fractionation of extracts of coriander (*Coriandrumsativum Linn*) with methanol has a greater weight than the n-hexane and ethyl acetate. The solvent has the ability to separate compounds in the extract by polarity. Fractionation Liquid-Liquid (FCC) is a simple and common fractionation performed. The basic principle of liquid-liquid fractionation is the process of contact between the solvent and the other one that is not intermingled and have different densities so that the two phases will be formed shortly after the addition of a solvent in a flask and shaking



separating funnel. This led to mass displacement from the origin to the solvent extracting solvent (Mirwan and Ariono, 2009).

### Test the sensitivity of the fungus *Candida albicans*

Fungus *Candida albicans* obtained from the Central Health Laboratory Palembang. sensitivity test done *Nystatin* through methods Diffusion Agar. The concentration used is 1000 ug / ml with solvent *dimethylsulfoxide* (DMSO). The result of sensitivity to each bacterium can be seen in Table 2:

**Table 2.**

**The sensitivity of the test results fungus *Candida albicans* with the *Nystatin* at a concentration of 1000 ug / ml (0.1%)**

Antifungal	Diameter resistor (mm)
<i>Nystatin</i> 0.1%	30

In Table 2 it can be seen that the *nystatin* diameter produce inhibitory effect on fungus *theCandida albicans* by 30 mm. This is indicated by the formation of a clear zone on a paper disc that can be seen in Figure 1:

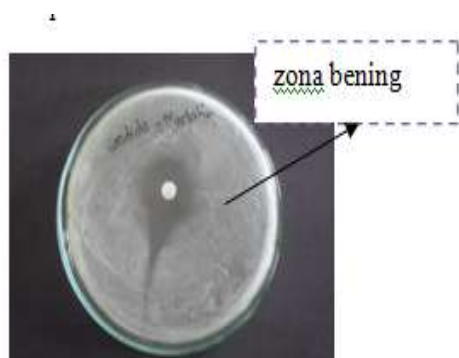


Figure 1. Results of Sensitivity Test with *Nystatin* at a concentration of 1000 ug / ml against fungal *Candida albicans*

Sensitivity test is performed to determine whether the fungus *Candida albicans* used in this research is still sensitive or resistant, sensitivity of the test results obtained inhibition diameter 30 mm, meaning *Candida albicans* used is still sensitive. Thus, the fungus *Candida albicans* can be used for further research in accordance with the opinion of Volk & Brown (1997) that the outcomes sensitivity tests *Nystatin* is said to be resistant if the inhibition zone formed <12 mm and sensitif if > 18 mm.

### Test the antifungal activity of *Candida albicans* from fractions of extracts of coriander (*Coriandrum sativum* Linn)

Test the antifungal activity of the fraction of n-hexane, ethyl acetate and water methanol carried by the diffusion method in order to determine which fraction of the active compound is located.



Figure 2. Extract and coriander seeds in a fraction of DMSO

Methanol extract was created with a concentration of 20% by dissolving in the solvent DMSO. The test results of the antifungal activity of each fraction is shown in Table 3:

**Table 3.**  
**Test results antifungal activity fractions coriander seed extract (*Coriandrum sativum* Linn) at a concentration of 20% of the fungus *Candida albicans***

Type fraction	Diameter inhibitory (mm)
methanol extract	0.00 ± 0.00
N-hexane,	± 0.000.00
ethyl acetate	19.4 ± 0.54
methanol water	0.00 ± 0.00

From Table 3 it can be seen that the fraction of ethyl acetate has a diameter of inhibition on fungus *Candida albicans* sedangan of 19.4 mm in the methanol extract, fraction of n-hexane and water methanol fraction has no inhibitory diameter of the fungus. This is evidenced by the formation of a clear zone on a paper disc that can be seen in Figure 4.3:



Figure 3. Test results antifungal activity of the extract, fraction of n-hexane, ethyl acetate and methanol water at a concentration of 20% of the fungus *Candida albicans*

Remarks: 1. The methanol extract 2. fraction n-hexane, ethyl acetate fraction 3., 4. fraction methanol, K: control

Measurement results obtained inhibition diameter of 19.4 mm diameter resistor, meaning 20% ethyl acetate fraction has strong inhibitory to the fungus *Candida albicans*. it showed that of the three

fractions found that the active fraction is the fraction of ethyl acetate. This contrasts with the results of research Bai & Kanimozhi (2012) which states that the methanol extract of *Coriandrum sativum* showed activity in inhibiting the growth of *Candida albicans*. The antifungal activity of the fractions indicated with resultant inhibition area on the medium that has been dikulturisasi. The more widespread inhibitory regions are generated, the greater the strength of the antifungal. In addition, concentrations fraction also influences the formation of inhibition zone.

This is consistent with the statement of Davis and Stout (1971) who argued that the provision of the strength of an antifungal as follows: the area 20 mm or more barrier means it is very strong, the area 10-20 mm barrier means strong, 5-10 mm and regional barriers means being 5 mm or less being weak. According to Herman *et al.*, (2007) that the interpretation area of antimicrobial growth inhibition refers to the common standards of the Ministry of Health (1988) that is said to be sensitive to the antimicrobial antimicrobial plant origin when a diameter of 12-24 mm pconstraints.

**The determination of minimum inhibitory concentration (MIC) of ethyl acetate fraction of coriander (*Coriandrum sativum* Linn)**

In this study the determination of minimum inhibitory concentration by decreasing the concentration that starts from 20%, 10%, 5%, 2.5%, 1.250%, and 0.625% with 5 repetitions, The results of the MIC determination ethyl acetate fraction of coriander (*Coriandrum sativum* Linn) can be seen in Table 4.

**Table 4. Mean Inhibitory Diameter (mm) fraction of ethyl acetate coriander seeds (*Coriandrum sativum* Linn) against**

**the fungus *Candida albicans* at various concentrations**

Concentration Fraction (%)	N	Mean (mm) ± SD Diameter resistor
20	5	18.8 ± 1.37
10	5	17.4 ± 0.97
5	5	15.2 to 1.65 ±
2.5	5	11.4 ± 0.83
1, 25	5	10.2 ± 0.65
0.625	5	7.6 ± 0.54

Antifungal activity of each fraction with various concentrations can be seen in Figure 4:

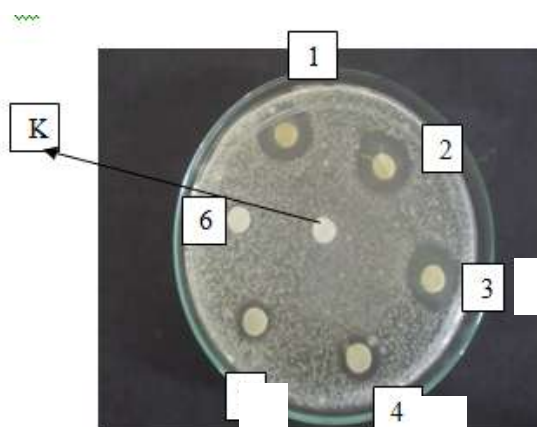


Figure 4. Determination of ethyl acetate fraction MIC against fungi *Candida albicans*  
Description:

- 1: Concentration of 20%,
- 2: Concentrations of 10%,
- 3: Concentration 5%,
- 4: Concentration of 2.5%,
- 5: Concentration of 1.25%,
- 6: Concentration of 0.625%,
- K: Controlon

Based Table 4 and Figure 4 shows the diameter of inhibition zone formed around the paper disc which is an indication of the strength of activity. *Candida albicans* Based on these values in mind that the higher the percentage, the greater the concentration of inhibition zone diameter are formed. The diameter of inhibition

zone at a concentration of 20%, ie 18.8 mm, then the diameter of inhibition decreases with decreasing concentration of the fraction. The smallest diameter of inhibition zone at a concentration of 0.625%, ie 7.6 mm. This is in accordance with the opinion of Greenwood (1995) in Syarifah (2006) states that the activity of the fraction decreases with decreasing the concentration, so that the diameter of inhibition zone formed also getting smaller.

The concentration of minimum inhibitory (MIC) of ethyl acetate fraction of coriander (*Coriandrum sativum* Linn) to the growth of the fungus *Candida albicans* can be determined by looking at the concentration limit that still contained the growth of fungi that are not contained fungal growth. From Table 4.4 it can be seen that the limit is at a concentration of 0.625% with a 7.6 mm diameter resistor. At a concentration of 0.625% to barriers fungal growth marked by a clear zone around the disc. According to Bailey and Scott's (1994), the MIC is the minimum concentration that can inhibit the growth of bacteria or prevent multiplication of germs.

With this explanation can be stated that the MIC is located on the last concentration which still contained the growth of germs before the concentration which had not contained the growth of germs. So MIC in ethyl acetate fraction of coriander (*Coriandrum sativum* Linn) is a concentration of 0.625%. These results are higher than the MIC ethyl acetate fraction of red betel leaf (*Piper betle* L) inhibited the growth of *Candida albicans* which KHM its ethyl acetate fraction was 2.5% with a 11.4 mm diameter resistor (Reveny, 2011). The smaller the minimum inhibitory concentration of the extract indicates the potential of the extract as an antifungal, because with a small concentration of the extract was able to inhibit fungal pertumbuhan.

Based statistical test *oneway ANOVA* obtained *wasp value* = 0,000 with a value

of  $\alpha = 0.05(p < \alpha)$ , which means there differences are striving towards the mean diameter of each inhibitory concentration.

### Test bioautografi and grouping the active compound

Ethyl acetate fraction bioautografi test and determination of compounds active plate of silica gel GF<sub>254</sub> using the appropriate eluent as mobile phase. Bioautografi test results and determination of classes of active compounds coriander seeds can be seen in Table 6:

**Table 6. Test results and grouping bioautografi active compound coriander seeds(*Coriandrum sativum* Linn)**

Type Fraction	eluent (solvent)	Rf	Color	active compound
Ethyl acetate	Ethyl acetate : methanol (9.5: 0.5)	0.81	Yellow	Phenol

test results obtained bioautografi active compound with Rf value of 0.81 with the eluent ethyl acetate: methanol (9.5: 0.5).

This can be seen by the formation of clear zone (fungal growth inhibition) at Rf 0.81 as shown in Figure 5

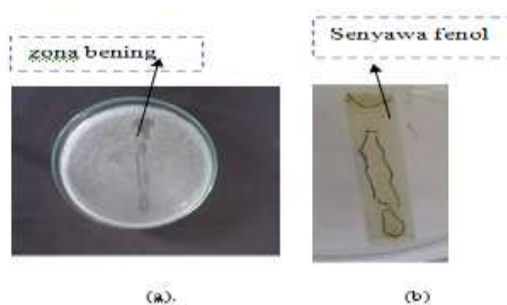


Figure 4.5 (a). Bioautografi test results, (b). TLC ethyl acetate fraction coriander seeds

Sprayed patches with Rf 0.81 H<sub>2</sub>SO<sub>4</sub> was then heated raised yellow patches indicating a phenol compound. This means

the phenolic compounds contained in ethyl acetate fraction of coriander seed is an active compound antifungal *Candida albicans*.

The chemicals contained in the seeds of *Coriandrum sativum* Linn are saponins, flavonoids, and tannins (Suharmiati & Lester, 2005). Coriander seeds also contain essential oils, flavonoids, polyphenols and  $\beta$ -carotenoids (Patel *etal.*,2013). The content of essential oil of coriander is *sabinene, myrcene, alpha-terpinene, ocimene, linalool, geraniol, decanal, desilaldehida, trantridecen*, acid petroselinat, acid oktadasetat, *D-mannite, scopoletin, p-simena, kamfena, and felandren* (Astawan 2009). In this study turns compounds antifungal obtained is phenol.

Research conducted Rajeshwari, *et al.*, (2013) showed that the test results phytochemical the ethyl acetate fraction of coriander seeds is known that the content of secondary metabolites highest phenols, followed flavonoids, and tannins that are the main components of coriander seeds. This is in line with what researchers found when research using thin layer chromatography (TLC) showed that the compound contains ethyl acetate fraction coriander seeds obtained is phenol.

According Pelczar and Reid (1979) in Poeloengan *et al.*, (2006) , a phenol compound antimicrobial compounds, with the mechanism of inhibition of microbial phenol as follows: (1) damage the cell wall causing lysis or inhibit the process of formation of a cell wall in the growing; (2) changing the permeability of the cytoplasmic membrane that causes leakage of nutrients from the cell; (3) denature cell proteins; (4) the metabolic system damage in cells by inhibiting the action of the enzyme intraseluler.

Rahmah and Aditya (2010) adds, compounds that are fungistatik eg phenolic compounds can mendenatuasi proteins, which damage the tertiary structure of proteins so that the protein loses its

properties. Terdenaturasinyacell wall proteins *Candida albicans* will lead to fragility in the cell walls so easily penetrated other active substances that are fungistatik. If a protein is denatured protein enzyme, the enzyme cannot work that causes the metabolism and impaired nutrient absorption process.

It is known that the cell wall of *Candida albicans* is the part that directly interacts with the host cell. cell walls *Candida* contain substances that are essential for virulence, among other mannoprotein derivative which has properties immunosuppressive that enhance the immune defense against the host fungus. *Candida* is not only stick, but also penetrate into the mucosa. Aspartyl proteinase enzymes help *Candida* at an early stage to penetrate the layer of tissue invasion mucocutaneous berkretein (Bachtiar, 1997). cell wall *Candida albicans* serves as a protector and also the target of several antimycotics. Cell wall plays a role also in the process of attachment and colonization as well be antigenic. The main function of the cell wall is to give shape to the cell and protect yeast cells from the environment.

The mechanism of action of phenols can form complexes with ergosterol contained in fungal cell membranes, the complex causes of enlarged pores in the yeast cells. Through the pores is a small component of the fungal cell contents come out as nucleic acids and other proteins. If it continues will lead to the death of the fungus. Phenol complex is in a weakened state, dissociation indirect cause phenol penetrate cells. At high concentration of the lipid, the biggest effect is the ability bengabung phenol with lipid components of the cell. Fungal cell membranes are composed of phospholipids which would cause a disrupted cell membrane permeability so the fungus is inhibited (the Goddess, 2009). In accordance with the opinion of Regezi and Sciubba (1999) which states that *Candida albicans* is a species that is very sensitive to phenolic compounds.

It is in accordance with the opinion of Jawets, *et al.*, (1996) that the workings of antimicrobial depends on the concentration of antiseptic, time and temperature, At very low concentrations can stimulate the growth of microorganisms, whereas at higher concentrations can inhibit the growth of microorganisms.

The study only looked at the effectiveness of concentration fraction of coriander seeds in inhibiting the growth of the fungus *Candida albicans* as one of the working mechanism of antifungal, while other factors such as time and the temperature was not observed.

## CONCLUSION

Based on the results of research and discussion that has been done, it could be concluded bahwafraksi ethyl acetate coriander seeds (*Coriandrum sativum* Linn) is active against the fungus *Candida albicans* with the Minimum Inhibitory concentration (MIC) of 0.625% (6250 ug / ml) of the fungus *Candida albicans* and ethyl acetate fraction of coriander seeds (*Coriandrum sativum* Linn) containing the active antifungal compound of phenols.

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## FACTORS INFLUENCING CADRE BEING ACTIVE IN PROVIDING HEALTH EDUCATION / TABLE 4 AT GRIYA ASRI ABAHAGIA IHC BAHAGIA VILLAGE, BABELAN SUB-DISTRICT BEKASI

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### ABSTRACT

**Background:** As a community-resourceful health care unit, IHC is run by trained cadres (volunteer) and opened every month to provide health care package. Bahagia PHC has 59 IHCs, with a total of 295 cadres. Judging from the implementation of table 1 to table 4 in 59 IHCs located in Bahagia village, only 30% implementation in table 4 are actively run.

**Objective:** To determine the factors in relationship with the IHC cadre being active in providing health education in Griya Asri Bahagia IHC, Bahagia village, Babelan sub-district, Bekasi, in 2016.

**Methods:** The study design was cross sectional. This samples were 60. The data in this study was collected through observation and questionnaires with closed answer alternatives. The data obtained was analyzed by univariate and bivariate.

**Results:** The results showed that in fact only 6.7% of cadres were active. Bivariate analysis showed that, of seven independent variables studied, the variable that did not have a significant relationship with the cadre being active in the IHC activities were support (p value = 1.000), while six other variables had a significant relationship, ie, knowledge (p value = 0.027), age (p value = 0.032), education (p value = 0.002), occupation (p value = 0.000), length of employment (p value = 0.017), and training (p value = 0.000). IHC program concept needs to be increased again with the training given to cadre by health workers in collaboration with the health center so that cadres can be active in running their roles.

**Keywords:** cadre, the activity at table 4

### INTRODUCTION

Based on the 2012 Demographic and Health Survey Indonesia (IDHS), the infant mortality rate (IMR) and Maternal Mortality Rate (MMR) are as an indicator of the Human Development Index which is very sensitive nowadays. The IMR in Indonesia from 2002 to 2012 decreased 3 points from 35 deaths per 1000 live births to 32 deaths per 1,000 live births; however, it is still very far away from Indonesia's targets according to MDGs at 23 per 1,000 live births. In contrast, the MMR in Indonesia has increased, reaching 359 / 100,000 live births in 2012, while the MDGs' target is 102 / 100,000 live births.

One attempt to reduce the number of such deaths is by developing an integrated approach through a form of activity called Integrated Health Center/IHC Post (IHC). IHC is an extension of the health center which provides services and health monitoring implemented in an integrated manner. IHC activities carried out by and for the community. IHC as a forum for public participation, which organizes service system to meet basic needs and to improve the quality of

human empirically has been able to equalize health (MOH, 2010).

As a health care unit with community resource, IHC is run by trained cadres and opened each month to provide a package of health services for mothers and children, family planning (FP), nutrition, immunization and supplementary feeding (PMT), and health services. In order to support its smooth operation, IHC service quality need to be coupled with the being active of qualified cadres; it is very important because the roles of cadres are in the planning, management, and guidance implementation of its activities. In the implementation of IHC, cadres provide service starting from the table I enrollment, table 2 weighing, table 3 recording, table 4 extension for toddlers' mother, pregnant women, postpartum mothers and nursing mothers, childbearing couple, family planning, and health behavior, as well as home visits that can be done by cadres and table 5 for the health care done by professional midwife or other health care worker (MOH, 2010).

In Bekasi, community participation in the health sector is also manifested in the presence of 7356 health cadres spreading at 2121 IHCs (Bekasi District Health Profile, 2009).

Bahagia PHC as one of the new health center has 59 IHCs, with classification self-contained IHC by 2%, middle IHC by 25%, *Purnama* IHC by 68%, and *Pratama* IHC by 5%, with the number of cadres reaching 295 cadres and the description of implementation of table 1 to table 4 in 59 IHC was that 30% of the implementation is actively run in in table 4. This can be caused by several affecting factors such as knowledge of the cadres, age, education, occupation, length of employment, coaching, and support.

In connection with the problems mentioned, the authors were interested in conducting research on the factors that influenced the activity of cadres in carrying out health education in Bahagia IHC, Bahagia village, Babelan subdistrict, Bekasi.

## RESEARCH METHODS

The study design was cross-sectional. The study population was 60 cadres. Samples taken by total population. The data were collected by observation with observation sheets and questionnaires that had been tested for validity and reliability. The cadre being active ratings were assessed by conducting direct inspections in the field during 12 months. The data obtained were analyzed by univariate and bivariate analytical test using statistical software. This research was conducted in Griya Asri Bahagia IHC, Bahagia Village, Babelan sub-District, Bekasi District. The independent variables consisted of cadres' knowledge, age, education, employment, cadres' tenurship, development, and support, while the dependent variable was the cadre's being active in providing health education

## RESULTS AND DISCUSSION

### Relationship of Knowledge to Cadre being active

From the analysis of the relationship between knowledge and the being active cadre's being active, of 2 good knowledgeable cadres, 1 cadre (50%) was active and 1 cadre (50%) was inactive. Of 21 moderate knowledgeable cadres, 2 (9.5%) were active and 19 cadres (90.5%) were inactive, of 37 less knowledgeable cadres,

cadre 1 (2.7%) was active and 36 cadres (97.3%) were inactive. Statistical test results obtained chi-square p value of 0.027 (p. Value <0.05), which means that there was a significant relationship between knowledge and cadre's being active in providing health education in IHC.

### Relationship of Age group to Cadre being active

From the analysis of the relationship between age and being active. of 23 cadres aged (25-35) years, 4 cadres (17.4%) were active and 19 cadres (82.6%) were inactive. Of 28 cadres of aged more than 35-40 years, no cadres (0%) was active and 28 cadres (100%) were inactive. Of 9 cadres aged more than 40 years, no cadre (0%) was active and 9 cadres (100%) were inactive. Statistical test results obtained chi-square p value of 0.032 (p. Value <0.05), which means that there was a significant relationship between age and cadre being active in providing health education in IHC.

### Relationship of Education to Cadre being active

From the analysis of the relationship between education and cadre being active, of 57 cadres with low education (elementary, middle, high school), two cadres (3.5%) were active and 55 cadres (96.5%) were inactive. Of 3 highly educated cadres (Diploma, college), two cadres (66.7%) were active and one cadre (33.3%) was inactive. Statistical test results obtained chi-square p value of 0.002 (p. Value <0.05), which means that there was a significant relationship between education and cadre being active in providing health education in IHC.

### Relationship of Occupation to Cadre being active

From the analysis of the relationship between work and cadre being active, of five cadres who worked, four cadres (80%) were active and one cadre (20%) was inactive. Of 55 not working cadres, no one was active and 55 cadres (100%) were inactive. Chi-square statistical test results obtained p value of 0.000 (p. Value <0.05), which means that there was a significant relationship between work and cadre being active in providing health education in IHC.

### Relationship of length of employment to Cadre being active

From the analysis of the relationship between length of employment and cadre being active, of

20 cadres with length of employment <3 years, four cadres (20%) were active and 16 cadres (80%) were inactive. Of 40 cadres with length of employment  $\geq 3$  years, no one (0%) was active and 40 cadres (100%) were inactive. Chi-square statistical test results obtained p value of 0.017 (p. Value <0.05), which means that there was a significant correlation between the length of work and cadre being active in providing health education in IHC.

#### **Relationship of Training to Cadre being active**

From the analysis of the relationship between training and cadre being active, of 8 trained cadre, four cadres (50%) were active and four cadres (50%) were inactive. Of 52 not trained cadres, none (0%) was active and 52 cadres (100%) were inactive. Chi-square statistical test results obtained p value of 0.000 (p. Value <0.05), which means that there was a significant relationship between training and cadre being active in providing health education in IHC.

#### **Relationship of Support to Cadre being active**

From the analysis of the relationship between support and cadre being active, of 12 cadres that were not supported, 1 cadre (8.3%) was active and 11 cadres (91.7%) were inactive. Of 48 cadres who supported, 3 cadres (6.2%) were active and 56 cadres (93.8%) were inactive. Chi-square statistical test results obtained p value of 1.000 (p. Value > 0.05), which means that there was no significant relationship between the support and cadre being active in providing health education in IHC.

#### **IHC Cadre being active at table 4**

From the results of a study of 60 cadres, the being active of cadres in table 4 in providing health education in Bahagia IHC in 2016 showed that 4 people (6.7%) were active and 56 people (93.3%) were inactive. This result was not as expected by the theory of National Education, (2008). The being active of health cadres can be assumed that the active health cadres can be assumed that the active health volunteers will carry out all their duties properly in accordance with the authority and responsibility, and then the health cadres can be in the active category. However, if the health worker is unable to perform the task as a whole, they belong to inactive.

Cadre is the motor of IHC; the life and death of IHC depends on whether the cadres are active or

not (MOH, 2010). Not active cadre cause disturbance in IHC and the nutritional status of infants and toddlers cannot be detected early (Andira, 2012). IHC activities are highly dependent on the cadres; they are needed in primary health care as the extension of it (Simanjuntak, 2012).

The results showed that many cadres in table 4 in providing health education were still not active, resulting in not optimal services in the IHC. Some of the causes of the being active of these cadres were influenced by several factors, among others, knowledge, age, education, occupation, length of employment, training and support.

#### **Relationship of Knowledge to cadre being active**

According to Notoatmodjo (2008), a good knowledge will provide the level of behavior or will make cadres be more active and vice versa that less knowledge will make cadres be not active. According to Nugroho (2008), a cadre will be active in IHC activities after the cadre knows and understands the duties of cadres and the purpose or benefit of providing health education properly and correctly so as to achieve the success of the IHC goal. Knowledge-based behavior generally lasts compared to the behavior that is not based on knowledge (Notoadmojo, 2008).

This result is consistent with a research by Latifah, (2010), which shows the relationship between the activity of cadres and knowledge (p = 0.017).

According to the researchers, in accordance with the theory for this research, many cadres lack knowledge so that many of them are not active; it greatly affects the behavior of these cadres. They also do not have the ability to give their knowledge because they do not know what to do in table 4 in providing health education. Thus, knowledge has a causal relationship with the being active of cadres; cadres with less knowledge will behave inactively because they do not have a good knowledge base.

#### **Relationship of Age group to Cadre being active**

The results of this study are not in accordance with the theory of Mardjuki (2008) that work performance began to increase in tandem with age and then declines towards the old age. The



older age is increasing one's wisdom in making decisions, rational thinking, control in their emotions and tolerance of the views of others. Effect of IHC cadre being active to the age of maturity shows the mindset of someone; it is because the older person is more mature and wiser. The productive and post productive age is generally a class of active cadres (Hartono, 2007).

According to the researchers, the study is not in accordance with the theory that mature or adult age will affect the level of activity of cadres in health education. However, from the results of research, many cadres in Bahagia IHC in productive age are not active in providing health education; this is due to the knowledge and understanding in health education which is still low. This can affect the activity of cadres in table 4.

#### **Relationship of Education to Cadre being active**

The results are consistent with the theory of MOH (2010) that education is a factor that affects the perception of the public so they can receive new ideas. The level of education will improve knowledge and in turn will lead to positive attitude and behavior so that cadres can be active, and vice versa (Notoatmodjo, 2008).

The results of this study are also in accordance with the results of research conducted by Sumiah (2010). Those with basic education by 32 (45.7%) of respondents are not active as a volunteer, whereas those with secondary education by 58 (75.3%) respondents are active as volunteers. While those with college education in 2 (66.7%) of respondents are still active as a volunteer. Chi-square statistical test results obtained p-value of .0001 (p. Value of <0.05). According to these researchers, it is in accordance with the theory because of the results of studies show that many cadres with low education are not active in providing health education.

#### **Relationship of Occupation to Cadre being active**

The results of this study are not in accordance with the theory of WJS Poerwadarminta, (2008). Work is a word and worker is a person who works, so that the work is carried out in form of activities of daily routine. Work is divided into 1) home chores, for example, housewives who do not have jobs outside the home, and 2) a job

outside the home, apart from home chores, such as teachers, employees, physicians, midwives, and so forth. IHC cadres working at home will have more time to implement IHC activities that affect the level of her being active.

This research's results are consistent with the results of research conducted by Sumiah (2010), that the respondents who are working are 8 (38.1%) of all respondents and they are still active as a volunteer, while those who do not work are as many as 84 (65.1%) respondents as active cadres with chi-square test results obtained p. 0034 (p. Value of <0.05). According to the researchers, the research results are inconsistent with the theory. Many cadres who are not working but not active in providing health education to clients properly because they did not receive any training so that they do not know the materials that will be provided to the client.

#### **Relationship of Length of employment to Cadre being active**

The results of this study are not in accordance with the theory according to Siagian (2006), that the quality and ability of a working person grow and develop through two main lines, ie, work experience that can mature person and that the education and training. Time range more than 3 years is a long time for a cadre in participating in IHC activities so that it can be said cadres have to know the ins and outs of IHC in terms of activity and approach to the public, so their motivation will be more inclined and they can be more active in following IHC activities (Ministry of Health, 2010).

The results of this study do not correspond to the results of research conducted by Sumiah (2010), that only 1 (3%) of respondents become an active cadre when being a cadre less than 1 year, and in those with a duration of being a cadre 1-3 years, 38 (79.2%) of respondents are active as volunteers. In addition, those ever to be a cadre  $\geq$  3 years as many as 53 (76.8%) are those not active as volunteers. Chi-square statistical test results obtained p. 0001 (p. Value <0.05).

According to the researchers, the results are not in accordance with the theory; it is known that many cadres who works  $\geq$  3 years are not active in providing health education. They should have already been more active since having experiencing in being a cadre  $\geq$  3 years.

### **Relationship of Training to cadre being active**

The results are consistent with the theory of Munindjaya (2005). Guidance has an important goal to improve the knowledge and skills as the criteria for overall success of the program. Development efforts must be able to provide a good learning experience for the staff and for society. If less than 50% IHC cadres follow the guidance of a health clinic on a regular basis, the cadres will be active and if less than 50% IHC cadres do not routinely follow the guidance, the cadres can be said to be inactive (Notoadmojo, 2008).

The results are consistent with the results of research conducted by Sumiah (2010) that 91 (61.5%) of respondents receive training but are not active as a volunteer, while those who do not receive training are only 1 (50%) of respondents to be active as a cadre. Chi-square test results obtained  $p > 0.05$  ( $p > 0.05$ ). According to the researchers these results are in accordance with diteori that a lot of volunteers who are not trained, they are not active in running table 4. This is because of the lack of guidance that they do not understand well about their duties and responsibilities that must be carried out at 4 tables.

### **Relationship of Support to cadre being active**

The results of this study are not in accordance with the theory of Desy A, (2013). Support is an effort that is given to others, both moral and material, to motivate the person carrying out the activity. Support can arise from a variety of parties such as the support of families, community leaders and the support of policy makers. However, the support of family and community is the closest and most to be expected to provide a strong motivation for the work of a cadre. If there is support from family members and community leaders, the being active of IHC cadres increases, and vice versa (Desy A, 2013).

The results of this study do not correspond to the results of research conducted by Meyta Mandagi, (2012) with the results that IHC active cadres with supporting category were 10.3% and 66.7% health cadres are less active in the motivation category because they do not receive support as a health cadres. Correlation calculations using exact fisher obtained  $p < 0.05$  ( $p < 0.05$ ) and OR 17.4 ( $p < 0.05$ ), meaning that there is a relationship between the family and community support and the being active of health cadres.

According to researchers, the results are not in accordance with the theory because many cadres who are supported are not active in carrying table 4. When they are supported, they should need to be active. It is in because the understanding and knowledge of the duties and responsibilities in table 4 are still low.

### **CONCLUSION**

Results show that of the seven variables above, there are six variables that have a meaningful relationship, that is, knowledge, age, education, occupation, length of employment, and training and there is one variable that does not have a significant relationship, ie, support.

To enhance the being active of a cadre at table 4, the researchers suggest that IHC management should have collaboration with PHC and PHC shall assist and provide guidance and training to the cadres on the understanding or what to do at table 4 including counseling / health education about MCH, childbearing couple, family planning, health behavior, vitamin A supplementation, and iron and oral rehydration salts, and together with cadres make posters and flip charts as tools to educate, encourage cadres to apply the results of training to clients / target, motivate volunteers to study harder, do place rolling or turnaround on every IHC table so that all cadres can feel and master the task in each of the 5 IHC tables in turn, encourage IHC supervisors to conduct a comparative study concerning IHC management so that the cadres become active in table 4, encourage cooperation with community leaders to provide awards on outstanding cadres, and evaluate the work done by cadres after being given guidance and training. All of these are done so that the being active of cadres in providing the service at table 4 can be achieved.

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## STUDY OF CROSS CULTURE OPTIMISM AMONG MIDWIFERY STUDENTS

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### ABSTRACT

This research was conducted to investigate the correlation between optimism and ethnicity among midwifery college students. This is quantitative research with correlational design and sample used midwifery college students in the area of Jakarta, Banten, West Sumatera and West Java. Overall, 476 midwifery student participated in this research by filling out questionnaire consisting of Life Orientation Test-Revised (LOT-R) constructed by Scheier, Carver and Bridges (1994). The result showed that ethnicity did not have a positive and significant correlation with optimism, which means that ethnicity of participant, did not have effect on high and low scores of optimism on midwifery students. On the other hand, variability of participants' ethnicity was not predictable by the correlation with optimism.

Keyword: Optimism Ethnicity Culture, Midwifery

### INTRODUCTION

Optimism is defined as positive expectations of the future (Scheier, Carver, & Bridges, 1994). Carver and Scheier (2002) believed that optimism is a basic characteristic of positive thinking. Optimism is also a positive anticipation of future events that acts as an important factor to help reducing problems such as maladaptive distress and interpersonal problems (Hong et al., 2014). Optimism is defined as a person's tendency to believe that he/she will achieve positive things in life (Lee, Brown, Mitchell, & Schiraldi, 2008). Based on the elaboration given, it can be concluded that optimism is a positive thought or a person's positive expectations about the future. An optimist also possesses confidence about the future that brings them to continue their efforts towards the expected goals despite the some obstacle in achieving the goals (Carver et al., 2010; Slutske et al., 2005 (in Hanssen et al., 2015)).

Midwifery students, as prospective midwives, who have a role and an important position as in terms of reducing Maternal Mortality Rate (MMR) and Figures morbidity and

infant mortality (IMR) (Decree of the Minister of Health of the Republic of Indonesia (MoH), 2007), is considered important to have high optimism. High optimism possessed by midwifery students can also help them to continue their efforts to achieve the expected goals (Carver et al., 2010; Slutske et al., 2005 (in Hanssen et al., 2015) although there are some obstacles in the world of obstetrics, such as their intense job competition, low number of midwifery with Strata level of 1, 2, and 3, the slow process of spending STR, and the possibility of experiencing trauma for failure in providing help (Circular of the Directorate General of Higher Education No. 1643, 2011; Pramudiarja, 02 February 2012; majalahbidan.com, 2012 February 20; Augers, 2011).

While optimism is perceived important and can help midwifery students in achieving their goals in the future, there are internal factors (experience and genetic) and external (socio-economic status, race/culture, and social resources that can influence individual's optimism. Some studies mentioned that these factors may affect the level of optimism possessed by an individual. One of the

factors that may affect the level of optimism is cultural factor, which is external factor. One cultural factor that highly affects an individual's optimism is associated with habits and rules that apply to daily life in the neighborhood he/she lives in. In one study, the results of the calculation of internal consistency with LOT-R as measuring instrument was not found in Afro-American and Hispanic as racial minorities nor in individuals with low education. Therefore, it is concluded that optimism was low in racial minority and low education groups (Hirsch, Britton, & Conner, 2010). This happened because in the United States, racial minorities such as African-American race are often discriminated by racial majority (Hirsch, Britton, & Conner, 2010).

The findings from these studies attract and encourage the researcher to conduct a research on the relationship between optimism and cultural aspects such as ethnicity. Given Indonesia is known as a country with diversity or heterogeneity with diverse ethnicities, cultures, religions, and customs (tradition), it is possible that these factors have great impact on the level of optimism, particularly, in this study, among midwifery students. Based on this background, the question to answer through this research is "Is there any relationship between optimism and ethnicity on midwifery students?"

### **Tribes**

Ethnicity is generally defined as a sense of group belonging to the core characteristics of same origin, history, culture, language, experience, and values are the same (Baumann, 2004; Ratcliffe, 2010). In addition, tribe is also the result of self and group identities made in the context of extrinsic and intrinsic as well as social interaction (Baumann, 2004). It can be concluded that identity of tribes will be upheld by every individual and the underlying values of life in it as it is internalized.

## **RESEARCH METHODS**

This is a quantitative and correlational research. The purpose of this study was to determine whether there is relationship between an individual's optimism and his/her tribe. Method of sample selection (sampling) conducted by the researcher is the non-probability or non-random sampling of convenience sampling.

Participants of this study were diploma program students of midwifery sitting on semesters 4 and 6 in the province of DKI Jakarta, West Java, Banten and West Sumatra, which have the characteristics of ethnic groups according to region of residence and college. The selection of the participant aimed to improve the purity of ethnic identity of the individual who is also in line with the cultural environment in the home or college environment. Based on the sorting carried out, 476 students of diploma in midwifery program whose tribes aligned with their provincial midwifery academy were taken as participants. The data were collected and processed quantitatively by using Statistical Package for Social Science (SPSS) with descriptive statistical technique and Pearson correlation to see the significance of the linear relationship between the variables. The hypothesis of this study is (Ha) is There is relationship between optimism and ethnicity among midwifery students and (Ho) There was no relationship between optimism and ethnicity among Midwifery students.

### **Measurement**

**Optimism** Optimism measuring tool used is a LOT-R measuring tool developed by Scheier, Carver and Bridges (1994) adapted in Indonesia by Isma (2013) along with some tests by the researcher including test of legibility ( $n = 12$ ), test of reliability and validity ( $n = 153$ ;  $\alpha = 0.51$ ; validity  $> 0.2$ ).



**Ethnicity** was recognized based on the participants' demographic data at the beginning of the study questionnaires filling.

## RESULT AND DISCUSSION

In this study, the researcher obtained 476 participants from students of Midwifery Diploma Program. Table one indicates presentation of participants' demographic data based on the questionnaires used in the study.

Table 1. participants overview (n = 476)

Characteristic	F	P
<b>Age</b>		
18 yr	15	3.1
19 yr	189	39.7
20 yr	185	38.9
21 yr	64	13.4
22 yr	19	4.0
23 yr	3	0.6
25 yr	1	0.2
<b>Provinces</b>		
West Sumatera	260	54.6
DKI Jakarta	180	37.8
Banten	27	5.7
East Java	9	1.9
<b>Ethnicity</b>		
Minang	260	54.6
Multicultural*	180	37.8
Sunda	36	7.6

\* Multicultural are individuals from various ethnic groups who live in the capital city (Jakarta)

Most (189) of the participants aged 19. Based on the identity of ethnic groups, the largest number of participants came from Minang ethnic (260 participants). In this study, because it took participants of students who attend college in the capital city of Jakarta with wide diversity of ethnic identity, the researcher used the multicultural identity term, which means their diverse ethnic mix in the region.

Table 2. General overview of Optimisme

Scor Category	Score Range	F	P
Rendah	8-14	84	17.6%
Sedang	15-21	353	74.2%
Tinggi	22-24	39	8.2%

The mean value of participants' optimism is 17.55 with standard deviation (SD) of 3. From the distribution of optimism total score, the distribution of optimism scores were divided into three categorizations including low, moderate, and high. 353 participants (74.2%) had moderate level of optimism.

The main results of this study indicated that there was no positive and significant relationship between the variables of optimism with ethnicity among midwifery students. The absence of significant correlation makes null hypothesis (H<sub>0</sub>) is received and alternative hypothesis (H<sub>a</sub>) is rejected, with interpretation that there was no linear significant and positive relationship between optimism with ethnicity.

### Correlation

Based on the research question, to answer whether there is a relationship between variabe of optimism and ethnicity, the researcher calculates the correlation between the two variables.

Table 3. Results of Correlation Calculation

Variabel	r	Sig (p)	r <sup>2</sup>
Optimism and ethnicity	0.064	0.164*	0.004

\*Not significant on L.o.S .01 (two tailed)

The results of the correlation calculation of tribes and optimism variables showed that the variables of optimism and ethnicity were not correlated and insignificant.  $r^2$  value indicates large effect size between ethnicity correlation and optimism score of midwifery students.  $r^2$  calculation results indicated that 0% variance of ethnic identity on midwifery students cannot be predicted score of optimism, which means that there are factors other than ethnicity that is able to predict optimism. Moreover, the significance value was not at 0.00. Therefore, it can be concluded that the relationship between optimism and ethnicity only happen by accident.

**Table 4. Calculation result of One-Way ANOVA**

Variabel	ANOVA	
	F	Sig.
Optimism and ethnicity	1.040	0.354

The calculation of the mean score of optimism and ethnic group was carried out by using statistical technique of One-way ANOVA. The result showed that there was no difference in the mean score of optimism based on ethnicity ( $F = 1.040, p > .05$ ). It means that ethnicity played no role in determining the difference in mean score of optimism in the group of study participants.

## CONCLUSION

Based on the results, optimism is not associated with ethnicity, that an increase or decrease in optimism score has nothing to do with the differences in individual ethnic groups. The results differs from the previous research stating that optimism was low in minority ethnics group and low education participants (hirsch, britton, &

conner, 2010), and a research conducted by chang (1996) about the influence of culture on optimism on Asian American and Caucasian Americans students. The difference results of these studies is likely to occur because Indonesia is the largest archipelago in the world (Portal Nasional RI., n.d). Each of islands in Indonesia is generally inhabited by tribes or a particular social group, thus certain ethnic groups makes up the majority in their respective territories. Meanwhile, according to the previous research, only racial minorities have lower optimism (hirsch, britton, & conner, 2010).

Samples taken from midwifery students in each region make them feel as the majority, that the results of this study is different from the results of researches conducted by Hirsch, Britton, and Conner (2010) and Chang (1996). The understanding of race in western states is different from that in Indonesia as ethnic identity is only cultural diversity in Indonesia

The differences that arise is in the form of cultures such as those related with custom or procession of a sacred event, ethnicity, and religion. They do not label attribute on certain ethnic groups related with capabilities (such as smart or stupid), or discriminate against certain groups because of ethnic or cultural differences. This is because the state of Indonesia still holds strong sense of unity despite different cultural ethnic groups manifested from their understanding of unity in diversity embraced by the Indonesian people. Therefore, it is important for the people of Indonesia to uphold and maintain understanding of national unity in order to realize the 3<sup>rd</sup> principle of Pancasila as the state ideology saying "Unity of Indonesia".

The results of this study indicate that there is no correlation between optimism and ethnicity on the participant of midwifery students in Indonesia. This is

as the result of characteristic factor of Indonesian society that does not discriminate one tribe against other tribes and their understanding of national unity that underlies the lives of the people of Indonesia until the current generation and their sense as the majority ethnic group while in its own territory.

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## EFFECTIVENESS OF WARM COMPRESS TO DECREASE THE SPINAL PAIN IN SECOND TRIMESTER OF PREGNANCY AT BPM LATIFATUSZAHRO IN BETAK VILLAGE

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### ABSTRACT

Spinal pain is a problem pregnancy that become phenomenon lately. Causes of back pain in pregnancy are weight gain during pregnancy, changes in posture, muscle tension, and stress. Spinal pain in pregnant women if untreated can cause discomfort and interfere with daily activities. This study research aims to determine the effectiveness of warm compress to decrease back pain in pregnant women in the second trimester BPM Ny. Latifatus Zahro.

This study research used design Quasy Experiment with approaches One Group Pre-Post Test Design. The samples were second trimester pregnant women who experience back pain, 16 people were taken use Purposive Sampling. This research instruments use Descriptive Pain Scale. Statistical test using Wilcoxon test against spinal pain before and after intervention with significance  $p < \alpha$  ( $\alpha = 0,05$ ).

The results showed significant effect on the warm compress to spinal pain in the second trimester pregnant women, evidenced by the Wilcoxon test  $p$  value  $0,000 < 0,05$ . The results of this study can be used as a reference cope with back pain in pregnant women. Expected further research on other non-pharmacological therapy against back pain in pregnant women.

**Keywords : Pregnancy, Spinal pain, Warm Compress**

### INTRODUCTION

Pregnancy involves emotional and physical changes of the mother as well as the social changes in the family (Saifuddin, 2006). During pregnancy almost all the body of pregnant women changes, especially on the reproduction organ and also the other organs, as a shape of adaptation in pregnancy (Bringiwatty, 2010). Pregnancy is a happy moment for women mostly. However, it is uncommon during pregnancy lasts there are various complaints submitted by pregnant women, one of whom is a complaint of back pain. Changes in the musculoskeletal system can cause spinal pain in pregnancy often in nowadays.

(CaHealth.Canoe, 2014; Mochtar, 2002). Spinal pain during pregnancy could be a good sign, that the fetus in the womb is growing. The more the fetus grows, the load on the back is also greater. Generally, pregnant women in the second trimester frequently expressed complaints of back pain. Spinal pain during pregnancy usually occurs when the pelvic met with the spine, which in the sacroiliac joint. There are many possibilities why back pain in pregnant women can occur.

An online survey conducted by the University of Ulster in 2014, of the 157 pregnant women who fill out the questionnaire, 70% had experienced pain in the spine (Sinclair et al, 2014). The



prevalence of spinal pain during pregnancy in Indonesia obtained from research by Suharto in 2001, explained that 180 pregnant women studied, 47% had spinal pain. Based on initial data that collected in Betak village, 10 pregnant women in second trimester, there were 7 (70%) of pregnant women who experience back pain.

A result that can arise when back pain in pregnancy is not handled properly and keep repeating. This pain can cause mother difficult in mobility especially in moving from place to another, so can causing discomfort and interfere with daily activities (Leifer, 2008). Pain or spinal pain is sometimes so persecute and sometimes accompanied by shortness of breath (not asthma), especially in the evening or night. It would interfere with daily routine and will also disturb sleep at night. In pregnant women, the tightness typically occurs due to increased pressure on the abdominal cavity with the uterus that getting bigger, but the tightness can be distinguished with asthma, the lack of shortness of breath is accompanied by the sound "ngik" should an asthma attack.

There are several ways pain management, including pharmacological and non-pharmacological management. Pharmacological management of pain can be by giving analgesic drugs, while in non-pharmacological include massage, hot and cold compresses, therapeutic touch, acupuncture and acupressure (Bringiwatty, 2010).

According to research by Sani and Winarsih in 2013, from 40 respondents were divided into two intervention groups, the first group given warm compresses interventions while the second group given cold compress intervention to the conclusion that the average reduction in pain scale on a warm compress is 1,60 and the average of reduction in pain in the scale of a cold compress is 1.05 (Meyllinda, 2014). Warm compresses can increase local skin

temperature, circulation and tissue metabolism. Warm compresses can reduce muscle spasm and increase the pain threshold (Bringiwatty, 2010).

Warm compresses therapy has been shown to increase the mother's ability to tolerate pain during childbirth because of the effects of the heat. Physical therapists and other health professionals have been using warm therapy for reducing various shapes of chronic pain. By compressing in maternal sacrum (lower back) can reduce labor pain.

The results showed that the warm compresses effectively done during childbirth and is a common measure for pain (Suryani, 2013). Warm compresses technique is to provide a sense of warmth on specific areas using liquid or tool pose yan warm on the body to relieve pain (Potter and Perry, 2006).

Spinal pain often experienced by pregnant women, especially in the second trimester. But in Indonesia has not been much research on the subject, especially at the working area in BPM Ny. Latifatuz Zahro in Betak Village, Kalidawir, Tulungagung subdistrict.

## RESEARCH METHODS

In this study used Quasy Experiment design with approaches One Group Pre-Post Test Design. This study reveal a causal relationship by engaging a group of subjects. The group of subjects was observed before the intervention, and then observed again after the intervention (Nursalam, 2011).

The population in this study is the second trimester pregnant women were registered in Betak village Betak District of Kalidawir. 23 pregnant women appropriate with the criteria. The sample was a half of the pregnant women in second trimester who experience back pain registered in BPM Ny. Latifatuz

Zahro Betak Village District of Kalidawir there are 16 people.

In this study, the sampling using purposive sampling based on a certain considerations made by the researcher, based on the characteristics of the previously known populations.

Observation instruments used in this research is descriptive pain scale. By providing a range of pain using numbers.

## RESULTS AND DISCUSSION

Data in this study, took 16 respondents of pregnant woman in second trimester who experience back pain.

Table 5.1  
Frequency Distribution of Respondents by Age in BPS Ny.Latifatus Zahro Betak Village District of Kalidawir.

No	Age	Freq	(%)
1.	< 20 years	1	6,25
2.	old	14	87,5
3.	20 – 35 years old	1	6,25
	> 35 years old		
	<b>Total</b>	<b>16</b>	<b>100</b>

According to the table 5.1 above shows that almost all of the respondents aged 20-35 years as many as 14 (87.5%) of respondents.

Table 5.2  
Frequency Distribution of Respondents by Type of Pregnancy in BPS Ny.Latifatus Zahro Betak Village District of Kalidawir

No	Type of Pregnancy	Freq	(%)
1.	Primigavid	6	37,5
2.	Multigravid	10	62,5
	<b>Total</b>	<b>16</b>	<b>100</b>

According to the table 5.2 above shows that most of the respondents are multigravid 10 (62.5%) of respondents.

## Spesific Data

Table 5.3  
Frequency Distribution Based Pain Scale before Warm Compress in BPM Ny.LatifatusZahro Warm Betak Village District of Kalidawir

No	Pain Scale	Freq	(%)
1.	Painless (0)	0	0
2.	Mild pain (1-3)	0	0
3.	Moderate pain (4-6)	15	93,75
4.	Severe pain controlled (7-9)	1	6,25
5.	Severe pain uncontrolled (10)	0	0
	<b>Total</b>	<b>16</b>	<b>100</b>

Based on Table 5.3 above shows that before the warm compress almost all respondents had experienced pain were 15 (93.75%) of respondents.

Table 5.4  
Frequency Distribution Based Pain Scale After Warm Compress in BPM Ny.LatifatusZahro Betak Village District of Kalidawir

No	Pain Scale	Freq	(%)
1.	Painless (0)	3	18,75
2.	Mild pain (1-3)	13	81,25
3.	Moderate pain (4-6)	0	0
4.	Severe pain controlled (7-9)	0	0
5.	Severe pain uncontrolled (10)	0	0
	<b>Total</b>	<b>16</b>	<b>100</b>

According to the table 5.4 above shows that after doing a warm compress almost all respondents had experienced mild pain, 13 (81.25%) of respondents.

Table 5.5  
Distribution of effectiveness warm compresses in BPS Ny.Latifatus Zahro Betak Village District of Kalidawir

Group	N	z	p
Pain scale before warm compresses	16	-3.704	0,000
Pain scale after warm compresses	16		

According to the table 5.5 above shows the effective warm compress to decrease back pain in pregnant women in second trimester. Warm compresses concluded affective from p value by Wilcoxon test results, where a warm compress against spinal pain in pregnant women has a p value  $0,000 < \alpha = 0.05$ .

### Spine Pain Characteristics Before Warm Compresses

Based on the analysis of data in Table 5.3, the result that the overall number of respondents who do not do warm compresses, almost all respondents had moderate pain with the number 15 (93.75%) of respondents.

According to Henderson and Jones (2006) as a result changes of the musculoskeletal increasingly the size and the weight of the fetus and uterus, changes in gravity, the abdominal wall, posture while walking, spinal ligament instability caused occurrence of spinal pain during pregnancy. According to Jiménez, (2000) approach of the seventh month, many women experience problems with pain in the nether back, and some of which might also experience pain in the upper back. According to research conducted by the University of Ulster in 2014 about the description of spinal pain that occurs in pregnant women without intervention ie 6.3 from 157 respondents (Sinclar et al, 2014).

Spinal pain in pregnancy is an issue that interfere with the mother during pregnancy (National Health System, 2014).

Almost all respondents experiencing back pain before applying warm compresses with moderate scale of pain in the second trimester of pregnant women by 15 (93.75%), and only 1 (6.25%) of respondents who experienced severe pain controlled. Spinal pain which felt by pregnant women caused of the heavy burden on the mother's abdomen, half of the body's weight is in the front. To maintain a balance usually unknowingly mothers shoulder leaning backwards which causes muscle tension in the back.

Spinal pain can also be affected with increasingly the size and the weight of the fetus and uterus, and then caused spinal pain during pregnancy. Most pregnant women consider spinal pain is not a serious problem, but if left over time will affect the activity of the mother. There are some analgesics should not be consumed by pregnant women, aside from a midwife or doctor's prescription. But there are some women who can not take medication so that the pain increased. Besides oral medications, there are also topical analgesic, but there are some mothers who are allergic or do not like the smell.

### Characteristics of Pain After Warm Compresses

Based on the analysis of data in table 5.4, the results that the overall number of respondents who already do a warm compress, almost all respondents experienced mild pain with the number 13 (81.25%) of respondents.

Gate control theory says that stimulate on skin to enable the transmission of sensory nerve fibers A-beta can bigger and faster. This process decrease pain transmission through the fiber C and deta-A small

diameter. Synapse gate close the transmission of pain impulses. Compress using warm water will increase blood flow and relieve pain by removing the inflammatory products, such as bradykinin, histamine and prostaglandins that cause local pain. The heat will stimulate the nerve fibers that close the gate so the impuls transmission of pain to the spinal cord and to the brain is blocked (Simkin, 2005).

Warm water therapy is part of a non farmakologis management of pain. Warm water therapy decrease the pain scale by 2.07 on each respondent was given treatment, while the pain will increase 0.17 in every increasement of scale labor pain if not properly controlled (Suryani, 2013). The difference of the pain scale caused of the heat which have the advantage of increasing the blood flow in a certain area and is likely contribute to a reduction of pain by accelerating the healing (Muttaqin, 2011).

All respondents decreased spinal pain after a warm compress. From allof the total number, almost all respondents scale of pain was reduced to mild pain at 13 (81.25%) of respondents, and a small percentage feel no pain which is 3 (18.75%) of respondents.

Warm compresses are one nonpharmacological therapy for pain management. Warm compresses can accelerate blood circulation, reduce muscle spasms, and eliminating the sensation of pain. So by giving warm compresses will provide a sense of comfort and serenityin pregnant women. Giving a warm compress is also easy and effective that can be done independently by the mother or with the help of the family at home.

### **Effectiveness of Warm Compresses to Decrease Back Pain in Pregnant Women in Second Trimester**

Based on the analysis of data in table 5.5 showed that the effective warm compress to decrease back pain in pregnant women in second trimester. Warm compresses concluded effective from p value by Wilcoxon test results, where a warm compress against spinal pain in pregnant women has a p value  $0,000 < \alpha = 0.05$ .

Significant effect from this study are similar to research on warm water therapy given to pregnant women who experience back pain which entered the first stage of labor (Suryani, et al, 2013). Based on research that conducted in Jombang regarding therapy pots thatgiven the warm water can reduce pain scale effectively in spinal pain when entering the first stage of labor (Yani & Khasanah, 2012). According Ilzam (2015) warm water therapy using pots has a very strong effectiveness towards reducing back spine pain in pregnant women, not just limited to pregnant women who entered the first stage of labor. The effectiveness of warm water therapy is because its given inhibit pain by vasodilating blood vessels around treated, increasing the flow of nutrients and facilitate the body metabolism that are not used for disposal in the area treated (Brunner & Suddrat, 2002; Potter & Perry , 2011).

Analysis results of the effectiveness of warm compress to decrease spinal pain proved by calculation using the Wilcoxon test, where a warm compress against spinal pain in pregnant women have value0,000 p value  $< \alpha = 0.05$ . The results of this analysis indicate that the warm water therapy is effective to decrease spinal pain in pregnant women. From the sensation of heat can accelerate blood circulation, reduce muscle spasms, and provide a comfortable sensation. Warm compresses can be another

alternative in the treatment of spinal pain in pregnant women, because it is very easy to be done independently at home. Especially for pregnant women that is difficult to take medication or mothers who are allergic or do not like the topical analgesic. From this therapy, can also make a therapeutic touch that makes the mother feel more comfortable, and accelerate the healing process.

This study has some limitations in its implementation about data among the pregnant women who experience back pain is still not available in the order in BPM as well as a national scale. Researchers have difficulty in seeing the prevalence and incidence of spinal pain, so the survey of respondents which are pregnant woman in second trimester need to be questioned individually and visited each house. Beside that, the threshold of pain in every pregnant woman is not the same, so the researchers difficulty in recap of the final data.

Implementation of the warm compresses intervention carried out in the home each respondent. This constraint makes the researcher must carry the equipment to warm compresses every day that is so far. Implementation of this intervention can not be done at all times, because the spinal pain that is felt emergence could at any time. So the respondents were given the example first, then the next day is evaluation. This intervention techniques make researchers work twice, so prolonging the process of intervention and data collection.

## CONCLUSION

Based on the results of research, analysis and discussion on "Effectiveness of warm compresses to decrease spinal pain in pregnant women in the second trimester at BPM Ny.LatifatusZahroin Betak Village,Kalidawir,Tulungagungsubdistric t" then the results obtained:

1. The decrease of scale of pain of pregnant woman in second before

and after warm compresses. From the most experienced moderate pain, after a warm compress into a mild pain and a few painless.

2. Giving a warm compress against the pregnant women in second trimester who experience spinal pain are effective.

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## EARLY BREASTFEEDING INITIATION AND POSTPARTUM BLUES

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### ABSTRACT

The act of separating mother from the newborn is considered inappropriate. The bonding between the mother and the newborn will induce the oxytocin hormone that will decrease bleeding on postpartum phase and trigger happiness on the mother. Early Initiation (EBI) is the process when the newborn starts breastfeeding from the mother on his/her own soon after the delivery process. Postpartum blues is a mild effect syndrome that often appears in the first week after delivery. Based on the research conducted using EPDS (Edinburgh Postnatal Depression Scale) instrument on 15 postpartum mothers in the maternity hospitals under the supervision of Kandangsapi Health Center, there were 67% who suffered from the Postpartum blues symptom. This study is aimed at revealing the correlation between EBI with the occurrences of postpartum blues. This study employed correlational analytic design with cohort study approach. The population was 78 respondents, the sampling was obtained by using purposive technique, there were 30 samples who met the inclusion criteria (10 respondents who did not have EBI history and 20 respondents with EBI). The instrument used in this study was EPDS questionnaire that was analyzed using Exact Fisher test which showed that  $p$  value = 0,000 <  $\alpha$  = 0,05. Based on the findings, the conclusion resulted is that there is a correlation between EBI and the occurrences of postpartum blues. Considering that this research on EBI can contribute to the prevention of postpartum blues, it is expected that midwives as the delivery assistant can provide Counsel – Information – Education about EBI to be applied during delivery process by the pregnant women.

**Keywords:** early breastfeeding initiation, postpartum blues, early breastfeeding initiation, postpartum psychological changes

### INTRODUCTION

Postpartum blues or is also known as maternity blues or baby blues is a mild effect that usually shows in the first week postpartum and reaches its peak at its third to fifth days that spans for 14 days (Soffin, 2012). The symptoms are: depression / sadness/dysphoria reaction, crying, irritability, anxiety, being unstable, tend to blame herself, problems of sleeping and eating. These symptoms appear after delivery and usually will disappear in a matter of hours or days (Murtiningsih, 2012).

Postpartum blues has quite high percentage that is 26%-85% (Suparyanto, 2012). Some research disclose that 50% women suffer postpartum depression and almost 80% of new mothers suffer from sadness postpartum that is well known as postpartum blues (Kasdu, 2007). Pieter & Lubis in Kusumadewi, 2010, state that 50-70% of women will suffer from this syndrome postpartum. Based on Hidayat, the incidents occurring in Indonesia reaches 50-70%. Postpartum blues can lead to postpartum depression that reaches 5% to more than 25% (Bobak, 2008).

The preliminary study on 15 postpartum women in the maternity hospitals under the supervision of Kandangsapi health center conducted on January 11-13 using EPDS (Edinburgh Postnatal Depression Scale) show that 67% postpartum women suffer from postpartum blues on the day 5 day to 14<sup>th</sup> days. It shows that more than a half of postpartum women suffer from early symptom of postpartum mental disorder. People need to be aware of postpartum blues, even though the symptom is mild. It is due to the fact that this is one of early symptoms of mental disorder on new mothers.

Separating the mothers from the newborn is considered inappropriate because the bond between mothers and the newborns will trigger oxytocin hormone that can decrease bleeding risk on postpartum as well as induce the happiness on the mothers. Early Breastfeeding Initiation (EBI) is the process when the newborn breastfeeds from the mother on his/her own. (Roesli, 2008). This program focuses on promoting the skin to skin contact between mothers and the newborns. They can interact in the first few minutes after delivery process if the newborn baby is put on the mother's stomach-

chest to create skin-to-skin contact. So, human baby is similar to other mammals' babies in that the human baby has the ability to breastfeed directly from the mother if given chance to have skin-to-skin contact with the mothers at least for one hour after born.

The study conducted by Bergman in 2008 , in 2015 shows that the skin-to s-skin contact performed while the newborn is lying up-side down will create interaction among autonomous nerves, hormonal system and somatic system as the process of 'attachment at will' when the newborn is crawling and touching the mother's breast. Watkin, et.al. (2011) prove that mothers with experience of off-procedure EBI suffer from postpartum depression on the second moth after delivery. Borra, et.al., 2015 show in their study that pregnant woman who has plan to breastfeed her baby and does not have emotional disorder during pregnancy tend to be free from postpartum depression.

in general, theoretical analysis and scientific journals prove the benefits of EBI towards the physical changes of the mother. However, the analysis on the benefit of EBI on the mother's state of mental has only been published by few. Therefore, this study is aimed at revealing the correlation between EBI with postpartum blues occurences in the maternity hospitals under the supervision of Kandangsapi health center, Pasuruan city, East Java.

## RESEARCH METHOD

The design employed is analytical correlation using observational cohort approach. the samples were the entire postpartum mothers in maternity hospitals under the supervision of Kandangsapi heath center in Pasuruan city starting from May to June 2016. In total, there were 30 postpartum mothers used as the samples. Pusposive sampling were employed in this study.

The inclusive criteria for the sample of this research are the postpartum mothers with:

- a. Spontaneous delivery
- b. The newborn is normal
- c. Does not have history suffering from mental disorder
- d. Able to communicate orally and written well

The exclusive criteria of the samples are: mothers and or the newborn have problem after

delivery on the day 0 to 7. Considering the design of the research that is cohort, the researchers created the comparison of the samples as 1 : 2 (Supranto, 2013) so that at the end of the research there were 10 people who did not do EBI based on the procedure and 20 people who did the EBI based on the procedure.

The research was conducted in two Maternity Hospitals (MH) under the supervision of Kandangsapi health center in Pasuruan city. Those are Cemara MH and Mardi Waluyo MH. Both MHs have applied the procedure of EBI on every normal delivery.

The procedure of data collection are as follow:

- a. Approached the respondets to-be who meet the inclusive criteria and gave the explanations on the intention as well as the procedure of the research
- b. Once the consent was obtained, the researchers ensured the legality of the informed consent by signing the form
- c. The researchers attended the delivery process focused on the EBI process using SOP in order to ensure whether the EBI process was done on procedure or not. The subjects performing the EBI based on the procedure were included in the EBI group and those who did not were put in the non-EBI group.
- d. On the 7th day of postpartum, the researchers did house visit to analyze the psychological status of the mothers using Indonesian versin of EPDS instrument. The researcher explained how to fill in EPDS questionnaire and assisted the respondets during the process of filling in the questionnaires.
- e. Ensured that the EPDS questionnaires were fully completed and then noted down the result on the data collection sheet.
- f. Performed the data analysis using Fisher Exact Test on  $\alpha = 0,05$ .

## RESULT AND DISCUSSION

The table 1 shows that more than a half of the repondents (70%) were between 20-35 years old. Those are the save age for human reproduction. Meanwhile, some 13.30% respondents were less than 20 years old and 16.70% were more than 35 years old.

**Table 1 Respondets Ages**

Criteria	Frequency (f)	Presentage (%)
Less than 20 years old	4	13.30
20-35 years old	21	70.00
More than 35 years old	5	16.70
Total	30	100

**Table 2 Respondents Parity**

Criteria	Frequency (f)	Presentage (%)
Primipara	14	46.70%
Multipara	16	53.30%
Total	30	100

Table 2 shows that more than a half of the total respondents (53.30%) have experienced delivery more than once (2-3 times). Less than a half of the total respondents (46.75%) have just experienced their first delivery.

**Table 3: Respondents Educational Background**

Criteria	Frequency (f)	Presentage (%)
Elementary School	4	13.30
Junior High	10	33.30
Senior High	14	46.70
University	2	6.70
Total;	30	100

Table 3 describes that less than the total number of respondents (46.70%) and 33.30% went to senior high and junior high. Only 13.30% respondents who went to elementary school and 6.70 went to university.

**Table 4: Assistance during Delivery**

Criteria	Frequency (f)	Percentage (%)
Yes	23	76.70
No	7	23.30
Total	30	100

Table above shows that most of the total respondents (76.70%) received assistance from the surroundings. The assistance came in the form of help in doing the chores and help in taking care of the newborn. However as many as 23.30% respondents did not get the assistance from the surroundings.

**Table 5: Cross Table of Early Breastfeeding Initiation with Postpartum Blues Occurrence**

Criteria	POSTPARTUM BLUES							
	No Post Partum blues		Yes Post Partum blues		Positive Post Partum blues		Total	
	f	%	f	%	f	%	n	%
No EBI	1	10	8	80	1	10	1	10
EBI	1	95	1	5	0	0	2	10
TOTAL	2	10	9	10	1	10	3	10
L	0	0	0	0	0	0	0	0

Table 5 shows that on the 7th day of postpartum, most respondents (95%) committing the EBI based on the procedure did not suffer from the postpartum blues. Even none of the respondents with EBI who was diagnosed to have positive postpartum blues. The case was different with those who did not commit EBI based on the procedure. As many as 80% were at risk of suffering from postpartum blues. Even 1 respondent was diagnosed to be postpartum blues positive. Based on the Fisher Exact test  $\alpha$  (0,05) and the amount of samples = 30, the value obtained was  $p=0,000$  ( $p<\alpha$ ). As the result,  $H_0$  was rejected which means that there is a correlation between EBI with postpartum blues occurrences.

Herawati (1012) state that physiologically, the fatigue phase of the mother occurs in the 1-2 days post delivery. At that time, mothers will depend heavily on the surroundings. However, the respondents with no EBI still suffer from fatigue up to the 7th day post delivery. Mothers complain on staying up late as babies cry a lot during the nights. Mothers look pale and have dark circle below the eyes. They sometimes also feel the urge to smash their heads on the wall when the babies are cranky at nights.

The fatigue suffered by the mothers on postpartum is something normal considering that the delivery process require a lot of energy. Mothers tend to give more attention to themselves than to the babies on the first few days after delivery. However, this symptom is not supposed to last for long.

From the sociodemographic data, mothers who are postpartum blues positive graduated from Elementary School, have under-five-year old baby already, and do not have support from the families in doing the chores and taking care of



the babies because the husbands are working and they happen to live far from the other family members.

Respondents who have history with EBI seem fresher on the 7th day post delivery. They state that they feel happy for being able to breastfeed their newborns. The breast milk production is good and the babies tend to stay calm. Eventhough some of the respondents suffer from stiches on their intimate parts, they rarely complain of the pain.

Based on the confession from some of the respondents, EBI is a new leasing experience. They have never imagined before that the newborn will look for the mothers' nipples without any help. Respondents feel confident in raising the baby in the future.

Breasfeeding process involves a series of unique process of syntectic hormone. That complicated process can be simplified into two parts that are Prolactin Reflex dan Letdown Reflex. Prolactine reflex is the process of hormone that produces breast milk in the breast milk gland. Letdown reflex is the process where the hormone process the breastfeed milk to come out. The most crucial hormone is oxytocn. Both reflexes work inseparably and continuously in the process of breastfeeding.

In the process of EBI, the sucking of the babies stimulates the backpart of hypofise gland to produce oxytocin hormon that in turn will affect the performance of uterus smooth muscle. Oxytocn will improve the frequency and potential duration of uterus smooth muscle. So, oxytocin will induce the contraction of uterus muscles. Besides, the sucking of the baby will be selivered to hypothalamus by spinalis medula that will affect the myoeptel cels in the breast. Hamrani (2010) states that the level of oxytocin hormone increases 2 minutes during the preparation of nipple sucking and reaches the peak in ten minutes.

Another effect of oxytocin is that it causes the feeling of clam and comfortable on human. Usually, this hormone is closely related with the feeling of love. Yuswanto (2009) articulates that other than love, oxytocin hormone is capable of triggering the performance of other anti stress substance that is endorphine. Endorphine is produced by ptuitari gland and is a combination of endogenous and morphine. Endorphine induces happy feeling and comfort that cause peopple to have more energy. This hormone has

a receptor spreading in the whole body. Endorphine comes in some types and it is found that beta-endorphine is the strongest in inducing the feeling of happy (Haruyama, 2015). Beside helping to reduce depression and inducing happiness, this substance is analgesis by nature that will decrease the after pain usually experienced by postpartum mothers.

Oxytocin and endorphine induce the feeling of happy that improves the positive image of the mothers. The confidence to take care of herself and the baby will make a mother adapt well with life. The challenges of becoming a mother will not be taken as a burden so that she will become more rilex in living her new role.

The process of 'skin-to-skin-contact' between mother and the newborn creates a bonding attachment. This bonding attachment is an early contact between newborn and the mother postpartum and induces continous love between the two. The love given to the baby by the mother will create a bonding between the two (Herawati, 2012).

The early bonding between mother and the newborn improves mother's confidence in taking care of the baby. In the first hour of the bonding process between the mother and the newborn will create a bond that can only be felt by them alone. The hormonal change initiated by EBI will decrease the panic, anxiety and worriness usually experienced by mothers in their postpartum phase. Kasdu (2007) explains that as many as 50% of postpartum mothers suffer from depression after delivery and almost 80% of new mothers feel the sad after delivery.

The effect of oxytocin and endorphine that creates the feeling of happy boosts the self image of them ather. The confidence of taking care of herself and the baby can help mother to adapt well. Challenges ahead are will no longer become a burden. Mother will become more rilex in acting her new role.

Letting go phase in psychological adaptation after delivery is signaled with her readiness to accept her new role and it takes place quickly on mothers who with EBI. Based on Pieter &Lubis (2010), the letting go phase will begin 10 days postpartum with EBI on procedure. Therefore, this phase will not occur to those mothers who do not commit EBI on procedure. It is proven that on the 7th day postpartum, they are ready to accept their new role of becoming mothers and live it happily.

Scientific analysis confirms that EBI provides a great deal of advantages for both the mother and the newborn. Many research findings show that psychological disorder experienced after delivery is closely related with the failure of breastfeeding. Other researchers reveal that the breastfeeding process, especially the exclusive one, can last for six months to those who commit EBI during the delivery. It is obvious that there is a positive correlation between EBI, exclusive breastmilk, and the postpartum psychological condition of mothers. Early breastfeeding can affect the hormonal performance, that is weakening the cortisol response when the mother is in stressed out. EBI also decreases the risk of postpartum depression, as postpartum blues complication, by managing the patterns of sleeping of the mother and newborn, closing the emotional bond between the mother and the newborn, decreasing the babies emotional urge so that they do not become cranky with the help of the oxytocin hormone performance that is also known as the love hormone.

The use of EPDS as the instrument to detect postpartum depression has been known for long. However it is rarely applied by the midwives in the postpartum handling. Castle, J (2008) says that EPDS has been proven to have sensitivity and specificity in detecting postpartum depression occurrences, easily understood by mothers, easily evaluated and concluded, and does not require longer time to complete.

## CONCLUSION

Since there is correlation between EBI and the postpartum blues occurrence proven by this research, it is then suggested that midwives provide CIE on EBI since antenatal phase, implementing EBI during intranatal phase, and performing early detection on postpartum blues on postnatal phase.

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## RELATION ABOUT VIOLENCE IN HOUSEHOLD WITH ANXIETY TO WOMAN IN UPT INTERGRATED SERVICE CENTER EMPOWERWOMEN A /PUSAT PELAYANAN TERPADU PEMBERDAYAAN PEREMPUAN (P2TP2 A) IN BANDUNG CITY 2014

Rika Nurhasanah, Mery Janiasti Pratiwi, Dewi Puspasari

### ABSTRACT

The incidence of violence of household problem in Indonesia especially in Bandung City Namely is in P2TP2A in Bandung city is increasing from year to year with women as victims. P2TP2A is that specialized agencies to overcome the violence in house hold to women. They let women have serious effect from the violence event in house hold that happened between healthy problem especially mental anxiety. The purpose of the research is looking for the relation about violence in household with woman's anxiety level. The samples was taken by accidental sampling methods. The research showed that half of respondes experiencing KDRT (50% samples). The anxiety's level related significantly with violence incidence (P value 0,001)

**Keywords: Domestic Violence, Anxiety, Forms of Domestic Violence.**

### INTRODUCTION

Violence against women is like an iceberg because that is surfaced only a small fraction, whereas a large part still submerged or unknown. This condition is influenced by a perception in society that violence against women is only an internal matter and should not be disseminated. Some communities is still covering this condition due to maintaining social status for their family, therefore, the violence occurring in the family environment is considered a disgrace that must be covered (Moerti, 2010). According Noorkasiani et al, (2009) anxiety or fear is a dominant feeling towards the victims of violence in household. This fear can control all their behaviors; disturb sleep patterns, causing insomnia, and nightmares. Sleep disorders can cause a dependency on sleep medication and tranquilizers. The couples may threaten each other, even threatened their life if one of them tried to leave their partner.

Anxiety is the early symptoms that appear in someone who experienced in family violation, and if it is untreated it will lead to chronic anxiety as well as cause other effects such as depression until the intention to suicide. According to Un Women Organization in 2013, there were 35% of women worldwide have experienced violence by their spouse either physically, sexually or non-sexually. Some studies show that violence towards their couple reached up to 70% in women experiencing physical and sexual abuse. In Australia, Canada, Israel, South Africa and the United States, violence against couples accounted for between 40 to 70%. In the United States, 83% of girls

aged 12 to 16 have experienced sexual harassment in public schools (Roman, 2013).

According to the complaining data of Indonesian national commission of women which written by Fathiyah from 2011 to June 2013 showed that 60% of victims of violence in household experienced criminalization, 10% of them being criminalized by the Law on the Elimination of Domestic Violence (UU PKDRT). During 2012 recorded around 8,315 cases of violence against wives or around 66% of cases handled. Almost a half or about 46% of these cases are psychological violence, 28% physical violence, 17% sexual violence, and 8% economic violence (Fathiyah, 2013).

Meanwhile, According to the result of the data from the technical operational units of integrated service center of women empowerment in Bandung city, the number of violence in household in 2011 (12%), 2012 (11%), and 2013 (34%). Based on the data, it is showed an increase of violence in the household from year to year. There are as many as 73 cases to the women, 22 cases to the children and as many as 38 cases to the man in 2013. Based on region, the incidence is mostly occurred in *Cibeunying Kidul* as many as 22%, *Batu Nunggal* as many as 18.36%, and *Sukajadi* as many as 8%. And then, the violence suffered by victims in UPT P2TP2 A in 2013 trafficking as much as 3%, physiological as many as 56%, physic as many as 13.5%, sexual as many as 3% and economic as many as 24%.

The Efforts of services at UPT P2TP2 A include counseling, psychological treatment, spiritual handlers, efforts to increase women's empowerment and child. Women are the most

casualties from the complaint of UPT P2TP2 A Bandung compared with children or men. The period of P2TP2 A case in UPT is not limited depending on the type of cases faced by clients and these clients will be handled by the counselor of psychologists, legal and social experts and institutions UPT P2TP2A cooperate with the police if there are severe cases.

Based on the description above, researchers are encouraged to investigate the relationship between household violence with anxiety towards women at UPT P2TP2 A in Bandung City.

## RESEARCH METHODS

This research uses Descriptive Correlational with Cross Sectional approach method. The populations in this research were women who experience domestic violence in Bandung City at UPT P2TP2 A as many as 30 respondents. Those samples are the minimal sample in Correlational descriptive study.

Sampling was done by accidental sampling method. The process of data collection is assisted by some counselors who directly interact with the respondent. To expedite the retrieval of data, researchers have had discussions with a counselor about the types of questions that are unclear or not understood yet.

The instrument used in this research is a questionnaire Zung self-rating anxiety scale to measure anxiety levels, while domestic violence using a questionnaire by selecting sub-question of the form of domestic violence. If there are results of more than one form of domestic violence, it will be selected based on the incidence of domestic violence which is the most dominant and most often occur. If there are 2 or more results, it will be determined by a percentage.

Univariate analysis which used in this study is using percentage and frequency distribution for the characteristics, forms of domestic violence and anxiety. To determine the relationship between domestic violence with towards women used statistical test Chi Square which is one of the simple correlation coefficient statistical tests.

## RESULTS AND DISCUSSION

**Table 1: Characteristics of Women in UPT P2TP2 A Bandung 2014 (n = 30)**

Respondents characteristics	Category	Total
Age	≥20-35	12
	>35	18
Education	Elementary	15
	Middle	10
	High	5
Work	Employee	20
	Un employee	10
Length of violence	≤5 th	18
	>5 th	12

Based on table 4.1 above, it shows that most respondents aged over 35 years as many as 18 peoples, half of the respondents have primary education as many as 15 peoples, the majority of respondents worked as many as 20 peoples, the majority of respondents experienced domestic violence as many as 18 peoples during five years.

**Table 2: Frequency Distribution of the relationship between Domestic Violence with Anxiety level towards Women at UPT P2TP2 A**

Kind of violence	ANXIETY						P Value	
	Light		Middle		Severe			Total
	F	%	F	%	F	N	%	
Physical	0	0	8	53,3	7	46,7	15	
Sexual	0	0	3	100	0	0	3	0,001
Physiology	6	54,5	5	46,5	0	0	11	
Economy	0	100	0	0	0	0	1	

According to the table above, it shows the results of chi-square which relation between domestic violence with anxiety on women in UPT P2TP2 A. The results of P value 0.001 <0.05 then received which means that there is a relationship between Domestic Violence with Anxiety on women in UPT P2TP2 A.

The results of this research, majority half of respondents experienced physical domestic

violence as many as 15 respondents or 50%. Research obtained on sub variable of domestic violence that is in physical form with slapping as many as 11 frequencies, sexual coercion and sexual prosecution as many as 3 frequencies, psychological humiliation as many as 11 frequencies, and no giving feed and prohibit wife for works as many as 1 frequency.

By viewing the results, a half of the respondents experienced violence physical as many as 15 peoples or (50%) in because of misunderstanding between husband and wife, a lot of problems triggering domestic violence in UPT P2TP2 in Bandung City causes by economy, the powerlessness of the victim because of their fear against their husband, in addition, the problem of infidelity up to beating and also demeaning his wife although the husband role is able to protect, to lead his family safely and comfortably, provide a decent living.

The results showed that the majority of age > 35 years experienced domestic violence as many as 18 respondents. People in this age have had a higher stability and peaceful in acting and addressing domestic violence. The results of the research showed that as many as 15 respondents have primary education that are elementary and junior high school. Education is very influential on domestic violence because of low education was also lower against domestic violence. This is in line with Notoatmodjo (2007), generally someone who has higher education will have wide knowledge compared to someone who is low levels of education.

The result showed that there are 20 employees' respondents; the women who work are prone to get domestic violence because they are more preoccupied with the work rather than taking care her husband and can cause or lead angry or even act rude. This is in accordance with Astuti (2008), working women who has workload to be doubled because in addition to their work should also be responsible for the overall housework, including taking care of her husband. The results of the length of domestic violence are more less ≤ 5 as many as 18 respondents. At the age 1 and 2 years of marriage are vulnerable to get problems because at this time the husband and wife are at the stage of adjustment and understanding each other.

### **Anxiety**

The results obtained from this research that half of the respondents had anxiety as many as 15

peoples or (50%) of respondents. Thus, the results of this research in general regarding anxiety levels on women at UPT P2TP2 A of Bandung city is experiencing in moderate levels of anxiety.

Women assume that domestic violence is a natural act performed by the husband because husband is the head of the family and can set or regulate everything, so it is hard to oppose the victims so that they appear moderate anxiety. Based on the length of the characteristics of domestic violence that less than 5 years of the incident there were 18 respondents indicate the incidence of domestic violence effect on anxiety, especially anxiety was due to the first year of marriage. According to Hurlock in 1980, during the first and second years of marriage couples usually have to do a major adjustment each other, to their respective families, while they're making adjustments haunting emotional that can lead stress.

Based on the results, the age under 35 years old or about 7 respondents experiencing moderate to severe anxiety showed at a young age than the old age because of the old age has mental and experience, so it can effect to the mechanism. The result showed that the women did not work as many as 8 respondents who experienced moderate anxiety. According to Hussain, et al., (2004), having a job is a cultural norm of high value and will benefit socially, psychologically as well as financially to someone, do not have a job can make someone more prone to stress due to loss of social status. In primary education, it obtained as many as 9 respondents experiencing moderate to severe anxiety. It is shows that primary education (SD, SMP) can affect the anxiety.

### **The Relationship Between Domestic Violence And Anxiety**

The results of chi-square indicate that the relationship between domestic violence with anxiety on women in UPT P2TP2 A of Bandung City with the results of P value 0.001 < 0.05 then, Ha accepted which means there is a relationship between domestic violence with anxiety towards the women.

Based on the results of this study, the relationship between domestic violence with anxiety on women in UPT P2TP2 A of Bandung City. This research was supported by the theory of Noorkasiani (2009) that is domestic violence have an impact on anxiety towards women.



According Noorkasiani (2009), anxiety or fear is a dominant feeling on the victims of domestic violence. Their fear can control the behavior that influences all the action, disturbing sleep patterns, cause insomnia, and nightmares. Sleep disorders can lead to a dependency on sleep medication and tranquilizers. Couples may threaten themselves; it can threaten their life if their tried to leave one of the partner. Anxiety is the initial symptom appears in people who experience domestic violence, and if untreated it will cause chronic anxiety as well as another cause such as depression until the victim has intention suicide.

## CONCLUSION

A Half of domestic violence towards the women in UPT P2TP2 A of Bandung City in 2014 is experiencing physical violence. Half of the level of anxiety towards the women in UPT P2TP2 A of Bandung City in 2014 was experiencing moderate anxiety. There is a relationship between domestic violence with anxiety towards women in UPT P2TP2 A of Bandung City in 2014 with p-value of 0.001.

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## BARRIERS AND IMPLEMENTATION OF EARLY BREASTFEEDING INITIATION IN MIDWIFE'S PRACTICE, BULELENG REGENCY BALI

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### ABSTRACT

Indonesian has still the Infant Mortality Rate (IMR) high and not reach from achieving the global targets. Efoort could made to decrease IMR wa give exclusive breast feeding and early berast feeding initiation (EBI) within hours after birth. The purpose of this study was to determine was to determine the barrier and implementation of EBI in Midwife's practice in Buleleng Regency Bali.

In this study showed that as many as 7.9% of the midwives do EBI appropriately. Most clinical procedure are not implementation of EBI such as not applied baby hats and blankets (46%) and the time to do skin to skin on the mother's chest is less than 1 hour (46%). The barriers of EBI were reported by midwives in the implementation of the EBI are suspected HIV colostrom (100%) and delivery rooms were busy (36.5%). Conclusion only a few of midwives implementation EBI with appropriate clinical measures, other than the most barrier reported by midwives was suspected colostrom HIV.

**Key words: Early Breast feeding Initiation, Midwife Practice, Implementation, Barrier**

### INTRODUCTION

Indonesia have still the problem low degree of serious health, there are still high infant mortality rate (IMR) and far from achieving the global targets. Indonesia has decreased from 34 per 1,000 live births in 2007 to 32 per 1,000 live births in 2012, but still far from the targets agreed by the Millennium Development Goals (MDG's) at 23 per 1,000 live births in 2015 (Board & National Population planning, 2013). One of the efforts undertaken to accelerate the decline of IMR is breastfeeding. Breastfeeding also improves quality of human and food source for infants up to the first 6 months of life. Factors affecting success in exclusive breastfeeding is by doing eraly breastfeeding initiation (EBI) which is a strong enabling factor to the success of exclusive breastfeeding (Fikawati et al., 2010). The results showed that infants who were given the opportunity to suckle within the first hour with the baby skin contact is left to the mother's skin, then 22% of the lives of infants aged less than 28 days might be saved (Sejatiningsih & Raksanagara, 2007).

The Indonesian government was generally very supportive policies of the World Health Organisation (WHO) recommends EBI as a lifesaving measure. This is realized by the Government Regulation No. 33 of 2012 article 9 paragraph (1), which requires all health professionals and providers of health care facilities to perform EBI to newborns minimum during the first hour after birth (Health minister's

decision, 2012). Although the EBI shall be done by midwives as birth attendants, but not all midwives perform well.

Breastfeeding early have a positive impact for both mother and baby. Skin contact between mother and baby will stimulate the hormone prolactin in the blood of the mother to produce milk. Breastfeeding has an important role that is fundamental to the survival of the baby, because the milk contains colostrum, which is rich in antibodies, good growth, health, and infant nutrition. EBI also plays an important role for the mother to stimulate uterine contractions that can parse postpartum hemorrhage and can improve the inner relationship between mother and baby (MOH, 2010).

Data in Indonesia there are more than 95% of mothers who never breastfed her baby, but breastfeeding within the first hour after birth only 43% of mothers who give birth. Prevalence of EBI in other countries such as India (51.7%) and Nepal (42.2%) (Khanal, Scott, Lee, Karkee, & Binns, 2015; Neelima, 2016). Data EBI according Riskesdas year 2013 shows the coverage process starts to suckle <1 hour (EBI) after the baby is born by 34.5% of mothers who gave birth, this percentage has increased from the previous year of 29.3% of mothers who gave birth at in 2010. Although the target EBI coverage are increasing but still far short of the 50% when the EBI is key to the success of early breastfeeding. Province of Bali get ranked fifth, namely 42.2% of mothers who gave birth in the

category of early feeding process <1 hour (EBI) (MoH RI, 2013). The condition of the data in absolute figures show that overall, especially Bali have EBI performance is still below 50% compared to exclusive breastfeeding although there is an increasing trend.

Childbirth mother in the last five years shows that 55.4% are done at health facilities (public and private hospitals, maternity hospitals, health centers, pustu, home office and practice nurses), 43.2% at home and 1.4% in polindes or Poskesdes. Based on the criteria that physician-assisted birth attendants as much as 2.1%, 51.9% midwives, paramedics another 1.4%, 40.2% shamans, as well as families 4.0% (Basic Health Research, 2010). This suggests that the more dominant mothers giving birth in a health facility compared to Polindes or Poskesdes, and birth attendants more assisted by a midwife. Midwives are health care workers who have emotional closeness with clients served in this are women. Women are much more open, trusting and cooperative when it gets the services of a midwife who incidentally are women.

EBI success or failure largely depends on health workers which midwives, because the midwives who help birth mothers do EBI (Sudemi, 2015). Research in India also mentions that this type of delivery, place of birth and advice given during the childbirth to determine the success EBI (Neelima, 2016). Post partum mothers who did not receive information about the EBI resulting mother is not able to explain about the EBI so no maternal motivation to do the EBI. Babies who do EBI at birth in 50 minutes was able to suckle better than those who do not do EBI. EBI is very beneficial for the sustainability of exclusive breastfeeding, where 50% of the infants who did the EBI will succeed in exclusive breastfeeding (Wulandari in Aryani, 2013). This condition indicates that the midwife is very important role in providing information and support regarding EBI. EBI affecting the mother sala post partum as a determining factor for the success of exclusive breastfeeding. The purpose of this study was to determine the barriers and the implementation of the EBI.

## RESEARCH METHOD

Research conducted at the Independent Midwife Practice (BPM) Buleleng regency in 2016. This research is a descriptive cross sectional approach. The population is all BPM as many as 171 BPM to 63 BPM number of samples taken

by random sampling (random). The data collection was obtained through interviews using a structured questionnaire and observation. Univariate data analysis using the software.

## RESULTS AND DISCUSSION

Buleleng regency is divided into 9 districts which is the largest district in Bali with 171 Provision for independent practice midwives (BPM), BPM is divided by the working area health centers, health departments and hospitals in Buleleng.

**Table 1: Characteristics of Respondents**

Characteristics	f (%)
Age (Mean±SD)	45.62 (±4.271)
Long of Time Midwife's Practice (years)	11,22 (±5,23)
Number of Assistants	1.16 (±0,37)
Number of Childbirth Average Education	5.65 (±2,30)
D-III	52 (82.5)
D-IV/ S1	11 (17.5)
Place of Work	
Public Health center	57 (90.5)
Hospital or Ministry of Health	6 (9.5)
Join in birth Training	
No	5 (7.9)
Yes	58 (92.1)

Table 1 shows that the average age of the respondents is 45.62 years with a standard deviation of 4,271. The average length of respondents are open 11:22 BPM year. The number of assistants who owned that one person. Total deliveries an average of 6 people in one month. Last midwife education still largely diploma III (82.5), most midwives also work in community health centers (90.5%). A total of 92.1% of midwives never participated birth Training to improve skills in assisting with delivery and implementation of the EBI.

**Table 1: Frequency Distribution and Implementation Barriers EBI in Midwife's Practice Buleleng**

Variable	f (%)
<b>Barriers</b>	
Baby hipotermi	5 (7.9)
Mothers feel tired	19 (30.1)
Lack of assisten	3 (47)
Birth room was busy	23(36.5)
Mothers should be sewn	0 (0)

Injecting Vit K and eye ointment	0(0)
Babies must be cleaned, measured and weighed	2(3.2)
baby was sleep	0(0)
Colostrum not out	7 (11.1)
Colostrum suspected in HIV	63 (100)
<b>Implementation of EBI</b>	
Done right	5(7.9)
Do not correct	58(92.1)

Table 2 shows that the implementation of the EBI only by 7.9% and the BPM of the most commonly caused by kolostrum suspected in HIV (100) and delivery rooms were occupied (36.5%). Measurement of the implementation of the EBI in this research is to perform observations with clinical measures EBI is supposed to do. Based on the results that the implementation of the EBI mostly in BPM is done incorrectly, it is because of several reasons including not paired hat when doing EBI and EBI time to less than one hour. Judging from the study and implementation of the policy of exclusive breastfeeding seems to have done in the presence of the Minister's decision, but the policy for the implementation of the EBI soon after birth has not entered explicitly in the policy (Fikawati & Syafiq, 2010). Similar results regarding the implementation of the EBI is also demonstrated by the research Semarang that the implementation of the EBI by midwives do with not optimal because it is not implemented correctly on every delivery assistance (Rahayu, 2012). Other clinical measures is often not done by midwives when aid delivery was the installation of hats and blankets during the implementation of the EBI, but the implementation of this clinic is very important to prevent hypothermia in newborns when brought near to the mother's chest (MOH, 2008).

The accuracy measures do EBI is key to successful implementation of the EBI. EBI's success is strongly supported by the role of a birth attendant or health workers because the mother can not do without the help and facilitation EBI from birth attendant (Fikawati et al., 2010). Study says that more skilled birth attendants, the higher the success rate of EBI, including the help of information from birth attendant can increase the confidence of mothers do EBI (Brooke Swails, 2016; Khanal et al., 2015). The highest qualification of birth attendants in Indonesia is the midwife reached 68.6% of deliveries (MoH RI, 2013). That is why

the midwife's role in facilitating the mother did EBI become a critical success.

Judging from the barriers did not commit EBI one of which is the delivery room busy. It is like the number of patients served by the maternity midwife so the midwife did not have time to do the intensive care of the EBI. These results also demonstrated similar results of research in Makassar, that the opportunity to do EBI takes a long time approximately 1-2 hours. Conditions busy delivery room will be very difficult to direct the mother to do EBI (Yuntas Dachlan and Sukmawati, 2013). Some studies say the barriers to such EBI colostrum is not out, the lack of access and information of health personnel related EBI, false perception of colostrum, and supports from the formula (Fikawati et al., 2010; Sharma & Byrne, 2016). The study also showed that barriers to not doing EBI is colostrum suspected HIV / AIDS. Colostrum is of paramount importance given by the mother at the beginning of the birth, but there is one problem that is not allowed to feed the views from the mother's condition is suspected of mothers who have hepatitis or HIV / AIDS. So it is very essential to not give milk to baby (Soetjningsih, 1997).

Limitations of this study can only describe as descriptive of the barriers and the implementation of the EBI did not analyze the relationship on several variables. It is expected to further research looking for the relationship between several variables to the implementation of EBI.

## CONCLUSION

Barriers dominant mentioned by midwives in the implementation of the ebi is colostrum suspected HIV and delivery rooms were occupied. Judging from the implementation of the EBI, that most midwives do ebi inappropriately.

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# THE EFFECTIVENESS OF IMPLEMENTATION IMD (EARLY INITIATION OF BREASTFEEDING) THROUGH THE IMPROVEMENT OF SUCKLE SKILLS IN NEWBORN AND PRIMIPAROUS BREASTFEEDING SUCCESS AT MUHAMMADIYAH SURABAYA HOSPITAL

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## ABSTRACT

The Infant mortality was still high in Indonesia, one contribute factor was the support of health workers towards the implementation of the IMD (Early Initiation of Breastfeeding) was still low. IMD has not been implemented to the fullest to date, resulting in newborns who would otherwise be doing early stimulation of the breast reaches its peak in the first hour to be delayed forty hours later, but it also resulted in a delay in ability primiparous to start breastfeeding her baby. The study aims to determine the effectiveness of the application of IMD to increased the ability to suckle the newborn and the mother primiparous breastfeeding success. The study design is a pre-experimental type of Static-Group Comparison. It was the collected data on October 6 to 5 November 2013. The study population was women gave birth in the hospital. Muhammadiyah Surabaya with a total sample of 28 consecutive sampling technique. Collection techniques by observation used the observation formats IMD, the ability of infant feeding and breastfeeding success. Effectiveness data analysis capabilities at IMD suckling babies with Fisher's Exact test showed statistically significant results with p value is  $0.021 < \alpha 0.05$ . The results of the data analysis of the effectiveness of the primiparous mothers breastfeeding success at IMD also showed a significant result p value is  $0.007 < \alpha 0.05$ . So the effective application of IMD to improve the ability to suckle the newborn and breastfeeding success primiparous mothers in Surabaya Muhammadiyah hospital.

**Keywords:** Early Initiation of Breastfeeding, Breastfeeding Ability, Breastfeeding

## INTRODUCTION

The rate of newborn mortality in Indonesia was very high. Results of IDHS (Indonesian Demographic and Health Survey) in 2012 showed that the infant mortality rate in Indonesia is 32 per 1,000 live births, as many as 19 per 1,000 occurred in the neonatal period from birth to the age of 28 days. Whereas in 2015 the target figure should drop to 23 per 1,000 live births. (Department of Health., 2012). Based on the source of data in BPS showed that in province of East Java, the number of infant mortality rate (IMR) in East Java in 2012 amounted to 28.31 per 1,000 live births, while the number of AKB Surabaya at 23:18 per 1,000 live births (East Java Health Office, 2012).

One of the efforts that have encouraged the government to reduce the mortality rate of newborns was to implement the IMD (Early Initiation of Breastfeeding), but to date of application of the IMD in Indonesia was still did not up to as much as 65%, in accordance with Government Regulation No. 33 of 2012 on

Exclusive breastfeeding in article 9 stated that the Workers Health and Health Care facilities Operator is obligated to suckle Early initiation of the newborn to her mother for a minimum of one hour (Department of Health., 2012).

The results of Riskesdas data (2013) indicates that the amount of coverage of East Java IMD of 33.3% was still below the national IMD coverage in 2013 amounted to 34.5%. Babies who are given the opportunity to suckle within the first hour after birth to allowed skin contact the baby to the mother's skin showed 22% of the life of an infant under 28 days can be saved, while infants who were given the opportunity to suckle early, the result is 8 times more successful in the implementation of successful breastfeeding exclusive (Fika & Syariq, 2003; Roesli, 2008; Ministry of Department of Health., 2013).

Based on the preliminary study on 70 normal birth mothers in Muhammadiyah Surabaya Hospital on October 5 until November 30, 2012 showed that only 26 mothers (37.1%) were

successfully performed IMD, while 44 mothers (62.9%) did not succeed IMD.

The results of interviews with six health workers who worked in hospitals. Muhammadiyah was connected with the IMD is not successful; 1) the mother was unwilling / refusing done IMD especially at mothers primiparous 2) the number of patients much so that health workers should promptly clean up the mother, 3) maternity first child (Primigravida) having the time of delivery longer than multigravida, this resulted in the mother often fatigue and refused IMD.

There was still a lack of application of IMD right now cause most newborn delayed to do nipple stimulation at an early stage, so the ability reflex suckling infants should reach the peak in the first hour can be delayed forty hours later, other consequences was the lack of trust self mothers who do not have the experience of breastfeeding, especially in primiparous mothers find it difficult to breastfeed, even prefer to give formula due to feel the baby does not want to suckle. Results of research from Righard & Margareta 1990 proved in the group of infants who are born normal, but separated from their mothers showed that 50% can not breastfeed their own babies. Risk of infant death increased with the postponement of the IMD. Babies who are born do so IMD at 50 minutes better able to suckle, while babies who do not do IMD at the same age of 50% could not feeding well. At the age of six months and one year, babies are given the opportunity to suckle early, the results are 59% and 38% were still breastfed. While babies are not given the opportunity of early breastfeeding at the same age some 29% and 8% were still breastfed (Roesli, 2008).

Through efforts to achieve the successful implementation of the IMD requires special management of that; 1) personnel and health services, supportive, 2) it is recommended to provide an opportunity IMD mother gave birth to a caesarean section, 3) reducing the use of chemical drugs, 4) engage the support of family, 5) health education about the IMD, the advantages of breastfeeding and breastfeeding and feeding techniques which was at least two times during antenatal care, 5) infants in the IMD continued to do rooming (Roesli, 2008).

Baby care with the method of rooming in Muhammadiyah Surabaya Hospital has not been made in full, the baby is given to the mother at certain hours. Normal newborn care performed

in the neonatal started 2 hours after birth, this was done for reasons giving mothers a chance to rest. IMD is not only save the lives of babies, IMD followed by rooming also may achieve exclusive breastfeeding, IMD appropriately motivate mothers and babies for breastfeeding later (Queensland Maternity and Neonatal Clinical Guideline Program, 2010).

Based on the description indicates that, the application of IMD on Mother's maternity hospital. Muhammadiyah Surabaya was not maximized, resulting in delays in optimizing the ability to suckle which should reach its peak in the first hour after birth. Mother bore mainly primigravidae will lose the opportunity for a first contact with the baby, this resulted in the adaptation that is much longer in the process of breastfeeding and the mother felt that her baby is still adapting to breastfeeding reflexes are reflexes are looking for, but it is considered not stop breastfeeding.

This research aims to; 1) determine the effectiveness of the implementation of Early Initiation of Breastfeeding (IMD) to increase the ability of Breastfeeding Newborn, 2) determine the effectiveness of the implementation of Early Initiation of Breastfeeding (IMD) to successful breastfeeding in primipara.

## RESEARCH METHODS

The research was a Pre-Experiment. The type of design used Static-Group Comparison, which was to determine the effect of an action on the group. The sample in this study was a couple of maternal and newborn normal in the Muhammadiyah Hospital of Surabaya began on October 6 until 5 November 2013 were taken using Consecutive Sampling as many as 28 pairs of maternal and newborn normal, which consisted of 14 mother-infant pairs in doing IMD during delivery and 14 mother-infant pairs were not in IMD, the data were collected by interviews and observations using instruments of observation format. The study began after obtaining a permit retrieval of data from Muhammadiyah Hospital of Surabaya.

The first stage of primary data collection was initiated by the informed consent to the respondent in accordance with the inclusion criteria and then make observations on a group of couples mothers who do IMD and a group of mothers who are not at IMD in normal labor, after 2 hours post partum observation ability

suckling infant and primiparous mothers breastfeeding success.

The ability to suckle the baby was assessed using observation sheets with indicators, namely 1) the baby tried and succeeded to the nipple itself 2) The baby's mouth wide open, her chin resting on his chest 3) most of the prop breast into the baby's mouth 4) babies were sucking strong cadence slowly 5) looks swallowing along with the rhythm of sucking 6) the mother's nipple is not sore. While the success rate for breastfeeding observations using the observation sheet indicators, namely 1) the general state of the mother and baby during breastfeeding 2) Breast Condition 3) the attachment of the baby while feeding. Data analysis using Fisher's Exact.

## RESULTS AND DISCUSSION

The results of the research at the hospital. Surabaya Muhammadiyah can be seen in Table 1 and Table 2 as follows:

**Table 1. Implementation Effectiveness Early Initiation of Breastfeeding (IMD) Toward Newborn Feeding Ability at Muhammadiyah Surabaya Hospital**

Implementation of IMD	Ability of suckle		p-value
	Good	Less	
Implement of IMD	11 (78,6%)	3 (21,4%)	0,021
Not doing IMD	4 (28,6%)	10 (71,4%)	
Total	15 (53,6%)	13 (46,4%)	28 (100,0%)

Sources : Primary data

The results of the analysis of Fisher's Exact test showed the value of  $p = 0.021 < \alpha = 0.05$ , then the IMD affect the ability to suckle the newborn. Based on Table 1, show that of the 14 respondents in the IMD, the most of the ability to suckle the newborn well as 11 infants (78.6%). Meanwhile, from 14 respondents who are not at IMD, the majority of infants less good ability to suckle as much as 10 infants (71.4%).

The results showed number of infants in the IMD as many as 14 babies, most showed the ability to suckle good that 11 infants (78.6%). Every newborn is not completely powerless, because

the baby has several reflexes. Reflex is a reaction to stimuli, reflexes regulate the baby's movements automatically and are beyond its control. Reflex allows the baby to respond adaptively to the environment before it has a chance to learn more. Reflexes are looking for (rooting reflex) and sucking reflex is one of the important (Santrock, 2012).

Based on the results of research, looking at baby's reflexes when IMD occurred in the 30th minute to 40. Babies successful breast sucking on average 45 minutes to get to 57. The pattern of sucking baby in doing IMD deeper and more regular, followed by flow ASI expenditures. Reflex seeking occurs when cheeks swabbed/ stroked or touched the edge of the mouth, as a response to the baby will turn his head towards objects that touch it to find something that can be inhaled. While sucking reflex occurs when the baby is automatically sucked object placed in her mouth. Sucking reflex will peak in 20 to 30 minutes after the baby is born, if the baby is not breastfed immediately then sucking reflex will decline rapidly and will increase again in 40 hours later (Arun Gupta, 2007).

This is evident in the results showed the ability of infants not breastfed at IMD mostly less good, that 10 infants (71,4%). Through IMD babies have an immediate stimulus to reach the top of sucking reflex, this condition allows the baby will respond adaptively to suckle on the first day, especially a few hours of birth (Moore ER, Anderson GC., Bergman, 2007).

In addition to sucking reflex, according Rovee-Colier (2004) in Richard (2012) that the baby responds orientation, which includes the movement of the baby's head in the direction of sight or sound, newborns are still developing nerve, muscle and eye lens. Newborns estimated to be worth 20/240 vision, meaning that newborns are able to see objects at a distance of 20 feet and an adult at a distance of 240 feet.

Babies have spent more time looking at his mother's face compared to other people's faces. The results of the study at the time of the baby at IMD, the baby suffered a break-stage / motionless, his eyes wide open occasionally to see his mother. This special period of calm which is a transition adjustment of state in the womb to a state outside the womb. This phase lasts an average of 15 minutes to get to 30. In this phase is often considered that the baby did not reach the breast, so that the baby

immediately removed / brought to the breast or urgent action baby care.

At this stage of development of the sense of smell indicates that newborns are able to distinguish the shoulder, it can be seen from the results of studies that breast-fed babies will show a fondness for the smell of upholstery fabrics are exposed breast milk compared with a clean cloth (Santrock, 2011).

The results showed that infants do IMD, on 30-40 minutes to start making a sound, such as the mouth movements to drink, kiss and lick the hand. Babies smell and taste the amniotic fluid that was in his hand. This odor similar to the smell of the fluid emitted breast. The smell and taste will guide the baby to find the breast and the mother's nipple. The tasting babies have seen their sensitivity before birth, even infants aged 2 hours able to show different facial expressions when given a solution of sweet, sour and bitter. Various patterns of development and sensory perception in newborns shows that babies will be ready to receive stimuli to improve the ability to suckle efficiently.

The results of the study of 14 babies at IMD, there are 3 babies (21,4%) showed poor ability to suckle. According to the theory of visual perception by Rovee-Colier (2004) in Richard (2012) that the baby is able to distinguish between old and new stimulus stimulus. Newborns may experience habituation to the sight, sound, smell or touch repetitive. Habituation to sounds can be seen that the baby will change the frequency of absorb be slow because you want to hear the sound of the new rhythm. So that the baby in the next hour when he received stimulus suckling at 2 hours later, the baby showed less response to begin breastfeeding reflexes.

**Table 2. Implementation Effectiveness of Early Initiation of Breastfeeding (IMD) related to succesfull breast feeding**

Implementatio n of IMD	Succesfull breastfeeding		p-value
	Good	Less	
Implement of IMD	11 (78,6% )	3 (21,4% )	0,007
Not doing IMD	3 (21,4% )	11 (78,6% )	

Total	14 (50,0% )	14 (50,0% )	28 (100,0% )
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Sources : Primary Data

The results of the analysis of Fisher's Exact test showed the value of  $p = 0.007 < \alpha = 0.05$ , then the IMD affect the success of breastfeeding mothers primiparous. Based on table 2, shows that of the 14 respondents in the IMD, mostly primiparous lactating mothers breastfeed well as 11 infants (78.6%). Meanwhile, from 14 respondents who are not at IMD, most mothers breastfeed less well primipara were 11 infants (78.6%).

Healthy infants at term showed a series of behaviors after birth and peak in feeding at or around the end of the first hour of life, using the sense of touch, sight, and hearing, and reflexes kicked / crawling and rooting, newborns can find and touch their breasts without aid. The first hour of life is considered as a sensitive period for breastfeeding, maternal-infant contact optimal during this period led to better results breastfeeding (Nita, 2007). The results of this study showed that infants at IMD, most have the ability to suckle good, this will motivate the mother to revitalize previous experience with breastfeeding early at 2 hours after birth. It is evident from the 14 respondents who do most moms IMD 11 mothers (78.6%) successfully breastfeed well, while respondents who are not in IMD mostly primiparous lactating mothers deficient by 11 mothers (78.6%).

Based on the results of suckle mothers is not good for 3 people (21.4%) although do IMD. The results showed the mother during breastfeeding difficulties can be caused by the mother feels her milk did not come out and feel unable to breastfeed properly, because there was no previous experience. According Roesli (2008) A mother who gave birth for the first time (primiparous) often experience some problems breastfeeding, one of the difficulties in the process of early breastfeeding.

The success of the baby while feeding through the stage IMD forming a positive perception that the mother would be easy to start breastfeeding in the next hours. The bond between mother and baby can be formed at an early stage through IMD, through IMD mother can immediately respond and perform their babies from birth stimulus and creating a climate for increased interaction in the next phase. IMD properly will



motivate breastfeeding mothers in the next. In accordance with the results of Essa, RM. and Aziz Ismail, NIA (2015) obtained significant results ( $p < 0,01$ ) differences in the success of breastfeeding in the group that made skin contact between mother and baby immediately after birth than those babies who do routine maintenance directly after birth.

Although the implementation of the IMD had often disseminated through television, mass media and information campaigns, but at the time of the research results the majority of women (50%) refused to do IMD. Results of interviews with 14 respondents who are not at IMD, the mother complained of fatigue due to face a delivery. Another factor of the failure IMD HCWsimproper conduct IMD, after the baby is born, the baby is placed on the mother's abdomen and then taken and baby care activities. Dissemination activities on the implementation of the IMD in RS. Surabaya Muhammadiyah been done, but not maximum, is still limited at the time of antenatal care, yet continued to provide motivation when birth mothers. This is evident from the results of the study were mostly mothers get information about IMD antenatal care, but some still refuse to IMD at the time of entry in the delivery room. Poor breastfeeding technique mostly looked at the difficulties of holding the baby, position of the head and shoulder on the elbow crease, the baby's body not facing the mother, resulting in the baby's body was twisted out and attachment of feeding poorly.

## CONCLUSION

Based on the results of this study concluded that the IMD affect the ability of infant feeding ( $p = 0.021$ ). Babies more quickly adapt and do a good adhesion and strong suction during feeding in the first 2 hours, this is due to some stimulus reflex that occurs at the time of IMD the first hour after birth. IMD also affect the success of breastfeeding mothers primiparous ( $p = 0.007$ ).

IMD implementation is not yet fully done optimally, for it was recommended for health care workers are expected to further increase health education on the importance of IMD that begins when antenatal care is continued during intranatal care. Besides the importance of the policy of Muhammadiyah Hospital of Surabaya on the IMD proper implementation of health care workers who continued with infant care rooming.

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# THE INFLUENCE OF JIGSAW COOPERATIVE LEARNING METHODS TO THE LEARNING OUTCOMES OF LABOR AND DELIVERY CARE OF MIDWIFERY ACADEMY STUDENTS

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## ABSTRACT

The learning method is an important factor that has big influence onto successful learning. In a learning process, problem that often arises about the lack of activity and lack of understanding of the lesson by the students. Cooperative learning models is very important to support the interaction in the learning process. One of them is Jigsaw model. The objective of the research is to analyze the influence of jigsaw cooperative learning methods to the learning outcomes of labor and delivery care of midwifery academy students. The method used in this research was pre experiment with One group pretest-posttest design. This research was conducted in Sari Mulia Midwifery Academy Banjarmasin. The population in this study were 107 students with 16 students as the sample. The analysis results of Wilcoxon sign test showed p value = 0.00, which means jigsaw cooperative learning methods has influenced the learning outcomes of labor and delivery care of midwifery academy students. Jigsaw cooperative learning methods was able to be use as one of the additional learning method to improve learning outcomes of labor and delivery care of midwifery academy students

**Keyword : jigsaw cooperative learning methods, learning outcomes, labor and delivery**

## INTRODUCTION

The learning method is an important factor that has big influence onto successful learning. The role of educators is not only to convey information to students, but also to be a facilitator to charge of providing ease of learning for all students, so that they can learn in a pleasant atmosphere, excited, eager, not anxious, and dare to express opinions openly. In the process of learning in the higher education, lecturers should have a strategy to make students achieve the objectives learning effectively and efficiently. One of the factors that support in achieving the objective results is to use appropriate learning methods by lecturers. Lecturers should be able to develop a variety of teaching by apply the various of learning models (Mulyasa, 2009)

In a learning process, problem that often arises about the lack of activity and lack of understanding of the lesson by the students. In the higher education system, student is not as a receiver only, but also as the process of acquire. One of the end results are expected to be achieved from learning process in the college is an self directed learning student and not just rely on lecturers (Partadjaja and Made, 2007).

Cooperative learning model is very important to support the interaction in the learning process.

One of the cooperative learning model is Jigsaw learning model. That is students learn in small groups of 4-5 heterogene people, positive cooperation, and all of the member have to responsible to study the specific problems of the material provided and communicate the material to the other group members. The advantages of Jigsaw Cooperative Learning Methods is to increase the students responsibility of their own learning and the learning of others. Students not only learn the given material, but also must provide and teach the material to other members.

Based on observations in the classroom in general learning process in Midwifery Academy Sari Mulia Banjarmasin using model Student Center Learning (SCL) method Small Group Discussion, Role Play, Case Study, Discovery Learning, Collaborative Learning, Contextual Instructional, Project Based Learning, Problem Based Learning. Thus, the results of learning to achieve labor and delivery care is not comprehended well by the student. Based on the results of the score of theory and practice test 49,8% under the passing grade. This is due to the lack of their understanding of labor and delivery care and the learning process is carried out only in dominance for the active students. So the students who are less active will be less understand. The purpose of this study is to analyze the influence of jigsaw cooperative learning methods to the learning outcomes of

labor and delivery care of midwifery academy students.

## RESEARCH METHODS

This study use pre-experimental design methods with one group pretest-posttests. The population in this study were all students at the Midwifery Academy II Sari Mulia Banjarmasin as many as 107 the second year student. The research study use a simple pre experiment group with simple random sampling technique. The number of samples taken in the study was 16.

## RESULTS AND DISCUSSION

Based on the results of research conducted on 16 people obtained the following results.

**Tabel 1: The Analisis Pre Test and Post Test The Second Year Student**

Variable	<i>p</i>
Pre Test	
Minimum	36,67
Maximum	73
Mean	58,1
Median	60
Standar Deviation	1,33
Post Test	
Minimum	80
Maximum	90
Mean	85
Median	86
Standar Deviation	3,65

Based on Table 1 shows that the value of pre-test and post-test students totaled 16 people there is a difference value of Mean (average) before the intervention which obtained an average rating 58.1. Then after intervention by using cooperative Jigsaw (Post Test) of Labor and Delivery Care subject, then the value increased to 85 students.

Based on Table 1 it can be seen that there is the influence of Jigsaw Cooperative Learning Methods to the learning outcomes labor and delivery care midwifery academy students. Based on Wilcoxon sign test with a significance *p* value 0.00 which is showed that there is influence of Jigsaw Cooperative Learning Methods to the learning outcomes of labor and delivery care midwifery academy students.

This is also consistent with the results of a study which is done by Maslakhudin (2013) which states that Jigsaw is designed not only for the sense of responsibility independently, but are also required to interdependence in a positive way to the group of the member in the execution. The results of the study, a significant difference between the use of the achievements of the Jigsaw model geometry. Where the jigsaw method can improve the achievement of students.

This study found that the average student in the following study shows that the subject of labor and delivery care with Jigsaw Cooperative Method can involve the students more active in participating in learning than before. Active in learning, mental, emotional, and social, will make learning more effective and meaningful than learn passively receive information. By learning together through discussion and mutual sharing actively with members of the group, students can more quickly understand the material.

### Cognitive Learning Results Before and After Learning Jigsaw

The results showed that the activity of students in learning following the labor and delivery care use Jigsaw Cooperative Learning Method was found that out of 16 students, as many as 14 students (87.5%) categorized very active and 2 students (12.5%) categorized active.

This is also consistent with the results of research Maslahudin (2013) which states that Jigsaw is designed not only for the independent and responsibility, but also required to interdependence in a positive way to the group of the member in the execution. The results of the study, a significant difference between the use of the achievements of the Jigsaw model geometry of  $F = 13.911 > F \text{ table} = 3.84, P < 0.05$ . It showed Jigsaw can improve the achievement of students.

This study found that the student in the study shows that labor and delivery care with jigsaw cooperative learning method can involve the students more active in participating in learning than ever before.

### Influence of Jigsaw Cooperative Learning Methods to the learning outcomes of labor and delivery care

Based on the survey results revealed that there is influence of Jigsaw Cooperative Learning Methods to the labor and delivery care learning outcomes of midwifery academy students.

Wilcoxon sign test with a significance p value shows that there is influence of Jigsaw Cooperative Learning Methods to the learning outcomes of labor and delivery care midwifery college students.

The results of the research consistent with the theory Isjoni (2011) which states that in cooperative learning, the success of a business depends on the work of the members. Each group member must carry out his own responsibility, so the next task in the group can be carried and interaction among students will be more intensive. Intensive interaction between students can be assured communications running well. The ideas of some heads will be richer than the ideas of one's head. Through this jigsaw cooperative learning methods, students will better appreciate the difference, exploit the advantages and disadvantages of each member.

Learning outcomes are the abilities possessed by students after receiving their learning experience. Student results are essentially changes include the areas of cognitive, affective and psychomotor oriented learning process experienced by students (Sudjanaradja, 2008). According to Sharon (2009) states that a person's success or failure in learning caused by factors originating from within the individual and factors outside the individual. Learning methods, an important factor that is big influence on learning success, even critical to the success or failure of students in the learning process.

Cooperative learning is to learn consciously and systematically incorporate the interaction among students as an exercise to live in real communities. Jigsaw Cooperative Learning to teach the team to resolve the problem together, to help each other. Learning system in jigsaw learning to work in small groups numbering 4-6 people collaboratively so as to stimulate the students more enthusiastic in learning.

Jigsaw cooperative learning methods can be used as a teaching method and applied in Sari Mulia Midwifery Academy Banjarmasin to improve learning outcomes. This is because the first group of students who comprehend the subject then they explained to their colleagues. Then the comprehension of another student can be achieved in a shorter time. Then learning methods can train students to be more active in speech and giving opinion, and students who have not comprehend can be helped in solving problems, applying the guidance of peers, a sense of self-esteem of students and higher retention of material deeper, increasing the motivation to learn in the process of learning teach students in a positive interdependence, and

can provide the opportunity for students to work with other groups and each student complement each other

Jigsaw cooperative learning method can be used as a supplementary learning methods to improve learning outcomes of labor and delivery care subject.

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# DETERMINAN OF ELECTION BIRH ATTENDANT IN SERUYAN REGENCY, PROVINCE OF CENTRAL KALIMANTAN

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## ABSTRACT

In developing countries, most childbirt occurs at home and is not assisted by skilled attendants. This situation increases the risk of martality mother and child. Health profile of Central Kalimantan 2014 indicate that proportion of chilbirth assisted by non healt staff at District seruyan was still relatively high (27,1%).

The objective of this research is to Identify determining factors that most probably caused mothers giving birth assisted by non helath staff at District Seruyan.

The study was observational that used cross sectional design and quantitative approach. Sample were taken with consecutive sampling method. Subject of the study were 211 mother who gave birth from January to December 2014 at District Seruyan. Data analysis used chi square and logistic regression.

The reseult of bivariable analysis showed parity > 1 (RP=1,54 CI=1,29-1,85), poor knowledge of mothers (RP=3,20 CI=2,35-4,37), low economic status of mother (RP=2,26 CI=1,84-2,79), husband or family as major decision maker (RP=2,27 CI=1,82-2,83) and number of ANC visits <4 times ((RP=1,37 CI=1,14-1,64) tended to use non helath staff asisstants. The result of multivariable analysis showed that varables significantly associated with childbirth assistants were knowledge of mother (RP=2,64 CI=1,46-4,78), economic status of the family (RP=1,72 CI=1,15-2,58) and decision makers (RP=1,73 CI=1,14-2,65). Parity, knowledge, economic status of the family, decision maker, number of ANC visits were factors associated with home childbirth assistents.

**Keywords:** childbirth, childbirth assistants

## INTRODUCTION

Maternal and child health problems remains a health problem in Indonesia. The effort have been made to reduce the maternal mortality rate in Indonesia, among others improve antenatal care in all health care facilities with good qualities and reach all target groups, improving boost birth by aid professionals, increase the early detection of high risk pregnant women and implement a referral system and to improve neonatal services with good quality. The final goal of the MCH program to reduce maternal mortality and child (Ministry of Health, 2014).

The proportion of births assisted by medical personnel in Indonesia showed an increase, from 73% (seventy three percent) in the survey demographics of Health Indonesia 2007 to 83% (eighty-three percent) on Demographic Health Survey Indonesia in 2012. However shaman baby still plays an important role in the birth helper especially in the rural areas (20 percent), the mother who never school (34 percent), mothers with high birth order (30 percent), and the mother with the lowest wealth kuintil (32 percent) (SDKI, 2012)

Childbirth at home without the presence of health staff have adverse effects on infant and maternal health outcomes (Van Eijk *et al.*, 2006). Health and Demographic Survey from 40 countries that were collected between 1995 and

2003 have documented that more than 50% of newborn deaths occur after delivery at home without the presence of a birth attendant trained (Lawn *et al.*, 2005). That birth with untrained baby shaman can cause maternal mortality caused by bleeding, dystocia, sepsis, and eklamsia that are difficult to be controlled and saved. (Jokhio *et al.*, 2005).

Previous studies have shown that the predisposing variables-enabling-need in Andersen models of health service utilization significantly associated with birth attendants election, but the deciding factor varies birth attendant election at each study site. In Indonesia, research Thind and Banerjee (2004) showed that the factors significantly associated with the election of birth attendants at home is the mother's education, religion, asset quartile index and the number of ANC, while research Mrisho *et al.* (2007) in Tanzania showed that the autonomy of men as decision makers, poverty and maternal age are all factors that influence the occurrence of labor by non-health staff. Hatt *et al.* (2007) which shows that the socioeconomic status of the mother is a prime determinant of professionals in labor utilization, as much as 90% of women in the category of rich women utilize birth attendants professionals as compared with the group of poor women by 16%.

Maternal mortality in Central Kalimantan indicates an increase which was originally

numbered 73 maternal deaths by 2013 to 101 in 2014. The figure is the accumulation of Maternal mortality in several Regencies that are in the province of Central Kalimantan. Seruyan Regency is one of the districts with the lowest rates help close in 2014 72,9%, which means there's still a 27.1% childbirth rescued by non health staff. This figure is lower than the figures the achievements of health staff Central Kalimantan province is 86.36% and the national rate of 90%. This is in line with MMR were donated by the District Seruyan of 7.9% for MMR Central Kalimantan. (Health profile Central Kalimantan, 2015).

This study aims to know the determinant of election birth attendant in Kabupataen Seruyan . Specifically aims to determine the relationship of predisposing factors such as maternal age, parity, and knowledge of the danger signs of pregnancy, the factors enabling such economic status of the family, and the mileage to healthcare facilities, factors need as decision-makers in the family, a history of complications of pregnancy and childbirth, and the number of visits to the ANC with election birth attendants.

## RESEARCH METHODS

This type of research is research observational with cross sectional study through quantitative and qualitative approaches. The research of cross sectional design of epidemiological studies is the study of the relationship between variables (expose) and variable (effect) are observed simultaneously at a given period (Gordis, 2004). The goal of this approach is to know the determinants that influence the likelihood of birthing mothers in the Regency Seruyan attendants election in childbirth. Data capture against a free variable and a bound variable is collected at the same time.

The study was conducted in 6 Puskesmas Seruyan Regency, Central Kalimantan Province. This study population is all the mothers in the District Seruyan.

Sample quantitative research amounted to 211 people are all mothers who gave birth in the Regency Seruyan on from January until December 2014 with the inclusion criteria is a mother who is willing to be respondents and resides in the location of research. Inclusion criteria is the mother who gave birth to itself without the aid of a helper in childbirth and mothers who give birth with complications. The selection of the subject with a method consecutive sampling that is any subject of research that meets the criteria for inclusion in the research until a certain period of time so that the number of samples required are met. How

qualitative research on sampling with purposif method that is the subject of the selected research can provide sufficient information to answer the problem research (Sastroasmoro & Ismael, 2008).

The statistical examination used was chi-square test, because the variable examined was categorizational. The result was  $\chi^2$ , p value. Special for the correlation analysis of determinant variable between election of birth attendant variable, the value of Ratio Prevalence (RR) and Confidence Interval (CI) was 95%. The multivariation analysis was used to find out the influence of free variable towards binded variable by controlling other variables. The statistical examination used was multiple logistic regression analysis. In this examination, the value of Ratio Prevalence (RR) was determined as an approach to find out the risk scale.

## RESULTS AND DISCUSSION

**Table.1 analysis was meant to describe the characteristics of research subjects**

Variable	n	%
<b>Election of birth attendant</b>		
• Non health staff	146	69,2
• Health staff	65	30,8
<b>Predisposing factors</b>		
Maternal age		
• <20 & ≥35 year	61	28,9
• 20-34 year	150	71,1
Parity		
• >1	90	42,7
• ≤1	121	57,3
Knowledge		
• Poor	164	77,7
• High	47	22,3
<b>Enabling factors</b>		
Economic		
• Low	127	60,2
• High	84	39,8
Mileage to health facilities		
• >30 minutes	65	30,8
• ≤30 minutes	146	69,3
<b>Need factors</b>		
Decision makers		
• husband and family	135	63,9
• Mother	76	36,1
Number ANC		
• <4 x	102	48,3
• ≥4x	109	51,7

Most of the mothers (69,2%) gave birth to the rescued by non health workers. On predisposing variables indicate the majority of mothers are at a reproductive age healthy (71,1%), having children  $\leq 1$  (57,3%) and knowledgeable low (77,7%). Enabling variable shows most with less economy (60,2%) with the mileage to healthcare facilities  $\leq 30$  minutes (69,2%). Most decision makers is the husband and family (63,9%) and ANC visits while pregnant  $\geq 4$  x (51,7%).

**Table 2: The determinant election of birth attendant**

Variable	Elevation of birth attendant		p	R P	95% CI
	Non health staff	Health staff			
Maternal age	42	19			
• <20 & $\geq 35$ year	(68,8)	(31,2)	0,92	0,99	0,81-1,21
• 20-34 year	104	46			
	(69,3)	(30,7)			
Parity					
• >1	78	12			
	(86,7)	(13,3)			
• $\leq 1$	68	53	0,00	1,54	1,29-1,85
	(56,2)	(43,8)			
Knowledge					
• Poor	134	30	0,00	3,20	2,35-4,37
	(81,7)	(18,3)			
• High	12	35			
	(25,5)	(74,5)			
Economic					
• Low	113	14			
	(88,9)	(11,1)			
• High	33	51	0,00	2,26	1,84-2,79
	(39,3)	(60,7)			
Mileage to health facilities					
• >30 minute	49	16	0,26	1,13	0,94-1,38
	(75,4)	(24,6)			
• $\leq 30$ minute	97	49			
	(66,4)	(33,6)			
Decision maker					
• Husband & family	117	18	0,00	2,27	1,82-2,83
	(86,7)	(13,3)			
• Mother	29	47			
	(38,2)	(61,8)			
Number of ANC					
• <4 x	82	20	0,00	1,37	1,14-1,64
	(80,4)	(19,6)			
• $\geq 4x$	45				

	64	(41,3)
	(58,7)	
$\chi^2$	= chi-square	
p*	= p value <0,05 (signifikan)	
RP	= rasio prevalence	
95% CI	= 95% Confidence Interval	

Based on Table.2 Age of the mother does not have relations with the election of birth helper. Parity has a significant relationship with the selection of birth helper. Mother with parity > 1 have the possibility of 1.5 times larger bore by non health workers compared parity  $\leq 1$ . Knowledge of maternal distress signal about pregnancy and childbirth-related election helper in childbirth. Mothers with low knowledge 3.2 times more likely rescued by non health personnel than mothers knowledgeable high.

Mileage to health care facilities have no connection with the selection of the auxiliary labor, while economic problems, decision makers and the number of visits has meaningful relationship with ANC election helper in childbirth. Mother with family less economic and decision-making is a husband and the family has the possibility of 2.3 times choose childbirth helper non health workers than the mother with the family economy is capable of and the decision maker's own mother. Mother with the ANC has the possibility of 4 x < 1.4 times choose helper labor not health workers than the ANC visit  $\geq 4$  x.

**Table 3**  
Multivariable analysis

Variabel	Model 1	Model 2	Model 3
Parity	1,28 (0,92-		
• >1	1,78)		
• $\leq 1$	1		
	2,53 (1,39-	2,64	2,64
Knowledge	4,59)	(1,46-	(1,46-
• Poor		4,78)	4,78)
• High	1	1	1
Economic	1,71 (1,15-	1,70	1,72
• Low	2,57)	(1,13-	(1,15-
		2,55)	2,58)
• High	1	1	1
Decision maker	1,61 (1,05-	1,69	1,73
• Husband and family	2,48)	(1,11-	(1,14-
		2,59)	2,65)
• Mother	1	1	1
Number of ANC	1,20 (0,86-	1,19	

• <4 x	1,67)	(0,86-	
	1	1,66)	
• ≥4x			
R2 (%)	11,1	10,6	10,3
Deviance	355,0	357,1	358,2
N	211	211	211

In the table 3. Multivariable analysis was conducted to know the influence of each variable against meaningful election helper in childbirth. One of the three existing models selected model 3 as a model of effective and efficient in seeing a very variable influence on election birth helper election, this model is able to predict the occurrence of birth helper election by non health amounted to 10.3%, or it can be assumed that 10.3% birth helper election by non health workers is determined by variables of family economic status, knowledge and decision makers.

One of the main factors contributing to the high maternal mortality is the lack of adequate birth place. Efforts to reduce the risk of maternal and child health is very important with how to increase childbirth performed by professional health workforce (SDKI, 2012)

Andersen (1995) describe that behavior health services utilization by individuals, families and communities affected by the factors predisposing, enabling and need. Predisposing, among others, namely age, parity, and knowledge about health. Enabling, among other earnings, distance to health care facilities. Need among other things support the husband and family as well as the experience of visiting health care facilities.

The results of this research show that the age of the mother does not have a meaningful relationship with the selection of birth helper. This is similar to the research conducted by Thind and Banerjee (2004) that the age of the mother did not have a statistically significant impact on childbirth at home with a helper of non health staff.

Thind and Banerjee (2004) research results indicate similar things that increasing parity someone will increase the chance of occurrence of childbirth rescued by non health workers. The mother's knowledge about pregnancy and childbirth hazard associated with significant electoral non health workers as a helper in childbirth. This is in line with research Mpembeni et al (2007) in Tanzania who stated that one of the factors that affect the mother to choose childbirth with non health workers is the lack of knowledge about the risk factors of the

mother's pregnancy and childbirth. According to Andersen (1995) knowledge is the basis for the formation of one's actions. A good knowledge of health care will motivate someone to make the using of health care facilities.

Family economy relates to the selection of helper in childbirth by non health workers. Ferdinan et al research (2014) of Nigeria stated that the decision of the woman to give birth at home with non-health workforce associated with economic hardship. Inyang and Anucha (2015) mention that socio-economic status of the mother is the primary determinants of the utilization of professionals in childbirth. The research of Mriso et al (2007) shows that the factors of production and economic activity such as money available and the money for the payment of the cost of childbirth as well as the transportation of pregnant women is a deciding factor in deciding helper in childbirth, because the availability of cash for childbirth is very important.

Decision making related to the selection of the auxiliary helper in childbirth. Research Mrisho et al. (2007) about the factors that affect the childbirth in house for Tanzania rural said that the pattern of power decision makers in the family is a major factor that determines the place of childbirth. Women who live in households with major decision makers is the husband or the family had even greater opportunities for maternity at home with non-health workers compared to women who stay at home with the main decision makers is the woman's own.

A study conducted in Nepal stated that the husband's involvement in maintaining pregnancy and decision making are jointly between husband and wife is an important strategy in achieving the empowerment of women (Mullany et al. 2005). The low aid of childbirth by professional health workers caused by one factor, namely the low position of women in decision making is the present family and community.

Visiting of the ANC has a connection with the election of helper in childbirth. Thind and Banerjee (2004) revealed that the mother with the visit of ANC < 4 times tend to be delivered with non health workers. Similar things expressed by Ishikawa et al. (2002) that the lady who did the ANC for consultation only 30% of maternity health care facilities and 70% childbirth at home. This is caused by the differences of service between modern and traditional. Non health personnel are able to provide physical and psychological support for 24 hours as well as being able to give psychic motivation compared to health workers in health care facilities. Mpembeni et al. (2007) in her research showed that the mother of 99.8% visit only 44.5% of the ANC, only 44.5% which the

childbirth was helped by the health worker. Some factors was influenced the lack of any suggestions or advice given by health workers to expectant mothers every visit ANC to give birth with health workers.

## CONCLUSION

Parity and the knowledge about the danger signs of pregnancy and childbirth on factors predisposing to have meaningful relations with birth helper. On enabling meaningful ties with the selection birth helper is economic status families. Decision-making in the family and the number of visits of the ANC is the variable that has the relationship with the birth attendant selection on need factors.

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# ANALYSIS OF FACTORS RELATED TO THE DETERMINANTS OF POSTPARTUM BLUES

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## ABSTRACT

A woman in the post partum period (post partum) are likely to experience considerable stress because of physical limitations that make it a must restrict activity. The potential stress on post partum allow the emergence of psychological problems in the mother, one of which is the post partum blues. From all post partum women are 50-70% of women experience post partum blues and continue to post partum depression.

The purpose of this study was to determine factors that associated with postpartum blues psychological problems in Muhammadiyah Hospital Palembang. Present study is cross-sectional by using primary data by means of a questionnaire instrument. Furthermore, the data were processed using frequency tables, cross tables, chi-square test and logistic regression.

Frequency distribution of experiencing post partum blues as much as 56%. Age ideal as much as 60%. Higher education as much as 57.3%. Multigravida as much as 68%. Pregnancy not program as much as 57.3%. Delivery to the action as much as 53.3%. Less family support as much as 61.3%. Chi-square test found no association between parity ( $p = 0.000$ ), planning pregnancy ( $p = 0.02$ ) and type of delivery ( $p = 0.009$ ) with psychological problems post partum blues. The most influential factors with psychological problems post partum blues is parity with Odd Ratio (OR) of 11.744.

It is recommended for health care workers in hospitals to pay more attention to the psychological state of post partum women not only physical attention. Post partum blues can be prevented by providing counseling to pregnant women during antenatal care.

**Keywords:** Post-partum blues, psychology

## INTRODUCTION

In the period of pregnancy and childbirth, women tend to experience considerable stress because of limited physical condition made it by limit activity. Women should also be vigilant in protecting the fetus. The existence of a variety of potential stress in the span of pregnancy until the birth process allows the emergence of psychological problems in a woman during this period can lead to symptoms of depression in the mother. (Zahra, 2010)

Post partum depression in women typically begins with post partum blues or baby blues or maternity blues. Post partum blues are a mild affective disorder syndrome that often occurs within the first week after delivery, but often occur in the thirteen or fourteen days post partum. (Sunarsih, 2011).

In most epidemiological studies reporting the prevalence obtained post partum blues vary around the world. The prevalence of post partum blues in Tanzania as much as 80% while in Japan 8%. It is caused by a lack of research diagnostic criteria and methodologies are different on each research. In Asia, the prevalence of postpartum depression between 3.5% occupied by Malaysia as the lowest rating, while 63.3% is occupied by Pakistan being the highest rating. (Gondo, 2010)

Nearly 50-70% of all women will experience postpartum baby blues which occurs in 4-10 days postpartum. Many risk factors that affect the occurrence of postpartum blues, among others: hormonal factors, exhausted after pregnancy and birth, the state and quality of the baby, stressors and psychological environment, support sosial from her husband and family, a history of emotional problems before, overwhelmed with responsibilities new responsibilities as mothers and feeling unfit to be a mother. (Sunarsih, 2011)

Based on research conducted Setyowati and Riska (2006) who was quoted by Irawati (2013), explains that the possibility of postpartum blues are caused by: an unpleasant experience during the period of pregnancy and childbirth as much as 38.71%, psychosocial factors (social support as many as 19.53%, the quality and condition of the newborn as much as 16.13%). Psychological problems post partum blues received less attention, because it is considered as a mental disorder light that can be lost over time, whereas if postpartum blues do not get treatment that can maximally develop into depression post partum or will result in disruption heavier again that psychosis post partum. (Mansur, 2009)

In a preliminary study in RS Muhammadiyah Palembang, data obtained from the researchers

found that the average number of post partum mothers - average  $\pm$  300 mothers per month. See the above phenomenon to anticipate more severe psychological problems such as post-partum depression, the researchers felt the need to conduct research on the factors - factors related to psychological problems post partum blues in one of the Muhammadiyah hospital in Palembang.

## RESEARCH METHOD

This study was a quantitative research using descriptive survey method with cross sectional study, conducted at the hospital. Muhammadiyah3,2 Palembang in April, 2014. The populations are all mothers postpartum Muhammadiyah Hospital in Palembang in 2014, with research samples were 75 maternal postpartum. Collecting data using primary data obtained from questionnaires filled out by respondents guided investigators. Data analysis was performed univariate (descriptive analysis) using the frequency distribution table, followed by analysis Bivariate Statistics Chi-Square test, and multivariate analysis using logistic regression.

## RESULTS AND DISCUSSION

**Table 1: frequency distribution of variables**

Variabel	F (n=75)	Persentase
Postpartum Blues		
No experience	33	44 %
PPB	42	56 %
Experience PPB		
Age		
Ideal ( $\geq$ 20 tahun)	45	60 %
Less ideal (< 20 tahun)	30	40 %
Education		
High ( $\geq$ SMA)	43	57,3 %
Low (< SMA)	32	42,7 %
Parity		
Multigravida	51	68 %
Primigravida	24	32 %
Pregnancy		
Planning	32	42,7 %
Pregnancy	43	57,3 %
Planned		
Unplaned		
Pregnancy		
Type of delivery		
Normal delivery	35	46,7 %
Delivery with action	40	53,3 %
Family support		

Support	29	38,7 %
Less Support	46	61,3 %

Table 1 above obtained frequency distribution of respondents who experienced Postpartum Blues as much as 56%, of respondents ideal age ( $\geq$ 20 years) more that 60%, highly educated respondents ( $\geq$  SMA) of 57.3%, of respondents with parity multigravida amounted to 68%, of respondents with an unplanned pregnancy of 57.3% and the respondents were less supported by the family of 61.3%.

### Relationship Age with the issue of Psychology Post Partum Blues

Based on the statistical test Chi Square test is obtained  $(0.129) > \alpha (0.05)$  so that  $H_0$  is accepted, then statistically revealed no relationship between age and psychological problems postpartum blues.

### Relationship Education with Psychological Problems Post Partum Blues

Based on the statistical test Chi Square test  $(0.665) > \alpha (0.05)$  so  $H_0$  accepted then statistically revealed no relationship between education and psychological problems post partum blues

**Table 2: The Result Of Bivariat Selectif Between Independent Variable With Dependent Variable**

No.	Variable	p value	Multivariat Candidate
1	Age	0,126	Entry
2.	Education	0,665	Not entry
3.	Parity	0,000	Entry
4.	Pregnancy Planning	0,020	Entry
5.	Type of Delivery	0,009	Entry
6..	Family Support	0,909	Not Entry

Based on the selection results Table 3.2 shows bivariate there are four variables that generate p value  $< 0.25$  is the variable age, parity, pregnancy planning and delivery types. While education and family support variables produce p value  $> 0.25$ , but in substance it is very important variables associated with the incidence of post-partum blues, education and family support variables remain included in the multivariate modeling.

Table 3: The Result Of Analysis Multivariat With Double Regresi Logistik Test

Variable	B	S.E	Wald	Df	Sig.	Exp (B)	95% CI For Exp (B)	
							Lower	Upper
Age	.077	0,617	0,016	1	<b>0,900</b>	1,080	0,322	3,621
Education	-.194	0,578	0,113	1	<b>0,736</b>	0,823	0,265	2,555
Parity	2,440	0,794	9,540	1	0,002	11,474	2,198	54,369
Pregnancy Planning	1,590	0,625	6,475	1	0,011	4,904	1,441	16,689
Type of Delivery	.867	0,571	2,307	1	<b>0,129</b>	2,380	0,777	7,287
Family Support	-.037	0,630	0,003	1	<b>0,954</b>	0,964	0,110	3,312
Constant	-6,405	2,056	9,708	1	0,002	0,002		

From the analysis of the first steps is evident there are four (4) variables p value > 0.05 is age, education, type of labor and family support. The variables with p > 0.05 released one by one from the multivariate analysis model, starting from the variable with the largest p value is family support.

Table 4: The Result Of Analysis Multivariat With Double Regresi Logistik Test After Family Support Variable out of Model

Variabel	P value	OR variabel lengkap	OR setelah Dukungan keluarga dikeluarkan	Perubahan OR
Age	<b>0,890</b>	1,080	1,087	0,6 %
Education	0,723	0,823	0,818	0,6%
Parity	0,002	11,474	11,448	0,2 %
Pregnancy Planning	0,010	4,904	4,869	0,7 %
Type of Delivery	0,128	2,380	2,372	0,3 %
Family Support	-	0,964	-	-

Based on the analysis, once excluded from the family support variable logistic regression analysis shows that the age variable has the highest p value is 0.890 so that the next model of the age variable excluded from the model.

Table 5: The Result Of Analysis Multivariat With Double Regresi Logistik Test After Age Variable out of Model

Variabel	P value	OR variabel complete	OR after Age out of model	Changes OR
Age	-	1,080	-	-
Education	<b>0,726</b>	0,823	0,820	0,3%
Parity	0,001	11,474	11,792	2,7 %
Pregnancy Planning	0,009	4,904	4,893	0,2 %
Type of Delivery	0,123	2,380	2,391	0,5 %
Family Support	-	0,964	-	-

Based on table 3.5, variables that have the greatest p value is education that is 0.726, compared with the three other variables, it will be removed (reduced model) so that the step or the next model that included only the variable parity, pregnancy planning and the type of delivery.

Table 6: The Result Of Analysis Multivariat With Double Regresi Logistik Test After Education Variable out of Model

Variabel	P value	OR variabel complete	OR after Education Variable out of model	Changes OR
Age	-	1,080	-	-
Education	-	0,823	-	-
Parity	0,001	11,474	11,744	2,3%
Pregnancy Planning	0,010	4,904	4,786	2,4 %
Type of Delivery	<b>0,120</b>	2,380	2,404	1,0 %
Family Support	-	0,964	-	-

Based on the analysis, once removed from the education variable logistic regression analysis shows that the variable type of labor has the largest p value is 0.120 so the next model process variable kinds of labor were excluded from the model.

Table 7: The Result Of Analysis Multivariat With Double Regresi Logistik Test After Type of Delivery Variable out of Model

Variabel	P value	OR variabel complete	OR after Type of Delivery out of model	Changes OR
Age	-	1,080	-	-
Education	-	0,823	-	-
Parity	0,000	11,474	14,453	25,9 %
Pregnancy Planning	0,008	4,904	4,836	1,3 %
Type of Delivery	-	2,380	-	-
Family Support	-	0,964	-	-

Having this type of delivery is issued, then do a comparison OR turns out one of the variables have change OR > 10%. Thus the variable type of labor is put back into the model. So that the final model in the multivariate analysis are as follows:

Table 8: The Result Of Analysis Multivariat Last Model With Double Regresi Logistik Test to Psychological Issues Post Partum Blues

Variabel	B	Sig.	Exp (B)	95% CI For Exp (B)	
				Lower	Upper
Parity	<b>2,463</b>	<b>0,001</b>	<b>11,744</b>	<b>2,639</b>	<b>52,257</b>
Pregnancy Planning	1,566	0,010	4,786	1,459	15,699
Type of Delivery	0,877	0,120	2,404	0,795	7,268
Constant	-6,645	0,000	0,001		

The table 3.8 can be seen from the table which variables were most influence on the dependent variable, seen from the value of Exp (B) of each - each significant variable. The greater the value of Exp (B) means the greater the effect on the dependent variable was analyzed. Thus, we can conclude that of he three variables entered simultaneously into the modeling above, which is the most dominant variable affecting psychological problems postpartum blues is variable parity.

The strength of the effect of variable parity against psychological problems post partum blues can be seen from the analysis Odd Ratio (OR) variable parity is 11.744, meaning that respondents who parity status primigravid have 11 times the risk of developing post-partum blues than respondents multigravida.

#### **Relationship Age with the issue of Psychology Post Partum Blues**

Based on the results of the univariate analysis, the majority of respondents are ideal ( $\geq 20$  years) is as much as 60%. On the results of the bivariate analysis, no association between age and psychological problems post partum blues.

Researchers found that mothers aged less than 20 years a lot of experience post partum blues. They are not yet ready to face changes her role as a mother, because at that age who entered late adolescence and will be heading the maturity level they can only fantasize about cute baby, healthy like a doll, but they can not accept that the baby also need good care to kembangnya grow in order to be a big kid, healthy and active. Therefore, mothers need psychological support as well as other physical needs that must also be met.

#### **Relationship Education with Psychological Problems Post Partum Blues**

Results of univariate analysis obtained frequency distribution of education respondents mostly high in the amount of 57.3% and the results of the bivariate analysis, no association between education and psychological problems post partum blues.

Researchers believe that these results do not fit the theory, but the formation of psychology mother not only gained through education alone, because many factors are more dominant in order to influence the occurrence of post partum blues.

#### **Pregnancy Planning Relationship with Psychological Problems Post Partum Blues**

Based on the results of the univariate analysis, most of the respondents with an unplanned pregnancy of 57.3%. The results of the bivariate analysis revealed no association between pregnancy planning with psychological problems post partum blues.

According to investigators, the respondents whose pregnancies were not planned more experience post partum blues, it can make the mother is not / was not ready mentally for pregnancy and childbirth, causing stress, anxiety and fear in the face of her role as a mother after childbirth.

#### **Type Labor Relations with Psychology Problems Post Partum Blues**

The results of the univariate analysis, the majority of respondents who are birth to the action that is as much as 53.3%. On the results of the bivariate analysis, there is a relationship between the type of delivery with psychological problems post partum blues.

Mother went into labor with action will feel anxious and prolonged pain as a result of actions taken during labor, such as caesarean section, induction, vacuum or forceps. Then, need the support of those closest to either the husband, family and friends so as to slightly reduce the physical trauma of interchangeable cause psychological trauma in the mother

#### **Family Support Relationship with Psychological Problems Post Partum Blues**

Based on the results of the univariate analysis, most of the respondents who received less support from family, namely by 61.3%. On the results of the bivariate analysis, there is no relationship between family support with psychological problems post partum blues.

Researchers also considered, that the family (husband and parents) plays an important role in the occurrence of post partum blues. And expected family realizes that his wife is in dire need of attention and support, especially from a husband. The support was not just a psychological support but physiological support, valuation, and financial information that is needed by the mother. The mother will feel safe and comfortable after childbirth.

#### **Parity Relationship with Psychological Problems Post Partum Blues**

Based on the results of the univariate analysis, most of the respondents multigravida that as much as 68%. On the results of the bivariate analysis, there is a relationship between parity with psychological problems post partum blues. Meanwhile, the results of the multivariate analysis, it appears that the parity variable is the most dominant factor affecting psychological problems post partum blues with the results of statistical analysis, the variable parity with respondents primigravid 11 times the risk of developing psychological problems post partum blues compared to respondents multigravida.

According to investigators, by looking at the results of the research that has been done and the previous study, respondents primiparity more experience post partum blues for the first time to experience the birth process so as they have to adapt, if previously they only think about themselves once the baby is born if the mother is not familiar with its role, the mother will feel confused while the infant must remain in order to grow big and healthy.

The existence of a very strong relationship between parity with psychological problems post partum blues because mothers primiparous first time to experience the birth process so as they have to adapt, if previously they only think about themselves once the baby is born if the mother does not understand its role, the mother will feel confused while baby must remain in order to grow big and healthy. The mothers need psychological support as well as other physical needs that must also be met. The mother needs a chance to express their thoughts and feelings from a scary situation. Perhaps also the mother - the mother requires treatment and / or break, and often will feel delighted to have practical help. With the help of friends and family, they may need to arrange or re-arrange their daily routine, or perhaps eliminate some activities, tailored to their concept of maternal and infant care.

## CONCLUSIONS

Based on the results of research on psychological problems post partum blues, it can be concluded as follows:

- a. There is no relationship between age and psychological problems post partum blues.
- b. There is no relationship between education and psychological problems post partum blues.
- c. There is a relationship between parity with psychological problems post partum blues.
- d. There is a relationship between pregnancy planning with psychological problems post partum blues.

- e. There is a relationship between the type of delivery with psychological problems post partum blues.
- f. There is no relationship between family support with psychological problems post partum blues.
- g. The most dominant factor affecting psychological problems postpartum blues is variable parity. Results of statistical analysis obtained primigravid respondents had an opportunity to 11 times the risk of developing psychological problems post partum blues.

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# THE PERSPECTIVE OF PATRIARCHAL CULTURE ON DECISION MAKING DONE BY CHILDBEARING-AGED COUPLES TO BE LTCM ACCEPTORS IN NAGA TIMBUL VILLAGE, DELI SERDANG DISTRICT, IN 2015

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## ABSTRACT

Patriarchal culture is a custom where a man has a higher position than a woman, especially to make a decision to use long-term contraceptive method (LTCM). Man's strong domination as a husband has been constructed in the society. The objective of the research is to find out the perspective of patriarchal custom of childbearing-aged couples to make decision to be LTCM acceptors. This research used descriptive qualitative approach with a case study design. The informants were three LTCM acceptors and the instrument use in-depth interviews. The result of research showed that in making decision all aspects in the informants' family were still controlled by the husbands because they were considered as breadwinner and the heir. The family-planning local field counsellors and cadres are suggested to socialize LTCM through religious approach and public figures to motivate husbands to get involved more in the program and decision making concerning LTCM should involve both husband and wife.

**Keywords: Patriarchy, Decision Making, Childbearing-Aged Couples, Long-Term Method**

## INTRODUCTION

The most important resource in a country is its citizens. With a large number of populations, a country has two different sides of impacts. The first of these is that large number of citizens provide benefits because they can be used as a potential asset for the country development. Data and Information of the Ministry of Health estimate that the population in Indonesia is increasing from year to year. It can be seen from the data that the total population in 2010 reached 237.6 million, soaring up to 241 million people in 2011, 245 million in 2012, and 248.4 million people in 2013. Based on these data, Indonesia is a country with an estimated five most populous among the ASEAN countries, and has the largest area with the Total Fertility Rate (TFR) at 2.6 where its figure is still above the average TFR of the ASEAN countries, ie, 2.4 (Infodatin MoH RI, 2013).

In connection to high estimate of the total population in Indonesia with TFR figure of 2.6, a way to reduced fertility is needed and fertility decline can then increase the probability to the betterment of life in term of 15 years in the future after they participate Family Planning. This condition can also be called the demographic bonus and will certainly have an impact on the burden of government and society that will ultimately improve the productivity of society.

In Law No. 52 of 2009 on Population Development and Family Development, in Chapter VI, Article 24 paragraph (1), it is stated that: "contraceptive services is organized in an effective manner and to be accepted and implemented responsibly by married couples with

options and consideration of the health condition of the husband and wife". From the contents of the Act, expressly the husband and wife have the same rights and obligations as well as equal position in determining contraceptive for birth control. National Family Planning Movement is prepared to build the optimal human resources, characterized by the increasing role of the community in meeting the need to be able to build a prosperous family in the context of family planning services. One of the strategies of the implementation of family planning programs as stated in the Medium Term Development Plan (RPJM) 2010-2014 is the use of long-term contraceptive method (LTCM) such as the IUD (Intra Uterine Device), Implants, and Sterilization (BKKBN, 2012).

Long-term contraceptive method (LTCM) at this time is IUDs, Implants, MOW and MOP. Based on the target of RKP in 2010, 2011, 2012, LTCM target to be achieved each year was 24.2%, 25.1%, and 25.9%, respectively. From the BKKBN routinely statistical data in last three years, the achievement PA-LTCM is still below target which has been set. Population problems are not only in terms of the demographic that focus on the quantitative aspects, but also taking into account aspects of human rights and aspirations of women and men without distinction. In fact, it looks most are still placing objects in the wife as a sexual and reproductive problems because pregnancy and childbirth happen in the wife. The wife is also required to use contraception to avoid pregnancy. Gender inequalities in reproductive health programs has significant impacts on the success of family planning programs (Maydita, 2014).

The presumption referred to above that puts contraceptive things on the wife not only is done by the ordinary people, but also is regarded by the providers, and policy makers. Male participation is very small but their control of women in deciding to family planning is very dominant. The inability of women to decide reproductive success of health problems is related to the weak position of women in family and society. The dominance of patriarchal culture that 98% acceptors are women. Women often do not have the power to decide the method of contraception they want, but because the missing information from health professionals and minimal contraceptive devices and drugs at on-site service, there is dependence on the husband's decision (BKKBN of Central Java, 2010). It is in fact necessary to have main principles in achieving gender equality by increasing the participation of men, so that men become more responsible and prudent in making decisions about reproductive health for the family. This is important because male participation in the implementation of family planning and reproductive health programs is a strategic way in improving family planning coverage and reproductive health programs (Nyoman, 2012).

The data of active contraceptive participant in 2012 for the North Sumatra Province show IUD by 2.1%, pills by 10.8%, condoms by 1.9%, Injectable by 18.3%, Implant by 3.1%, and MOW by 6.4%. If seen from some contraceptive methods proposed by the government, the users of long term contraception method (LTCM) are still a few. In general, people choose non long term contraception method (NON LTCM). This is in line with the Bureau of Family Planning and Women's Empowerment (BKB&PP) of Deli Serdang in 2014 which showed that of 335.871 childbearing age couples, those as active family planning participants are 228,543 and only 72,401 (21.5%) become LTCM acceptors.

Indonesia alone has jurisdiction patriarchy, where in a family those with power are the father and the male dominance of women in various ways continues in all other civic sphere (Nyoman, 2012). Strong dominance of men as husbands has been constructed in the socio-cultural form; as a result, there is inequality of opportunity, participation, decision-making, health care, and other access which can ultimately lead to gender gap (Fakih, 1997). The assumption that women have become nature to care for children, care of the education of children, contraceptive use and affairs of the household is often misinterpreted, so that today women are still being targeted in the program on population. It is evident from the greater volumes of contraception addressed to

women than men. In addition to being the owners of the organs of reproduction (pregnancy and birth), women have also been a target for contraceptive use (Sukeni 2010).

Decision-making of childbearing couple to become family planning acceptors dominated by the husband and the low participation of the childbearing couple to be LTCM users are the problems to be solved, so that the researchers wanted to know how the patriarchal cultural perspectives in decision-making of childbearing age couples to become LTCM acceptors in the village of Naga Timbul of. Tg. Morawa District. Deli Serdang in 2015.

## RESEARCH METHODS

This was a qualitative descriptive study, with case study design to investigate carefully a group of individuals with the perspective of a patriarchal culture that was limited by the activity and time specified in the decision making to be LTCM acceptors that might not be explored when using only questionnaire or quantitative studies. The key informants in this study were the childbearing couples using LTCM of contraceptives in each of the dominant tribe in the village of Naga Timbul (Java, Mandailing). The informant were then interviewed using in-depth interviews to generate data to be analyzed descriptively based on themes or specific perspective.

## RESULTS AND DISCUSSION

Informants in this study amounted to 9 informants divided into two principal informants consisting of 1 PLKB, 1 PKK cadre and one village cadres.

**Table 1 Characteristic of Informants**

Role	Age	Ethnicity	Education
PLKB	35 yo	Karo	D3
PKK	38 yo	Mandai ling	SMA
Cadre	37 yo	Java	SMP

Meanwhile, the key informants comprised 6 acceptors using long-term contraception, each of Javanese and Mandailing ethnic group in the village of Naga Timbul.

**Table 2 Charateristic of Key Informant**

Age	Occupati on	Educati on	Ethnicit y	Meth od
28	Housewif e	SMP	Java	Impla nt

32	Religious teacher	SMA	Mandailing	Implant
31	Housewife	SMA	Mandailing	Implant
36	Factory Admin	Sarjana	Jawa	IUD
33	Housewife	SMA	Mandailing	Implant
23	Housewife	SMP	Java	Implant

### **Patriarchy Culture Concept in Javanese and Mandailing**

Patriarchal culture in Batak Mandailing is more viscous than the Javanese in the village of Naga Timbul. It can be seen from the customs of Batak Mandailing ethnic group that always thinks that the man is a ruling. Sons in Batak Mandailing are the heir to continue the clan. This is in accordance with the response from the informant: *“We are Bataknese, if there is no a boy it means no a successor to the clan, so people will gossip about us, even we have up to eight daughters if a son is not yet obtained, we keep trying to get a son...”*.

### **Decision Making Process Being LTCM Acceptors**

*“It is more and less a week I persuaded him, because they want a boy...”* is the statement from one informant. The decision making process in the family on the Javanese informants are not much different from the decision-making process on the Mandailing informant in terms of being LTCM acceptors. Javanese informants still ask permission first for their husband to use long term contraception, despite the fact that according to the informant, the husband is not so concerned and fully devolving the matters of contraceptives to the wife; yet, to decide to become acceptors is the husband, while in the tribe of Batak Mandailing, the husband is harder and needs longer process in deciding become LTCM acceptors because they wish to have a son.

### **Reason Childbearing Age Couple to Use Long-Term Contraception**

Based on the results of interviews done with the informants, the reason using a long-term contraception is not much different because they want to space pregnancy, do not want to get pregnant again, long-term contraceptive method to be considered more practical and free of charge.

### **Relations of the Patriarchal Culture to the Decision Making in Being LTCM Acceptor**

Patriarchal culture in Javanese and Mandailings has a close relationship in the decision to become LTCM acceptors, which is the decision-makers in the family are still husband whereas many types of contraceptives are addressed to women or wives.

This is disclosed by the informant as follows: *“... Before I work all husbands decided all, right now I’ve been working, I want him to listen to what I say, indeed like when I wanted to use contraceptives and he said it was all up to me...”*. With the culture of patriarchy that requires wives to follow the decision taken by the husband to become LTCM acceptors, while the husband does not want to know about it since it is always considered to be the wife’s concern and this opinion has become an understanding in communities that household issues including business planning is always borne by women, which raises the role of inequality in the sharing of tasks and responsibilities of each partner in a family. This of course affects the outlook and attitude of the childbearing age couples to be LTCM acceptors.

### **Characteristics of Childbearing Age Couples in Using Long-Term Contraception**

The key informants in this study are 6 women and acquired characteristics as follows 3 Javanese ethnicity, three Mandailings people consisting of four informants aged > 30 years and 2 informant aged <30. These informants have varied educational background from Bachelor by one person, high school by 3 people and a junior high school by 2 people. Of 6 informants, only two people work as a teacher of the Qur’an, the administration of the factory, and housewife. For a monthly family income, two informant income is > Rp. 2.000.000, -, and another informant income is <USD. 1.000.000, -.

Three informants have 2 children (both female), one informant has 3 children (2 girls, 1 boy) and two informants have 4 children (2 boys, 2 girls and 3 girls and 1 boy). For the use of contraceptive long term methods, 5 informants use Implant and 1 informer uses IUD. One informant has used implant done by a midwife for one year and other informants use implants and IUD for only two months.

### **Patriarchal Culture Concept in Javanese and Mandailings**

Culture is not something that falls from the sky. It is shaped by humans and socialized from one generation to the next. Koentjaraningrat 2009 says that cultural values are the mental factor that

determines one's actions or the public. Patriarchal culture is a culture where men have a higher position than women. In this culture, there are clear differences regarding the task, the role of women and men in public life, especially in the family. In this system, the man is the one who has the power to determine and the condition is considered reasonable as it is associated with the division of work based on sex. The existence of this culture has to give privileges to the male gender, and therefore does not indicate the culture of equality and balance, in which in this culture female gender is not taken into account (Wahyuni, 2010).

In Indonesia, patriarchal culture is still very strong in social, economic, legal and other aspects of life and the structure of society, creating gender imbalances that affect the relationship of women and men. In this culture as well as in many other countries, patriarchal culture is still very strong in social, political, economic, and legal aspects and moreover, the state of inequality, asymmetries and subordinate to the women in culture seems very clear.

For indigenous traditions, patriarchal society is seen as something that has always been associated with power and nature, the belief that God has established the existence of differences in men and women, where men become dominant in terms of power and strength. This can be seen very clearly in an example of a Batak Mandailing as patriarchal holders that are still thick, where lineage and heir in the family is only in males, and one family that does not have a boy is considered flawed because it has no heir (clan) and is not given the right to obtain wealth and power sharing in Batak traditions/customs (Wahyuni, 2010).

Until now, there are several theories that state the birth of patriarchy, one of which is the patriarchal system described by Engels and Helene Cixous. The concept of a patriarchal culture is actually still understood by nearly all tribes and cultures in Indonesia, including the tribal Batak Mandailing and Javanese in the village of Naga Timbul.

#### **Decision Making Process in Being LTCM Acceptor**

Wife's participation in decision-making is still very limited. The dominance of the husband in the decision-making is still deeply felt very strong at research sites. It can be seen from the statement of the informants that to become family planning acceptors in particular long-term contraceptive

method, wife is required to request permission from her husband.

Husband often feel inappropriate when participating in reproductive activities. The different roles in the work of reproductive matters between husband and wife is due to a culture that sees women should be in the kitchen with household chores so that men are not in place when participating in this activity. The dominance of the husband in the decision-making is not only found in the health sector, but in all sectors of the public, one of which is in the farming sector in a study done by Widodo, 2009, which finds that about 81% of the respondents state that the decision makers in tobacco farming is determined by the husband.

Husband dominance in decision-making is due to the growing view in the community that the wife only understands the problem of the kitchen alone. Women always subordinated by men is evident in the daily life at the household level, including when making important decisions in an activity at the household level and female role still lacks to be involved.

#### **Reasons of Childbearing Couples in Using Long-Term Contraception**

In general, the reason of childbearing couples in using a long-term contraception in the village of Naga Timbul is because they want to space or postpone pregnancy and do not want to get pregnant again, and long-term contraceptive method is more practical and free of charge. The reason according to a statement from field officer is as follows: "... *Most people there want to use long-term contraception because they have already had many children, do not want to get pregnant again, know that the contraceptive is free of charge, cadres that keep inviting them to use implants, IUD or perhaps remove the organs ...*"

Those reasons are not much different from the results of a study by Christiani, 2013, about the factors that affect the use of LTCM in Central Java province, which states that social, demographic and economic aspects influence couples to choose long-term contraception. Age, number of children, education level, place of residence, family stage, objectives and reasons for family planning, and contraceptive services resource are closely related to the use of LTCM. At the age of 30 years and having two children or less, couples usually prefer non LTCM, while at the age of 30 years and older and having children of two or more couples have the purpose or reason for family planning to stop having more



children or not getting pregnant again. This encourages them to use the long-term methods of contraception.

Couples or one of the couples that have higher education will tend to choose LTCM, because they have knowledge of family planning, thus knowing the strengths and weaknesses of their choosing LTCM: a) practical; not have to remember to take a pill or injectable schedule, b) safe; the installation is done by trained health personnel, and c) economical; LTCM is cheap or even free of charge. Women who work or have a steady job choose LTCM for reasons of practical and safe, and they tend to limit the number and spacing of children so as not to interfere with their career and work. Distance and infrastructure where services are located are also often influencing couples in choosing a long-term contraception (Christiani, 2013).

For Naga Timbul village, the implementation of family planning programs have been going well, but because the understanding of couples is less about family planning and the existence of patriarchal culture in the region, sometimes those things influence and constrain its implementation. In addition, there is also the assumption that families and people claim that the use of contraception and other family planning programs are the affairs of the mother (wife).

#### **Relations of the Patriarchal Culture in the Decision Making in Javanese and Mandailings in Being LTCM Acceptor**

Patriarchal culture is a culture where men have a higher position than women. In this culture, there is a clear distinction about the duties and roles of women and men in public life, especially in the family. Men as a leader or head of the family has the authority to control economic resources and a sexual division of work within the family. This causes women to have less access in the public sector than men.

Not only in terms of the division of work, patriarchal culture also has a negative effect on equity in the use of contraceptives. Villagers of Naga Timbul seems less support men as the preferred group in long-term use of contraceptives. One characteristic of patriarchy that stands out is the decision-making to become LTCM acceptors that remains in the hands of men, while in reality, men are not concerned with the affairs of family planning, as things regarding the use of a long-term contraception is a woman's problem (wife).

Inequality role in the affairs of contraceptive use is very influential in women (wives), where the wife is labelled by the rural people themselves as doing house chores and taking care of children. They should not be in charge again with the affairs of family planning, which should become the concern between husband and wife. There should be no dominance in taking decisions also in the use of contraception in the family. This is evident from an informant: "... *The unfairness is like this. If i can work outside the house, my husband should also help to take care of home chores. I can also get money by working. So, when I aksed my husband that I wanted to use implant, he only said yes. He never asked for further detail....*".

It is found at the research sites, and is inseparable from the theory of social construction that is shaped by society, in which the roles of men and women are socially not something that is given or natural, but men and women are socially constructed by people who had formed long before the cultural and social development progress. This theory is based on the assumption that the man is said to be strong, powerful, rational which is actually an invention or an understanding of patriarchal society.

#### **CONCLUSION**

1. Patriarchy in the Javanese ethnicity of Naga Timbul village has the concept that having a son is more important than a daughter because men is regarded as the breadwinner in the family so that girls have less access in terms of the insight that can actually prosper themselves and their family. Patriarchal culture in Batak Mandailing ethnicity in the village of Naga Timbul can be seen from the customs which always consider men to have a higher position than women, have power, and are the heir offspring to carry on their family clan.
2. The process of decision-making in the family on the Javanese informants is not much different from the decision-making process on the Batak Mandailing informants that still request permission from the husband to use long-term contraceptives, even though according to the informant, husband is not so concerned fully about contraceptives; however, the difference is that the Batak Mandailing husband is harder in deciding to become family planning acceptors, especially for long-term methods because they wish to have a son again.
3. In the Javanese and Batak Mandailing informants, the reason for the long-term use of



contraceptives is not much different because they want to space pregnancy, do not want to get pregnant again, and know that the method is practical and free of charge.

4. Patriarchal culture is not really a problem in the community and in the family, if the men as decision makers can understand and care about the use of LTCM and can also share the role, duties, and responsibilities so as not to bring up any inaccuracies in family such as the case in research locations.

#### RECOMMENDATION

1. For PLKB, local cadres (volunteers), and medical personnel, they should further promote family planning programs particularly LTCM to be done routinely in special event so that more people understand and realize the importance of family planning for later life and should always provide counseling to couples who become LTCM acceptors to encourage potential acceptors, especially for men (husband) in order to motivate the wives so that they can take the right decision to use long-term contraception.
2. Community participation should be increased, especially religious leaders, community leaders or village institutions in the implementation of family planning programs, especially LTCM.
3. It is recommended to make a community group "husband concerned to LTCM" in the village to be able to facilitate access to contraceptives information, especially long-term method (LTCM).

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# DURATION IN SECOND STAGE OF LABOR BETWEEN MOTHERS USING HALF-SITTING PUSHING POSITION AND THOSE USING LEFT-SIDE LYING POSITION

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## ABSTRACT

In the process of childbirth, the mother can choose a comfortable pushing position to shorten the second stage of labor as well as to reduce complications during childbirth. Data from BPM CH Mala in 2015 showed that 11 (2.6%) of 423 women giving birth had complications during childbirth, one of which was prolonged duration in the second stage. To let the mother take the desired pushing position during childbirth will provide many benefits such as shorter second stage. The objective of this research was to determine the difference in the length of the second stage of labor with half sitting and left-side lying pushing position in BPM CH Mala in 2016. The study was conducted from 12 July to 24 May 2016. This was a pre-experimental study with posttest only design. The population was 64 women giving birth with a sample size of 32 respondents taken by purposive sampling technique. The result showed the mean value of the length of the second stage of labor in half-sitting pushing position group was 33.25 minutes, while in left-side lying position was 19.63 minutes with a difference mean value of 13.52 minutes. Statistical test results using independent T-test values obtained P value = 0.000, mean that there were differences in the length of the second stage of labor between both positions. Based on this study, health practitioners are suggested to provide counseling about pushing positions which cover their benefits and advantages to pregnant women and those facing labor and counseling should be given when the mother is in the first stage on, among others, the use of pushing position of left-side lying as this position will accelerate the second stage of labor. Keywords: second stage of labor, pushing position.

**Key words: second stage of labour, half sitting position, left side lying position**

## INTRODUCTION

The issue of maternal health needs to be top priority, because it determines the quality of future generations. Maternal Mortality Rate (MMR) is one indicator to view the health status of women. However, MMR in the world is still high. One reason is the prolonged labor which can cause infection, exhaustion, dehydration, and post-partum bleeding or even death (Wahyuningsih, 2010).

Based on data from the World Health Organization (WHO) in 2015, the number of MMR in 2015 amounted to 303,000 per year. The causes of death among pregnant women and childbirth are always associated with complications including bleeding by 24.8%, infections by 14.9%, eclampsia by 12.9%, dystocia during childbirth by 6.9%, and other related causes.

Based on data from the Indonesian Demographic Health Survey in 2012, the number of maternal deaths was 359 per 100,000 live births and the IDHS also noted that the biggest cause of maternal mortality in 2010-2012 remained the same, namely bleeding, hypertension, infections, abortion and obstructed labor.

According to data from the Health Profile of South Sumatera Province in 2013, the MMR in South Sumatra was 146 per 100,000 live births. The data can be said to be decreased compared to those in 2012 which was 148 per 100,000 live births.

According to data from the city of Palembang, the number of MMRs in 2014 was 14 persons from 29 235 live births (Palembang City Health Office, 2015).

Childbirth is a physiological process that allows a series of major changes in the mother to give birth to her fetus through the birth canal. The delivery process is divided into four stages, namely the delation as the first stage, the birth as the second stage, the expulsion of the placenta as the third stage, and monitoring or observation as the fourth stage (Sujiyatini, 2011)

In labor, one form of mother's friendly care that can be given during labor attendant during the second stage is to set the psuhing position that can help accelerate the process of delivery, thereby reducing the incidence of prolonged labor in childbirth. The good pushing position to be done in the second stage of labor is to use half sitting and left-side lying positions, because these position can provide a sense of comfort and relax for the mother during labor and be also assisted

with the gravity of the earth so as to facilitate the presenting part down to the bottom of pelvis as well as doing the axis rotation (JNPK-KR 2007 in walyani, 2015).

Half-sitting pushing position is the position of the labor with the mother's both legs are bent and both hands are put in the groin. This position will help speed the descent, and midwives in helping facilitate the birth of a baby. Left-side lying pushing position is labor positions with the mother lying to the left, and the mother's right foot is bent and placed on the mother's thigh. This position makes the mother more comfortable and effective for pushing so that the second stage could also be faster, and provide a relaxed atmosphere among the exhausted mother contraction (Walyani, 2015). Selection of wrong pushing position will cause the mother to have a long second stage, and it may cause harm to the mother or the baby that can cause death (Simkin, et al, 2006).

From an interview that was done with an employee of BPM (privately practising midwife) CH Mala Palembang, problems faced at the second stage are prolonged time, fatigue, shoulder dystocia and others. The position of pushing frequently used or taught in BPM CH Mala is half-sitting and left-side lying. Based on the observation done on 2-5 April 2016, there were 6 women in labor where three women were treated with half-sitting pushing position, and three other mothers giving birth were treated with left-side lying pushing position. The results showed that mothers who were given the left-side lying position experienced the second stage faster and women who were given a half-sitting position experienced normal second stage.

According to data obtained in BPM CH Mala in 2013, there were 433 mothers giving birth wherein of the women, eight (1.8%) mothers had complications during childbirth such as postpartum hemorrhage, prolonged second stage, shoulder dystocia and retained placenta. In 2014, the number of women giving birth was 459 women in which there were four (0.9%) mothers who had complications of prolonged second stage, and retained placenta. In 2015, there were 423 women giving birth in which there was an increase in mothers who experienced complications during childbirth by 11 (2.6%), while the number of women giving birth from January to February 2016 was 64 women and no complications were found during childbirth.

Based on this background, this study aimed to find differences in the length of the second stage

on mothers giving birth with pushing position of half sitting and left-side lying in BPM CH Mala in 2016.

## RESEARCH METHOD

This was a pre-experimental study with a posttest only design. The sample in this study was multigravida women giving birth totaling 32 respondents and divided into 2 groups, ie, 16 respondents in the group with a half-sitting pushing position and 16 respondents in the group with the left-side lying pushing position.

Sampling techniques used purposive sampling with inclusion criteria, among others, multigravida, mothers giving birth in stage II, and willing to follow the direction of the researcher to use pushing position of half sitting or lying on left side. Data collection techniques used primary data collected by direct observation that used observation sheets and partograph as a base to observe the duration of the second stage.

This study was done in BPM CH Mala on July 12-24 May 2016. The variables measured were pushing position with half-sitting and left-side lying on the length of the second stage of labor. Analysis of data used T-independent test.

From the above table it can be seen that the value of the average duration of the second stage of labor in half-sitting pushing position group was 33.25 minutes (95% CI: 31.45-35.05) with a standard deviation of 3.376 minutes. The fastest long second stage in a half-sitting position was 28 minutes and the longest was 38 minutes. From the estimation interval, it can be concluded that 95% believed that the average duration of the second stage of labor in the group with half-sitting pushing position was from 31.45 minutes to 35.05 minutes.

## RESULTS AND DISCUSSION

Mean duration of second stage of labor in half-sitting pushing position

Table 1.  
Mean duration of second stage of labor in half-sitting position

Variable	Mean	SD	Min-Max	95% CI
Duration (in minute)	33.25	3.376	28-38	31.45 - 35.05

From the above table it can be seen that the value of the average duration of the second stage of labor in half-sitting pushing position group was 33.25 minutes (95% CI: 31.45-35.05) with a standard deviation of 3.376 minutes. The fastest long second stage in a half-sitting position was 28 minutes and the longest was 38 minutes. From the estimation interval, it can be concluded that 95% believed that the average duration of the second stage of labor in the group with half-sitting pushing position was from 31.45 minutes to 35.05 minutes. Mean duration of second stage of labor in left-side lying pushing position

Table 2.  
Mean duration of second stage of labor in left-side lying position

Variable	Mean	SD	Min-Max	95% CI
Duration (in minute)	19.63	3.575	13-25	17.72-21.53

From the above table it can be seen that the value of the average duration of the second stage of labor in the group with left-side lying pushing position was 19.63 minutes (95% CI: 17.72-21.53) with a standard deviation of 3.575 minutes. The fastest of the second stage with this position was 13 minutes and the longest was 25 minutes. From the estimation interval, it can be concluded that 95% believed that the average duration of the second stage of labor in the group with left-side lying pushing position was from 17.72 minutes to 21.53 minutes.

Duration difference of second stage of labor between half-sitting and left-side lying pushing positions

Table 3  
Duration difference of second stage of labor between half-sitting and left-side lying pushing positions

Pushing position	Mean	SD	SE	P value
Duration (in minute) half-sitting	33.25	3.376	0.844	0.000
Duration (in minute) left-side lying	19.63	3.575	0.894	

Based on the statistical test results, the obtained average value of the length of the second stage of labor in the group with half-sitting pushing position was 33.25 minutes with a standard deviation of 3.376 minutes, while the average value of the length of the second stage of labor in left-side lying pushing position was 19.63 minutes with a standard deviation of 3.575 minutes and the difference in mean values of both pushing positions was 13.52 minutes.

From the above table it can be seen that the value of the average duration of the second stage of labor in half-sitting pushing position group was 33.25 minutes (95% CI: 31.45-35.05) with a standard deviation of 3.376 minutes. The fastest long second stage in a half-sitting position was 28 minutes and the longest was 38 minutes. From the estimation interval, it can be concluded that 95% believed that the average duration of the second stage of labor in the group with half-sitting pushing position was from 31.45 minutes to 35.05 minutes.

From the above table it can be seen that the value of the average duration of the second stage of labor in the group with left-side lying pushing position was 19.63 minutes (95% CI: 17.72-21.53) with a standard deviation of 3.575 minutes. The fastest of the second stage with this position was 13 minutes and the longest was 25 minutes. From the estimation interval, it can be concluded that 95% believed that the average duration of the second stage of labor in the group with left-side lying pushing position was from 17.72 minutes to 21.53 minutes.

Based on the statistical test results, the obtained average value of the length of the second stage of labor in the group with half-sitting pushing position was 33.25 minutes with a standard deviation of 3.376 minutes, while the average value of the length of the second stage of labor in left-side lying pushing position was 19.63 minutes with a standard deviation of 3.575 minutes and the difference in mean values of both pushing positions was 13.52 minutes.

Statistical test results using independent T-test values obtained p value of 0.000, meaning that there were significant differences in the duration of the second stage of labor using half sitting pushing position and left-side lying pushing position

**The second stage length difference at the groups with pushing position of Half Sitting and Left-side lying**

The results showed that the mean value of the length of the second stage of labor in the group with half-sitting pushing position was 33.25 minutes with a standard deviation of 3.376 minutes, while the mean value of the length of the second stage of labor in left-side lying pushing position was 19.63 minutes with a standard deviation of 3.575 minutes and the difference in the average value of the two positions was 13.52 minutes. Results of statistical test by using a test T-Independent obtained the value of  $p$  value of 0.000, meaning that there were significant differences in the duration of the second stage of labor using half sitting and left-side lying pushing position.

According to Walyani (2015), Half-sitting pushing position is the position of the labor with the mother's both legs are bent and both hands are put in the groin. This position will help speed the descent, facilitate the midwife to deliver the baby's head, allow the midwife to guide the birth of the baby's head, and help the midwife pay attention to the perineum, but this position often increases pain at the second stage of labor. Left-side lying pushing position is labor positions with the mother lying to the left, and the mother's right foot is bent and placed on the mother's thigh.

This position can reduce the emphasis on the inferior vena cava so as to reduce the possibility of hypoxia due to not disturbed oxygen supply, help to accelerate the birth of a baby because this position is the same as the position of the fetus in utero, make mothers more comfortable and effective for pushing so that the second stage could also be faster, help improve the position of the occiput transverse to spin into occiput anterior position, help mothers reduce pain during childbirth, allow the mother to be rested easily between contractions, give a relaxed atmosphere in a tired mother between contractions, and prevent perineal laceration.

According to JNPK-KR (2007), the choice of pushing position based on the mother's desire provides many benefits, including less pain and less discomfort during the second stage of labor, shorter second stage of labor, fewer lacerations, helping pushing more, and better value of Apgar, and helping the progress of labor when varying the position on a regular basis during the second stage is done.

The results are consistent with research that has been done by Musthofiyah (2011) that there is no difference between a half-sitting position and left-side lying position with a  $P$  value of 0.002. The length of the second stage in a left-side lying

position was 28.9 minutes, while half-sitting position was 43.8 minutes. Differences in the mean value of both were 14.9 minutes and this was also in line with research conducted by Rahmawati (2012) which showed no effect of pushing position on the length of the second stage of labor with value  $p$  of 0.019.

Based on the results of this study, the researchers found that there was a difference between a half-sitting and left-side lying pushing position. This is because this position is the same position with the position of the baby in the uterus so that it will speed up the second stage of labor. In addition, this position made respondents more comfortable and provide a relaxed atmosphere for respondents who experienced fatigue. Pushing position during labor also greatly affect the acceleration in labor because it helps facilitate the presenting part to enter and perform internal axis rotation down to the bottom of the pelvis.

## CONCLUSION

- The mean duration of the second stage of labor with the half-sitting pushing position in BPM CH Mala in 2016 was 33.25 minutes.
- The mean duration of the second stage of labor with the left-side lying pushing position in BPM CH Mala in 2016 was 19.63 minutes.
- There were significant differences in the duration of the second stage of labor between half sitting position and left-side lying position in BPM CH Mala in 2016 with the results of statistical tests using independent T-test of the  $p$  value of 0.000.

Health workers particularly in BPM CH Mala are expected to be able to provide counseling about pushing positions for pregnant mothers starting in the third trimester or before delivery, covering the benefits and advantages of the pushing positions, giving counseling when the mother is in the first stage of labor, putting up posters about the pushing position, and recommending using pushing position of left-side lying as this position will accelerate the second stage of labor.

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# RELATIONSHIP OF BMI TO MENSTRUAL CYCLE AT KEPUH PHC OF CIREBON REGENCY

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## ABSTRACT

Some studies have shown that women with a body mass index ( BMI ) of more than 40 will likely have a potential pregnancy by 35 % which is less than those with normal BMI. This may occur due to abnormal menstrual cycles. This study was conducted to determine the relationship of body mass index to Menstrual Cycle at Kepuh PHC of Cirebon in 2016. This was an analytical study using primary data. The population was all childbearing age women amounted to 60 people. The number of samples was 38 taken using accidental sampling technique. The independent variable was BMI while the dependent variable was menstrual cycle. There was a significant relationship between body mass index and the menstrual cycle in Kepuh PHC in 2016. With a p-value of < 0.05.

**Keyword: BMI and Menstrual Cycle**

## INTRODUCTION

According to WHO, obesity is defined as an accumulation of abnormal or excessive fat that may present some health risks to individuals and can be expressed by the ratio of increased weight and height. Nowadays, obesity is one of the most serious challenges in public health. WHO in 2010 estimated that more than 42 million women worldwide are overweight.

According to the 2013 basic health research (Riskesdas), the number of childbearing age women in Indonesia is 272 556, out of a total of 649,625 women aged  $\geq 18$  years. Of adult population the prevalence of underweight, overweight, and obese was 8.7%, 13.5%, and 15.4% respectively. In 2013, the prevalence of obese women (> 18 years) was 32.9%, increasing 18.1% from 2007 (13.9%) and 17.5% from 2010 (15.5%) (Riskesdas, 2013 ).

Data on the nutritional status of childbearing age women is very limited. Based on the 1995 SKRT data, approximately 51.7 percent of adolescent girls are anemic. In Jakarta, approximately 17.9 percent and 42.1 percent have a Body Mass Index (BMI) below normal according to Thomas standard. Other data showed that the prevalence of childbearing age women in West Java with protein-energy deficiency and anemia was 16.8 percent and 42.4 percent.

Obesity is one of the factors that cause some obese women to have difficulty conceiving. Some researchers showed that women with a body mass index (BMI) of more than 40 had potential pregnancy as much as 35% less than women with normal BMI by 18.5. The study proved that obese

women is difficult to get pregnant because obesity can cause irregular menstrual cycle that can affect the fertility of women (Notoadmodjo: 2010)

Obesity in the medical world is often associated with a condition called Polycistik Ovarian Syndrome or PCOS which can cause the ovaries to thicken and not able to release an egg when ovulation.

Women may experience various problems with their menstruation. The problem can be no menstrual bleeding or prolonged menstruation. The menstrual cycle of each woman is different, some are experiencing irregular periods, and some are relative regular. Menstrual irregularity may be caused by hormonal disorders or psychological factors, such as stress, depression, etc.

Harits and Supandi (2007: 21) suggest that menstrual disorders are complaints that usually happen before menstruation but some do not feel the complaints. The incidence of menstrual disorders in the world is very large, and according to Abidi (Paramita, 2010: 2), the incidence of menstrual cycle disorders percentage in America is about 60%, Sweden 72% and Indonesia 55%. Research in the United States revealed that menstrual disorders were experienced by 30-35% of women of reproductive age and 10-15% of women experienced menstrual cycle disorders. For West Java province, this disorder reached 26.60% (CBS, 2010).

The author conducted a preliminary study in December 2015 in Kepuh PHC of Cirebon by the measurement of height, weight and interviews in 10 married childbearing age women (WUS) to determine whether the women experienced

obesity and irregular cycles. From this preliminary study, the authors found a problem that there were 4 women to be obese and have irregular menstrual cycles.

## RESEARCH METHOD

This was an analytical study. In this study, the independent variable was BMI. The dependent variable was menstrual cycle. The population in this study was childbearing age women who were married checking up at Kepuh PHC of Cirebon. The sampling technique used was accidental sampling technique and the respondents selected were 60 respondents.

The data used primary data obtained from measurements of height, weight and direct interviews with married childbearing age women at Kepuh PHC of Cirebon Regency in 2016. Instruments in this study used height gauges, weight scales, and interviews to married childbearing age women.

## RESULTS AND DISCUSSION

**Table 1: Frequency Distribution of Body Mass Index at Kepuh PHC in 2016**

Status	F	%	Total
Obese	12	31.58	31.58
Normal	15	39.47	39.47
Low	11	28.95	28.95
Total	38	100.00	100.00

Based on Table 1, of 38 respondents, the majority of respondents had a normal BMI (15 people/39.47%). Respondents with obese BMI were 12 people (31.58%), and respondents with less BMI were 11 people (28.95%).

**Table 2: Relationship of BMI to Menstrual Cycle at Kepuh PHC in 2016**

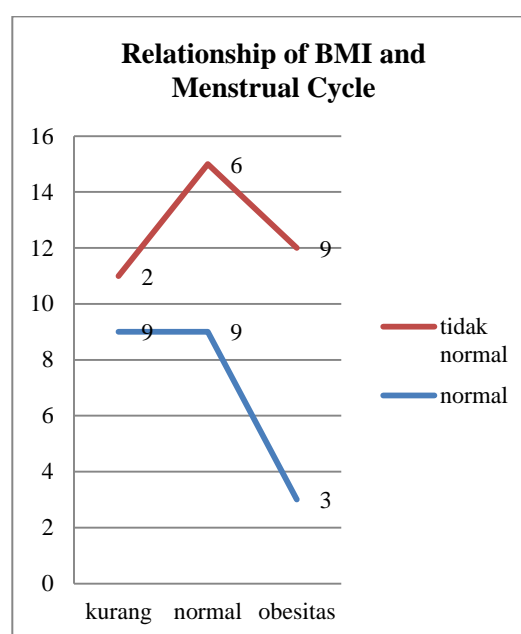
Status	Cycle				N	P Value
	Normal		Not Normal			
	F	%	F	%		
Low	9	81.8	2	18.18	11	0.015
Normal	9	60	6	40	15	
Obese	3	25	9	75	12	
Total	21		17		38	

Based on Table 2, respondents with lower BMI experiencing normal menstrual cycle were 9

people (81.82%), while 2 (18.18%) experienced abnormal menstrual cycles. Respondents with normal BMI experiencing normal menstrual cycle were 9 people (60%), while 6 (40%) were with abnormal. In addition, respondents with obese BMI were three people (25%), whereas 9 (75%) were with abnormal menstrual cycles.

The relationship of body mass index to the menstrual cycle in women in Kepuh PHC in 2016 obtained p value of 0.015, which means that there was a significant relationship between BMI and Menstrual Cycle.

**Diagram 1: Relationship of BMI to Menstrual Cycle at Kepuh PHC in 2016**



Based on the results shown in Table 1, of 38 people, 12 people (31.58%) were overweight obese as many as, 15 people (39.47%) had normal body weight, 11 people (28.95) experienced less weight.

According to experts based on the results of the study, obesity can be influenced by various factors. These factors, among others, are genetic factors, excessive eating, consumption of foods containing carbohydrates, eating frequency, slow metabolism, lack of physical activity, medications, psychological, disease, and hormone.

Based on Table 2, respondents with lower BMI experiencing normal menstrual cycle were 9 people (81.82%), while 2 (18.18%) experienced abnormal menstrual cycles. Respondents with normal BMI experiencing normal menstrual cycle

were 9 people (60%), while 6 (40%) were with abnormal menstrual cycle. In addition, respondents who were obese were three people (25%), whereas 9 (75%) were with abnormal menstrual cycles. It can be concluded that there was a relationship of body mass index to the menstrual cycle in women.

In accordance with the theory of BMI, body can be fat (obesity) due to the buildup of excessive fatty tissue and this can cause interference irregular menstrual cycles. Besides, obesity can result in increased levels of the hormone testosterone in the blood that affects the menstrual cycle. Body Mass Index (BMI) is a tool or a simple way to monitor the nutritional status of adults, especially those relating to the deficiency and overweight. Less weight can increase the risk of infectious diseases, while the excess weight will increase the risk of degenerative diseases and disorders of the menstrual cycle. Therefore, maintaining a normal weight allows one to reach life expectancy longer (MOH, 2000).

For the handling of BMI so that ideal weight may be gained, it can be done by eating a balanced diet and physical activity. However, to find the cause of irregular menstruation in the natural course requires further examination, in-depth analysis as well as other supporting tests (such as ultrasound, HSG, lab tests, etc.) (Winkjosastro, 2010).

## CONCLUSION

In this research, there are 31.58% of respondents included in the criteria for obesity. Of these women, 75% have irregular menstrual cycles. Here we can see that obesity status greatly affects the smoothness of the menstrual cycle highly influential on female fertility. This shows that there is a relationship of obesity to menstrual cycle. Childbearing age women are expected to be able to maintain their ideal weight in order to have a normal BMI and a good nutritional status and ultimately have normal menstrual cycle and good fertility.

## ACKNOWLEDGMENTS

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## Induction of Labor Relations With Mild-Moderate Asphyxia Neonatal at Regional General Hospital DR. Soedarso Pontianak, Indonesia

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### ABSTRACT

Risk factors for mild-moderate asphyxia divided into several categories of risk factors antepartum, intrapartum, and the fetus. One of intrapartum risk factors is induced. In 2015, the data found in the General Hospital of DR Soedarso Pontianak there 304 mild-moderate cases of asphyxia and in spontaneous labor induction, 56 babies born with mild-moderate asphyxia. This study aims to determine the relationship between the induction of labor with mild-moderate asphyxia in newborns in the General Hospital of DR. Soedarso Pontianak 2015. This study used a case-control design with a retrospective approach conducted on 2 until 22 February 2016 Record Regional General Hospital medical DR. Soedarso Pontianak. The sampling technique used was purposive sampling in which case was taken by inclusion and exclusion criteria. Control samples taken Systematic Random Sampling. The statistical test used was Chi-Square and Odds Ratio (OR) with 95% CI. The results of data analysis showed that there is a relationship between the induction of labor with mild-moderate asphyxia in newborns. It meaning that women who undergo labor induction at risk 5.68-fold more likely to give birth to infants with mild-moderate asphyxia when compared to women who did not undergo labor induction. Conclusion The correlation between induction of labor with mild-moderate asphyxia in newborns in the General Hospital of DR. Soedarso Pontianak

Key Words: Induction, Labour, Mild Moderate asphyxia. Newborn Baby

### INTRODUCTION

The World Health Organization (WHO) states throughout the world, it is estimated that approximately 23% of all neonatal mortality due to neonatal asphyxia. Since the 2000-2003 asphyxia ranks sixth, which is about 8%, as a cause of child deaths worldwide after pneumonia, malaria, neonatal sepsis and premature birth. Throughout the world, hypoxia in the newborn estimated 23% of neonatal deaths. In Indonesia, according to the *Human Development Report 2009*, the IMR in Indonesia reached 34 per 1,000 births. target *The MDG* for a reduction in the infant mortality rate in Indonesia is at 23 per 1,000 births alive in 2015 (Profile of Health, 2009). Household Health Survey (Household) in 2001, said the cause of death of newborn asphyxia as much as 27% (Maryunani, 2009: 46).

Labor is the process of spending the products of conception (fetus and placenta) that has been quite a month or can live outside the uterine through the birth canal or through any other way with help or without help (own power). There are several forms of labor that are spontaneous labor, artificial labor, and childbirth encouragement. Childbirth suggestion is when the strength required for labor generated from outside stimulation. One suggestion is labor induction of labor (Manuaba, 2010: 164).

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through the birth canal or through any other way with help or without help (own power). There are several forms of labor that are spontaneous labor, artificial labor, and childbirth encouragement. Childbirth suggestion is that if the power required for labor generated from outside stimulation. One suggestion is labor induction of labor (Manuaba, 2010: 164).

Induction of labor is a process to initiate uterine activity to achieve vaginal delivery (Liu, 2007: 182). Indications for induction include mother indications and fetus indication.

Induction of labor is a process to initiate uterine activity to achieve vaginal delivery (Liu, 2007: 182). The purpose of the action is to achieve his 3 times in 10 minutes, 40 seconds duration (Saifuddin, 2002: P9-P10). The success of labor induction associated with a cervical condition at the start of induction. To assess the condition of the cervix examination of the cervix and cervical score (score bishop). If the bishop score  $\geq 8$  labor usually use oxytocin and amniotomy. Conversely, if the Bishop score  $\leq 7$  finalize the cervix using prostaglandins (Liu, 2007: 185-186). One of the risks of induction of labor is uterine hyperstimulation. Pharmacologic agents used to stimulate uterine activity can cause excessive uterine amplitude and frequency. When the frequency of contractions exceeds 5 per 10 minutes uterine activity becomes less efficient. Hyperstimulation occurs after the use of high concentrations of oxytocin. This resulted in uterine hyperstimulation fetal hypoxia (Liu, 2007: 190).



A mild-moderate asphyxia in newborns is a state of the baby can not breathe spontaneously and regularly immediately after birth so that the process of physiological adaptation interrupted with an Apgar score of 5-7. Mild-moderate Asphyxia can be caused by maternal factors, placental factors, factors of fetal and neonatal factors. Maternal factors one of which is uterine hyperstimulation that causes mild to moderate asphyxia. Then there are some risk factors for mild-moderate asphyxia divided into categories which risk factors antepartum, intrapartum risk factors, and risk factors fetus. One risk factor is the induction intrapartum (Maryunani, 2009: 48-50).

Infant Mortality Rate (IMR) in West Kalimantan in 2009 based on data from the Central Statistics Agency still refers to the province of IMR in 2005 amounting to 38.41 per 1,000 live births because the competent agency has not issued the latest figures. That figure if differentiated between a baby boy with baby girls, 33.34 per 1,000 live births for AKB girls and 43.73 per 1,000 live births for AKB men (Health profile Kalbar, 2009). Regional General Hospital Dr. Soedarso Pontianak in West Kalimantan, a referral hospital so many cases found pathologies associated with obstetrics. From early survey found the data from 1601 live births in 2015 consisting of 651 births *sectio* Caesaria, 98 birth with actions, *vacuum extraction* 594 spontaneous birth without induction and 258 spontaneous birth by induction. In live birth there were 304 cases of mild-moderate asphyxia and in spontaneous labor induction, 56 babies are born with mild-moderate asphyxia. Reasons for induction is 16, pre-eclampsia, 7 eclampsia, 7 premature rupture of membranes, 7 breech presentation, three premature births, 2 the first stage lengthwise, 1 pre-eclampsia light, 1 hypertension in pregnancy, 1 anemia, 1 hemorrhage antepartum, 1 history of *vacuum* extraction, 1 multiple births, and one psychiatric disorder.

This is why researchers want to know clearly about the relationship of labor induction with mild-moderate asphyxia in newborns at the Regional General Hospital Dr. Soedarso Pontianak.

Based on the background, the formulation of the problem in this research is "What is the relationship between labor induction with mild-moderate asphyxia in newborns at the Regional General Hospital Dr. Soedarso Pontianak Year 2015?"

The objective of the research in order to determine the relationship between the induction of labor with mild-moderate asphyxia in newborns at the Regional General Hospital Dr. Soedarso Pontianak Year 2015.

## RESEARCH METHOD

*Control* where researchers examined the relationship between labor induction with mild-moderate asphyxia in newborns using the retrospective approach.

Population in this study were all newborns living in the General Hospital Dr. Soedarso Pontianak the period 1 January to 31 December 2015. The population in 2015 is 1 601 live births. For a sample of cases in this study were all newborn infants with asphyxia mild-moderate in the General Hospital of Dr. Soedarso Pontianak on:

Criteria for inclusion in this study are:

- 1) Newborns life at the General Hospital of Dr. Soedarso Pontianak who had complete data.
- 2) newborns single.
- 3) Babies born with the presentation back of the head.
- 4) newborns asphyxiated mild to moderate.

Exclusion criteria in this study were:

- 1) Babies born with:
  - a) Sectio Caesaria
  - b) Vacuum extraction
- 2) Baby born with:
  - a) coil cord
  - b) knot umbilical cord
  - c) prolapse of the umbilical cord
  - d) Less months on premature
  - e) serotinous or through months
- 3) Congenital abnormality

The samples in this study were 180 infants consisted of cases that meet the specified criteria is 90 infant and control adjusts the case with the 1: 1. The sampling technique used was *purposive sampling* in which case was taken by inclusion and exclusion criteria. While the control sample taken Systematic Random Sampling which way they were taken was the first samples were randomly selected and for the samples again been a systematic manner.

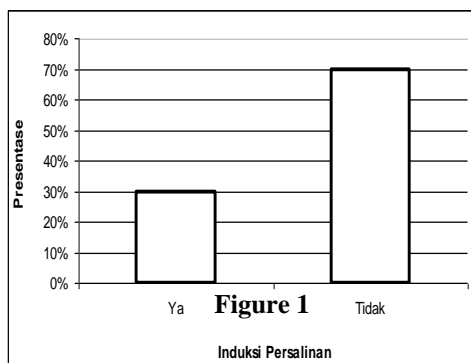
Variables in this study are:

1. Variables (*Independent Variable*) in this study was an induction of labor.
2. Variable Bound (*Dependent variable*) in this study were mild-moderate asphyxia in newborns.

Data collection instruments used in this study is a checklist consisting of the identity of the mother (number Medical Record, name, age, and address), parity, problems, Hb, status obstetrics (labor induction, or without induction) and the baby's condition at birth (asphyxia mild-moderate or no mild-moderate asphyxia).

## RESULT AND DISCUSSION

### Frequency Distribution Induction of Labor

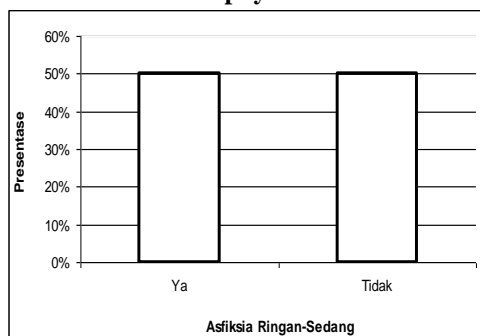


### Distribution Frequency Induction of Labor

Based on figure 1 distribution of frequencies of occurrence of labor induction, obtained the proportion of women who undergo labor induction by 30% and women who did not undergo induction of labor by 70%.

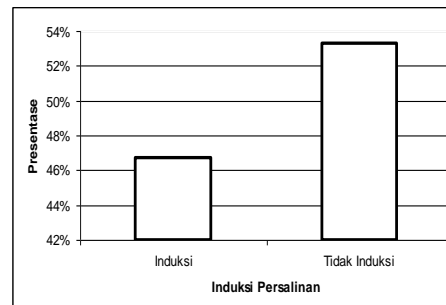
### Frequency Distribution of Mild-Asphyxia

**Figure 2**  
Frequency distribution of Mild-Moderate Asphyxia



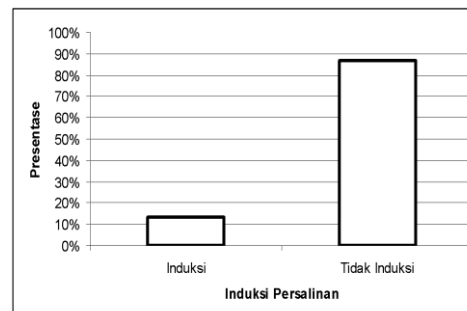
Based on Figure .2 frequency distribution asphyxia mild-moderate, obtained the proportion of infants with asphyxia mild-moderate by 50% and infants who are not asphyxiated mild-moderate by 50%.

**Figure 3**  
Frequency Distribution of infant experiencing asphyxia Mild-Medium based on induction and not induction criteria



Based on Figure 3 frequency distribution of infants with asphyxia mild to moderate based on the criteria of induction and induction, obtained the proportion of infants with asphyxia mild-moderate induction of labor at 47% and did not do the induction of labor at 53%.

### Distribution Frequency Infants not Experiencing Mild-Moderate asphyxia Based on induction and not induction Criteria.



**Figure 4: Frequency Distribution Infants Not Experiencing Asphyxia Mild-Moderate Based on Induction and not induction Criteria**

Based on Figure 3 frequency distribution infants not asphyxiated mild to moderate based on the criteria of induction and induction, obtained the proportion of infants not asphyxiated mild-moderate induction of labor at 13% and did not do the induction of labor by 87%.

The bivariate analysis used to determine the relationship between variables, independent variables, and the dependent variable, as described below:

**Table 5: Relationship Induction of Labor with asphyxia Mild-Moderate in the General Hospital of DR Soedarso 2015**

Induction of Labor	Light		Medium		Amount	X <sup>2</sup>	P	OR
	-		-					
	N	%	N	%				
Yes	42	23,3	12	6,7	54	30	22,2	0,00
No	48	26,7	78	43,3	126	70		

Note : CI=95%;  $\alpha = 0,05$

Based on Table 5, induction of labor relations with mild-moderate asphyxia at the General Hospital DR Soedarso Pontianak showed that there is a relationship between the induction of labor with mild-moderate asphyxia in newborns with  $P = 0.000$  or  $P < 0,05$  which means  $H_0$  accepted (significant) and  $OR = 5.68$  means that women who undergo labor induction have the possibility of only 5.68 times more likely to produce offspring with mild-moderate asphyxia when compared to women who did not undergo labor induction.

The significance of test results showed no correlation between the induction of labor with mild-moderate asphyxia in newborns. This is indicated by P value = 0.000 smaller than  $\alpha = 0.05$ ,  $H_0$  accepted. While the results of the calculation *Odd Ratio* (OR) of 5.68, meaning that women who undergo labor induction at risk 5.68-fold more likely to give birth to infants with mild-moderate asphyxia when compared to women who did not undergo labor induction. This research was supported by the results of research Wulandari (2011) and Ritonga (2009) who argued that there is a relationship between prolonged labor with asphyxia with CI 95% ( $\alpha = 0.05$ ). In research Wulandari (2011) states that there is a relationship between prolonged labor with asphyxia with  $OR = 5.23$  means that women with prolonged labor had a 5.23 times greater risk of having infants with asphyxia. While the research Ritonga (2009) also states that there is a relationship between prolonged labor with asphyxia with  $OR = 3.03$  means that women with prolonged labor had a 3.03 times greater risk of having infants with asphyxia.

This is consistent with the theory Maryunani (2009 : 48) asphyxia in newborns is a condition where the baby can not breathe spontaneously and regularly immediately after birth so that the process of adaptation of the physiological disturbed. According to Prawirohardjo (2007: 709) asphyxia due to a disruption of gas exchange and transport of oxygen from mother to fetus so there's disruption in the supply of oxygen and remove carbon dioxide. Infants who experience a lack of oxygen will occur and rapid breathing in a short period. If asphyxia continues, the movement will stop breathing, heart rate also began to decline, while the neuromuscular tone decreases gradually (Prawirohardjo, 2009: 347).

According to Kattwinkel (2006: 7-3) mechanical obstruction of the airway caused by meconium or pharyngs or viscous mucus in the trachea, atresia choana and pharyngeal airway malformation. Impaired lung function due to pneumothorax, pleural effusion congenital, congenital diaphragmatic hernia, pulmonary hypoplasia, immaturity weight and congenital pneumonia. According to Maryunani (2009: 48) the risk factors asphyxia are divided into categories of risk factors antepartum, intrapartum risk factors and risk factors fetus. Intrapartum risk factors that malpresentation, prolonged labor, meconium in the amniotic fluid, premature rupture of membranes, induction of labor and umbilical cord prolapse. This research was supported also by Yuniarti (2001) that the three clients who are having problems hypotonia uteri then do the induction of labor, there is one obstetric problem is only partially mitigated potential problems fetal distress related to placental insufficiency. This is consistent with the theory of Manuaba (2010: 454) noted an important complication in labor induction is fetal distress. Fetal distress due to impaired circulation retroplacenta on tetania uteri. This research was supported by the results of research Indriyani (2011) which suggests that there is a relationship between the induction of labor with asphyxia.

This is consistent with the theory Fitrianiingsih (2009: 128) oxytocin works selectively on uterine smooth muscle to stimulate the rhythmic contractions of the uterus, increasing the frequency of existing contractions and improve the tone of smooth muscles of the uterus. Response largely depends on the stimulation threshold uterus to these drugs. The side effects of oxytocin are excessive stimulation of the uterus. When done oxytocin, both the frequency and strength of uterine smooth muscle contraction will be increased so that more intense labor pain. Strengthening labor with oxytocin carries the risk of uterine hyperstimulation,

oxytocin always contains the danger of uterine contraction tetanic (Jordan, 2004: 158). Ergometrine and oxytocin pharmacodynamics effects by combining oxytocin continuously with ergometrine, thereby increasing uterine contractions. The effect is proportional to the magnitude of the doses administered. A small dose causes the elevation of amplitude and frequency, followed by relaxation. Large doses cause tetanic contraction and elevation of muscle tone in the resting state. Very large doses cause contractions lasting (Susanti, 2011: 76).

One of the risks of induction of labor is uterine hyperstimulation. Pharmacologic agents used to stimulate uterine activity can cause excessive uterine amplitude and frequency. When the frequency of contractions exceeds 5 per 10 minutes uterine activity becomes less efficient. Hyperstimulation occurs after the use of high concentrations of oxytocin. This resulted in uterine hyperstimulation fetal hypoxia (Liu, 2007: 190). The side effects of induction of labor are divided into side effects on the mother and adverse effects on the fetus. One side effect of induction of labor in the fetus is low Apgar score in the 5th minute (Fitrianiingsih, 2009: 131). Based Research Hila (2011) ratings Apgar at the 5th minute show a likelihood of success in performing neonatal resuscitation. If the Apgar score in the 5th minute lower still needs to be done resuscitation back. Fetal monitoring needs to be done because there is a risk of fetal distress (Norwitz, 2007: 121). Based on the results of existing research and theory, stating that women who undergo labor induction at risk for having a baby with mild-moderate asphyxia.

## CONCLUSION

Based on the analysis that has been done in this study, it can be concluded that women who undergo labor induction have the possibility of only 5.68 times more likely to produce offspring with mild-moderate asphyxia compared with women who did not undergo labor induction. Statistical analysis showed that the P value = 0.00 < 0.05 then  $H_a$  accepted, meaning that there is a relationship between the induction of labor with mild-moderate asphyxia in newborns at the Regional General Hospital DR Soedarso 2015.

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# MOTHER'S AGE AND PARITY RELATIONSHIP WITH PLACENTA PREVIA INCIDENCE IN DR SUDARSO HOSPITAL PONTIANAK, INDONESIA

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## ABSTRACT

Bleeding is the number one cause of maternal deaths. In 2015, out of a total of 1892 patient person, there are 1601 pregnant women > 28 weeks. And who was diagnosed with placenta previa as many as 34 patients. The purpose of this study is to determine the relationship between maternal age and parity with the incidence of placenta previa at DR Sudarso hospital. Research method used an analytical survey case control approach. Comparison of cases and controls 1: 1 32 cases and 32 controls. The sampling technique used purposive sampling. The statistical test used was the chi-square test and Odds Ratio calculation with a confidence interval (CI) of 95% and the estimated 5% ( $\alpha$  0.05). The results of that study of 64 pregnant women studied, aged <20 or> 35 years as many as 18 people (28.12%) and those aged 20-35 years as many as 46 people (71.88%). For parity, 1 or> 3 as many as 46 people (71.88%) and parity 2-3 as many as 18 people (28.12%). There was no relationship between age and placenta previa and no relationship between parity with placenta previa. The conclusion there was no correlation of age with the incidence of placenta previa and there was no correlation with the incidence of placenta previa parity.

**Key words: Age, Parity, Pregnancy, Placenta previa**

## INTRODUCTION

According to WHO (World Health Organization), there is a maternal mortality of 500,000 people per year (Manuaba 2012 : 4). According to data obtained Indonesian Demographic and Health Survey (IDHS) in 2013, Maternal Mortality Rate (MMR) in Indonesia amounted to 359 per 100,000 live births. The number is still very far from the target of the fifth Millennium Development Goals, which in 2015 reached 102 deaths per 100,000 live births.

The background of maternal deaths in Indonesia is bleeding obstetrik (24.8%), infection (14.9%), eclampsia (12.9%), obstructed labor is not forward /dystocia (6.9%), abortion unsafe (12.9%), and other causes (7.9%). Bleeding obstetrik that to caused deaths maternal consist of abruption placenta (19%), coagulopathy (14%), tearing of the birth canal, including uterine rupture (16%), placenta previa (17%), accreta placenta or increta and perkreta (6%), atonic (15%) (Wiknjastro 2008 : 493).

Placenta previa is one of the causes of bleeding in late pregnancy with the incidence rate of 31% which is the first order (D Fraser & Cooper, 2011: 293). The results of the study by Abdat hospital dr. Moewardi Surakarta in 2009 got the risk of placenta previa in women multiparity increase of 2.53 times, and there is a relationship between parity with the incidence of placenta previa. According to Hartono research in hospitals dr. Soedarso Pontianak, showed no

significant association between age maternal  $\geq$  35 years with placenta previa and had 1.87 times the risk for placenta previa occurs.

Placenta previa is a condition in which the placenta implants in abnormal places, namely in the lower uterine segment that covers part or the entire opening of the birth canal (Mochtar, 2012: 187). In some of the Government General Hospital reported incidence ranging from 1.7% to 2.9%. Placenta previa is more common in multiple pregnancies than singletons. *Uterus* unblemished participate heightens kejadiannya figures. However, more pregnancies with *parity* high and at the age above 30 years (Wiknjastro 2008: 496).

There are some major complications that can occur in pregnant women with placenta previa, some of which can cause bleeding quite a lot and fatal, causing anemia even shock. Recurrent bleeding is a consideration for the termination of pregnancy for the mother to be life-threatening and can cause fetal distress, thus increasing the number of actions sectio caesarea, birth premature and additional hospitalization days. Additionally placenta previa can trigger placenta increta even placental perkreta, the risk of retained plasenta and laceration of the cervix, because the implantation of the placenta in the lower uterine segment who do not have much muscle tissue so tuft chorionic embedded penetrate muscle tissue, even reaching the serous lining of the uterus. Abnormalities location of the child in cases of placenta previa due to the

shape of the uterus is abnormal implantation of the placenta at the bottom (Wiknjosastro 2008: 499).

The maternal mortality rate in West Kalimantan is still fairly high at 403 / 100.000 live births compared to the national level that is 228 / 100.000 live births. The results of a preliminary survey conducted in the delivery room Regional General Hospital (Hospital) DR Sudarso, of the register book reflected an increasing trend of placenta previa in the last 3 years.

Based on the background, the formulation of the problem in this research is "What is the relationship of mother's age and parity with placenta previa incidence in DR Sudarso Hospital Pontianak Year 2015?". The purpose of this study is determining the relationship between mother's age and parity with the incidence of placenta previa in DR Sudarso Hospital Pontianak Year 2015

## RESEARCH METHOD

This research is analytic survey and design used is casecontrol. The study design is known as nature retrospektif, namely design with hindsight of events relating to the events studied (Hidayat, 2007:57).

This study was conducted in DR Sudarso Hospital Pontianak in April 2015. the population in this study were all pregnant women with gestational age  $\geq$  28 weeks entered the delivery room at the District General Hospital DR Sudarso Pontianak in the period January,1 to December,31 2014 which amounted to 1601 people. The sampling technique used purposive sampling, which is based on a certain consideration which made the researchers themselves, based on the characteristics or properties of a previously unknown population (Notoadmodjo, 2002: 124). Certain considerations which mean the inclusion and exclusion criteria.

### 1) Inclusion Criteria

Pregnant women with gestational age  $\geq$  28 weeks with placenta previa who entered the delivery room hospital DR. Pontianak Sudarso the period January, 1 to December, 31 2014.

### 2) Exclusion Criteria

- a) Disabled endometrium.
- b) Tumor uteri.
- c) Malnutrition

The number of cases that met the inclusion and exclusion criteria as many as 32 people. The comparison between the case group and the

control group is 1: 1 so that the amount of the overall sample of 64 people.

## RESULTS AND DISCUSSION

From the results of the 64 respondents, obtained a description of maternal age as follows:

Table 1 Frequency Distribution of Mother's age in DR Sudarso hospitals Pontianak 2015

Age (year)	Case		Control		Total	
	n	%	n	%	n	%
<20 or >35	9	14,	9	14,	18	28,1
20-35	2	1	23	1	46	2
	3	35,		35,		71,8
		9		9		8
Total	3	50	32	50	64	100
	2					

Most of the study subjects aged 20-35 years as many as 46 people (71.88%), in the case group there were 23 people (35.94%) and the control group are also as many as 23 people (35.94%).

Table 2 Frequency Distribution Mother's parity in DR Sudarso Hospital Pontianak 2015

Parity	Case		Control		Total	
	n	%	n	%	n	%
1 or >3	20	1,3	26	40,6	46	
2 - 3	12		6	9,4	18	71,9
		8,7				28,1
Total	32	50	32	50	64	00

Most of the 64 respondents, mostly with parity 1 or > 3 as many as 46 people (71.88%), which in the case group of 20 people (31.25%) and the control group there are 26 people (40.63%).

## Relationship Mother's age with the incidence of placenta previa

Table 3 Analysis Bivariate relations Mother's age with placenta previa incidence in DR Sudarso hospitals Pontianak 2015

Age	Case		Control		OR	X <sup>2</sup>	P Value
	n	%	n	%			
<20 or >35	9	14,1	9	14,1	1	0,077	1,000
20-35	23	35,9	23	35,9			
Tot al	32	50	23	50			

From table 3 showed pregnant women with placenta previa mostly aged 20-35 years that is

numbered 23 people (35.94%). Values  $X^2$  obtained 0.077count. Furthermore, compared with the value  $X^2$  tables are sought on the degrees of freedom (df) = 1 of the significance level of 95% and a degree of error of 5% (0.05).  $X$  values obtained<sup>2</sup> table 3,841. This indicates  $X^2$  count <  $X^2$  table. *P values* obtained (1.000) is greater than  $\alpha$  (0.05). In the analysis of the data obtained by calculating the value of OR = 1.

**The relationship of parity with the incidence of placenta previa**

Table 4 Analysis Bivariate Relations Mother’s Parity with Placenta Previa Incidence in DR Sudarso hospitals Pontianak Year 2015

Parity	Case n	Case %	Control n	Control %	OR	$X^2$	<i>P value</i>
1 or >3	20	31,3	26	40,6			
2 - 3	12	18,7	6	9,4	0,385	3,787	0,164
Total	32	50	32	50			

From table 4, the result of relations mother’s parity with placenta previa mostly with parity 1 or > 3, as many as 20 people (31.25%). The calculation of the value  $X^2$  count values obtained 3.787.  $X^2$  count <  $X^2$  tables (3, 841) which get by finding degrees of freedom (df) = 1 of the significance level of 95% and a degree of error of 5% (0.05). Thus concluded  $H_0$  accepted (no relation to parity with the incidence of placenta previa). *P value* = 0.164 which is greater than  $\alpha$  (0.05). So conclusion is also no parity relationship with the incidence of placenta previa. From the analysis results are also obtained OR = 0.385. That is parity <2 or> 3 is not quite likely to be the risk of placenta previa.

**The relationship of age to the incidence of placenta previa**

Based on bivariate analysis showed no association of age with placenta previa in DR Sudarso hospitals Pontianak in 2015, in which the acquired  $X^2$  arithmetic (0.077) <  $X^2$  table (3.841). Calculation results Chi square using a computerized program also shows the same thing, with the obtained *P value* = 1.000 >  $\alpha$  (0.05). So  $H_0$  accepted (no relation to age with the incidence of placenta previa). With OR = 1, indicate age is not a risk factor for placenta previa in DR Sudarso Hospital Pontianak in 2015.

These results are not in accordance with Aryanti’s study (2009) that get results there is a significant correlation between the age of pregnant women with placenta previa in hospitals Sragen, and research Hartono (2012) that get results maternal age is a factor that increases the risk of placenta previa in pregnant women in the General Hospital dr. Pontianak Soedarso year period 2009-9011. Age  $\geq$  35 years of 1.87 times likely to occur placenta previa. The impact of increased maternal age, especially  $\geq$  35 years likely related to the aging of the uterus, causing sclerosis the ofarteries of small and arteriolesmyometrium,causing blood flow to the endometrium is uneven so the placenta grows with surface area greater, to get the blood flow is adequate, which ultimately led to the occurrence of placenta previa.

The study also does not fit with the theory Mochtar (2012: 189) which states married and pregnant at a young age can cause endometrial hypoplasia, where at a young age endometrium is still immature (inferior). Condition and function of the reproductive organs are immature causing implantation of the egg in buahi not occur in the uterine endometrium part of the corpus, but on the lower part of the uterus.

In the book of Obstetrics Williams (Cunningham, 2013: 189) written older women more often request counseling preconceptions and women who are physically fit with no medical problems, the risk is much lower than previously reported. This is likely to cause age is not a risk factor for placenta previa in DR Sudarso Hospital Pontianak in 2015. The incidence of placenta previa in pregnant women should receive intensive supervision and treatment because of impact on the health of the mother, such as the results obtained from studies Maharani (2012) that anemia is greater than the etiology of placenta previa totalis group and solutio placenta. Placenta previa also have an impact on the welfare of the fetus, which is drawn from research Herath (2012) that get results There was a significant association between placenta previa and asphyxia,also researches Yaniarti (2012) which concludes that there hubungnan significantly between placenta previa with obstructed labor prematurely and placenta previa 2.5 times likely to occur premature parturition.

Research results obtained from the univariate analysis that women with risk age (<20 or> 35 years) who had placenta previa were 9 people (14.06%), is small compared with the group healthy reproductive age (20-35 years) as many as 23 people (35.94%). This illustrates that

research results are more dominant in healthy reproductive age who have placenta previa, the picture indicated that the possibility of small samples are obtained and other factors that affected the results. Factors or other assumptions in question may be circumstances that affect the anatomical structure of the mother's womb, such as maternal age healthy reproduction with a Body Mass Index (BMI) is not normal, have a history of cysts, myoma uteri, curettage.

### **The relationship between the parity of pregnant women with incident placenta previa**

Bivariate analysis results obtained by  $X^2$  value count (3.787), which is smaller than  $X^2$  tables (3,841). Meanwhile, analysis Chi square using a computerized program obtained P value = 0.164 >  $\alpha$  (0.05). So conclusion is also no parity relationship with the incidence of placenta previa ( $H_0$  accepted). Statistical analysis was also obtained from the value of OR = 0.385. That is parity < 2 or > 3 is not quite likely to be the risk of placenta previa. The results of this study are not in accordance with the theory that high parity play a role in the process of inflammation and atrophy of the endometrium, so that endometrium a thin makes implantation placental expanded (Wiknjosasto 2008: 496).

Nor is it consistent with studies Abdat hospital dr. Moewardi Surakarta in 2009 got the risk of placenta previa in women multiparity increase of 2.53 times, and there is a relationship between parity with the incidence of placenta previa (p value 0.055). The increased risk in multiparity is due to vascularization reduced and atrophy of the decidua as a result of previous deliveries. This resulted in blood flow to the placenta is not enough so the placenta expand the surface to look for parts of the blood supply is a lot that is part of the lower uterine segment and cover the birth canal, which is usually associated with placental migration.

In the study Suherni (2007) in getting the results there is a relationship which significantly between parity with placenta previa and parity > 3 increases the risk of placenta previa is three times higher than the parity 1-3. This suggests, although the results of research conducted there was no correlation between parity with the incidence of placenta previa in DR Sudarso Hospital Pontianak 2015 but the parity is risky, especially parity > 3 can increase the risk of pregnancy. The results of the univariate analysis of risk group (1 or > 3) found the incidence of placenta previa as many as 20 people (31.25%), while the parity is not at risk as many as 12 people (18.75%). It describes the physiological placental implantation in the endometrium does

not occur at the location of the placenta implementation earlier. Then the mother with parity > 3 anticipated for the next pregnancy.

To prevent the increased risk of pregnancy due to high parity by setting the number of parity, one of which is a program of Family Planning, can use both hormonal contraception and non-hormonal. So the necessary awareness, support and cooperation of all parties to regulate the amount of parity, both from the woman herself, the family, society and government.

### **CONCLUSION**

1. There is no correlation between mother's age and the incidence of placenta previa.
2. No the relationship between mother's parity with the incidence of placenta previa.

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# THE UTILIZATION OF HEALTH CENTER SERVICES BY MOTHERS WITH EXPERIENCE OF PREGNANCY COMPLICATIONS IN INDONESIA

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## ABSTRACT

The maternal mortality rate in Indonesia in 2012 increased to 359 per 100,000 live births and among ASEAN countries it ranked the second highest after Laos. The high incidence of complications in pregnant women in Indonesia is a contributor to high rates of maternal and infant mortality.

This study aimed to analyze the utilization of health center services in mothers with pregnancy complications. This study was a quantitative study using a cross-sectional design with multilevel analysis at three levels (individual, public health center and district). Data used were from Basic Health Research (Riset Kesehatan Dasar/Riskesdas) in 2013 and Health Facility Research (Riset Fasilitas Kesehatan/Risfakes) in 2011.

The results showed the incidence of pregnancy complications was by 3.0% and the utilization of public health center by the pregnant mothers was 66.9%. The contributing factors at the individual level were: the frequency of ANC more than 4 times, consuming Fe tablet, getting counseling about emergency, the easy transportation, living in urban areas, having health insurance and high household expenditure (PCV: 45.61%). At the health center level, the contributing factors were phone ownership, the existence of workshops, the existence of quality assurance (PCV: 11.12%; MOR: 3.05). At the district level, the contributing factors were regions other than Java and Sumatra with the utilization of PHC service by 0.6 times compared to regions other than Java and Bali (PCV: 57.4%; MOR: 2.25). It is suggested that the area outside Java, Bali and Sumatra should be given priority to increase the number of PONE health centers accordance with the standard accompanied with completeness in infrastructure for cooperation with the provincial and district/municipal government. The implementation of MCH program should be emphasized in remote areas and poor communities. The implementation of the health insurance program for all Indonesian people should be accelerated, especially for the poor segments of society.

**Keywords:** pregnancy complications, utilization of health center services.

## INTRODUCTION

The number of maternal mortality rates has been a challenge to the medical world. The cause of death is directly due to pregnancy by 73% and to the indirect causes by 27%. (Say, 2014; Hussein, 2012; Dumont, 2013; Sikder, 2014). The maternal mortality rate (MMR) in Indonesia rose to 359 per 100,000 live births in 2012. In comparison to the maternal mortality rate in ASEAN countries, maternal mortality rate in Indonesia ranked second highest after Laos (WHO, 2012). Indonesia was the fourth largest country in the world in terms of the occurrence of cases of pregnancy complications (UNICEF, 2012). The high incidence of complications in pregnancy, childbirth and postpartum in Indonesia was a contributor to high rates of maternal and infant mortality (Achadi, 2012; MoH RI, 2013).

According to some studies, the incidence of complications in pregnancy is influenced by many things, including parity, age at pregnancy,

education level, occupation and birth attendants (Kakaire, 2011; Tayade, 2012; Birmeta, 2013). Public Health Center as one type of health care is the main gateway of primary health care carried out in accordance with standards of operational procedure and service of the Health Minister Regulation number 75 of 2014 (Ministry of Health, 2014).

According to McCarthy and Maine's theory (1992), several factors are found associated with postpartum complications that impact on maternal mortality. Maternal disability and mortality could be caused by complications during pregnancy and/ or aggravated by inadequate and not timely services of complication managements. Other unknown and unpredictable factors also contribute to the occurrence of complications during pregnancy.

According to Endang (2012), an estimated 15% of pregnancies and deliveries would experience complications. Most of these complications

could be life-threatening, even though they could be prevented and handled. Thus, for complications that require hospital services, continuum of care, ie, care at the primary level up in the hospital should be taken. Steps of management will not be helpful if the steps on the basic level are inadequate. Instead, the presence of adequate services in hospital will not be helpful if the patients experiencing complications are not immediately referred.

According to WHO (2013), utilization of services in health facilities depends on the availability of service infrastructure and readiness at the health facilities. The availability of facilities and infrastructure to service in the health center comprises two components, ie, Availability and Readiness (Kosen, S, 2013).

## RESEARCH METHOD

This was a quantitative observational study with a cross sectional approach from the secondary data of the 2013 Riskesdas and the 2011 Risfaskes. The target population in this study was all women aged 12-54 years who had been pregnant and given birth during the period of last three years in accordance with the sample of the 2013 Riskesdas. The samples were 1769 pregnant women who experienced complications in PHC services.

Data collected from various sources were merged using code number of the Sub-Districts. The dependent variable in this study was the utilization of health services at the public health center while the independent variables were taken from three levels, ie, the level of the individual, the level of public health center, and the level of district/ municipality. Multivariate

**Table 1. Model of Individual Level, Public Health Center, District/Municipality on the Utilization of Pregnancy Complication Services**

Fixed Effect	Coef B	SE	Nilai p	OR	95% CI Lower pper	
<b>Individual Level:</b>						
No history of asma (ref. With history)	-0.631	0.097	0.001	0.5	0.37	0.76
No history of hypertension (ref.with	-0.225	0.131	0.171	0.7	0.57	1.10

analysis was performed to look at the role and relevance at all levels and see which factors were most responsible by using multilevel data analysis.

## RESULTS AND DISCUSSION

The result showed the number of respondents who experienced obstetric complications amounted to 12.8% (7563 cases of 58 847 mothers), while the mothers with pregnancy complications at the health center care were 3.0% (in 1769 the mother). From the data, the mothers who took advantage from the pregnancy complication services in health care were 66.9%.

The key modeling on individual level included high expenditure of household (OR 2.4); the coverage of health insurance (OR 2.0); easier transportation to health care (OR 1.7); and ever receiving counseling of emergencies (OR1,6). The amalgamation of these factors showed that 45.61% participated in utilization of complication services.

The key modeling at PHC level included medical devices in accordance with PONE standard (OR 2.0). A change in the value of the variance (PCV) showed this factor contributed to the utilization of the complication services by 11.12%.

The key modeling at the level of district/municipality included the existence of the division of the region. Pregnant women who utilized the services of complications in the region in addition to Java, Bali and Sumatra were 0.6 times lower. Once it was added by the factor of district/city, there was 17.7% of those who utilized the services of complications after it was controlled by other variables.

history)						
ANC more than 4 times (ref. Less than 4 times)	0.321	0.197	0.025	1.3	1.04	1.82
Consumption of Fe tablet (ref. No consumption)	0.250	0.231	0.165	1.2	0.90	1.82
with emergency counseling (ref. Without counseling)	0.503	0.356	0.020	1.6	1.08	2.52
Easy means of	0.437	0.271	0.012	1.5	1.09	2.18

transportation (ref. difficult)						
Urban residency (ref.rural)	-0.189	0.180	0.204	1.2	0.90	1.62
With health insurance (ref. Jamkes Without insurance)	0.653	0.310	0.000	1.9	1.40	2.63
High expenditures (ref. low)	0.748	0.298	0.000	2.1	1.60	2.78
Parity (ref.more than 4)	-0.134	0.117	0.315	0.8	0.67	1.13
<b>PHC Level:</b>						
<b>Sarana Prasarana:</b>						
With phones (ref. No phones)	0.243	0.225	0.169	1.2	0.90	1.80
With Poned facility (ref. No facility)	0.045	0.199	0.813	1.0	0.72	1.51
With medic instrument (ref. Without medic instrument)	-0.085	0.175	0.657	0.9	0.63	1.33
<b>PHC readiness:</b>						
Having workshop (ref.no)	0.359	0.411	0.212	1.4	0.81	2.51
Having quality assurance (ref.no)	0.228	0.179	0.110	1.2	0.94	1.66
<b>District/municipal level:</b>						
Regional : (ref. Java, Bali)						
- Sumatera	-	0.211	0.785	0.9	0.60	1.45
- Others	-	0.138	0.055	0.6	0.45	1.00

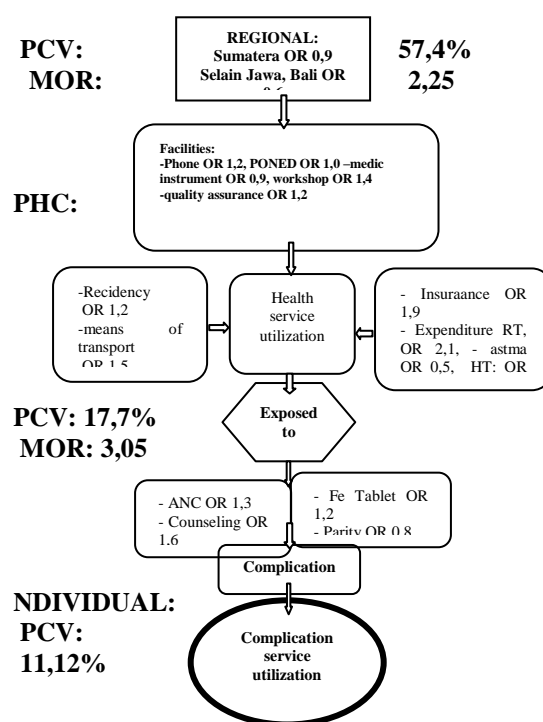
PCV : 57.4% MOR of PHC : 3.05 MOR of District: 2.25

Merging the factors at the level of individual, health centers and district/municipality obtained the percentage of change in value of variance (PCV) of 57.4%; simultaneously all the factors contributed at 57.4%. Median Odd Ratio (MOR) of the health centers was 3.05 (half

mothers at health centers tended to be likely to use services of less than 3.05 times, the other half had a better chance than 3.05 times). MOR of district/municipality was 2.25 (half of the districts/municipalities tended to be likely to be used of less than 2.25 times, the other half had to be used of more than 2.25 times).

From the multilevel analysis, a flow of the linkage of utilization of pregnancy complications at the level of individual, public health centers and district/municipality is delivered in the following diagram.

**DISTRICT/MUNICIPALITY:**



Most complications in pregnant women were high blood pressure (hypertension), in contrast with the previous year's data, ie, bleeding. Mothers with a history of previous pregnancy complications would choose the place of delivery in a health facility.

The contributing factors were the frequency of ANC visits, the consumption of Fe tablet, the ownership of MCH books, the presence of counseling of emergency, the convenient transportation, the urban residency, the membership of health insurance and mothers with higher household expenditures. In line with Tipping and Segal's a study (1995), the utilization of medical services for obstetric complications was influenced by socio-

economy, maternal age, type of disease, access to health services and quality of care. This was also consistent with the results of Mengistu and Tafere's study (2011) that pregnant women who received ANC had nearly eight time chance of giving birth in a health facility.

Women who consume Fe tablet indicate that they have been exposed to health services; if they have complications, they will prefer to seek care at a health facility. A pregnant woman at the second trimester of pregnancy will have a declined hemoglobin level caused by hemodilution in the mother's body which is physiologically called physiological anemia. Pregnant women who visit health services will get maximum Fe tablet for 90 days for the prevention of severe anemia. Ejigu's study (2013) in Ethiopia showed that 64% of pregnant women did not get Fe tablet during ANC visits and had pregnancy complications.

Mother who got emergency counseling during her pregnancy was likely to utilize health services if she had emergencies. Safety of Pregnant women with complications depends on the easy access to the nearest health facility and precision intervention given. The sooner the mother gets help, the safer her life is more assured. Travel time, mileage, the availability of transportation, road conditions and topography are the environmental factors that affect the access to health care for pregnant women (Pambudi, 2014).

Mothers who live in urban are relatively easy to reach a health facility compared to those living in rural areas. It is a determinant of poor visits done by pregnant women to health services (Sandi I., 2012).

Health insurance is one way to reduce the cost as a barrier to access to health services (Anderson, 1995). Protection of health insurance in women who have complications during previous pregnancies is very important, because the experience of complications will probably happen again in the next pregnancy and childbirth (MoH, 2015, Thabrany, H., 2009).

Pregnant women who have low household expenditures will be difficult to access to health services. Health costs in this case do not only include the cost of delivery and medicines, but also include the cost of transportation to health care, living costs for the family while waiting for delivery, and the cost of losing work time (Thadeus & Maine, 1995).

Efforts to reduce lower expenditures of household are a duty of the government to implement various intervention programs with the provision of health insurance insured by the government.

In line with Agha and Carton's study (2011), there is a significant association between the income and the utilization of delivery assistance by health personnels. Other studies have claimed there is a relationship between socio-economic status and the utilization of obstetric services (Makoka 2009; Zere, 2012).

Data of Risfaskes in 2011 showed that almost half of health centers did not have means of communication (phone/Hp/communicating radio). The availability of means of communication in the clinic should be an important consideration in order to improve the quality of patient care, especially in the face of emergencies.

The existence of health centers with PONE facilities is very strategic to be able to provide first aid in emergency circumstances (MOH, 2004). Mothers who are in the area of public health center with PONE facilities tend to utilize the services of complications.

The contributing modeling at the level of districts/municipalities included the areas other than Java and Bali. Mothers who are in the area other than Java, Bali and Sumatra had a smaller tendency in using the service compared to the area of Java and Bali (0.6 times).

## CONCLUSION

Based on the results of the analysis, the most powerful contributing factor was at the level of district/municipality. Factor of areas of the district/municipality played a very important role in the utilization of health services by pregnant women who experienced complications. In Sumatra, the utilization was almost similar with mothers who were in the areas of Java and Bali. Meanwhile, mothers who were in the area other than Sumatra, Java and Bali utilized the services lower.

Other factors as the contributing modelling in the level of health centers and individual were the existence of emergency counseling at health centers and poverty and health insurance that would hamper the utilization of health services for pregnant women who experienced complications.

## RECOMMENDATIONS

It is advisable for the central and district government to establish a policy on the area of district/municipality to prioritize increasing the number of public health centers in accordance with PONED standard, mainly focusing in the area other than Sumatra, Java and Bali.

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## DETERMINANTS OF THE USE OF CONTRACEPTIVE INTRA UTERINE DEVICE (IUD) AT COMMUNITY HEALTH CENTRE IN PALEMBANG 2014

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### ABSTRACT

One of Population programs in Indonesia is to improve the promotion and motivation of the national family planning program which has been implemented and aimed to reduce the burden of poverty, ignorance and backwardness due to population pressures and increase efforts to support the welfare of the population through the program - the other development programs. Formulation of the problem in this research is the determinant factor of what relates to the use of contraceptive IUD in community health centre in Palembang 2014. The objective of the research was to determine the determinant factors related to the use of contraceptive IUD in community health centre in Palembang 2014. This research is an analytic survey with cross sectional approach. The population of the study was the whole acceptors of family planning program LTM (IUD and implants) at community health centre in Palembang 2014. There were 4927 number of acceptor as the population and there were 100 samples in this study. The sampling technique used is by means of systematic random sampling. The data were analyzed by using univariate and bivariate in chi square test and univariate by using multiple logistic regressions. Bivariable analysis results showed that there was no significant correlation between the level of education and the attitude of the use of IUD with p value was  $<0.05$  and there was no correlation between age, parity, employment, family income value, safety, knowledge, availability of information, resources, staffs skills, husband support, and the support of medical staffs in using IUD (p value  $> 0.05$ ). Results of univariate logistic regression showed that variable resource availability gave the most dominant influence on the use of IUD with p value 0.025 OR 8.267. It is hoped that this research can provide input in the area of reproductive health programs, especially IUD programs in space of pregnancy.

**Keywords:** age, education, parity, employment, knowledge, attitudes, family income, value, safety, husband support, staffs support, availability of resources, information, and IUD.

### INTRODUCTION

The high birth rate in Indonesia is an issue that requires special attention, one of the ways to solve this issue is by promoting family planning programs in a comprehensive manner. One of the strategies is the implementation of family planning programs as contained in the Medium Term Development Plan of 2010-2014 and the changing strategic environment and to meet the target of achieving the Millennium Development Goals (MDGs) which is to bring access to reproductive health in 2015, the availability of family planning services in Long Term Contraceptive Methods (LTCM) as in IUD / IUDs, Implants (implant) and sterilization which result in the impact on the total fertility rate (TFR). (BKKBN, 2011).

The advantage of using an IUD is it only requires one installation for long periods of time at relatively low cost. It is also safe because it does not have a systemic influence circulating throughout the body, and it does not affect

breastfeeding and fertility after the removal of an IUD (Maryani, 2008). Many factors affect the use of IUDs including age, education, parity, employment, knowledge, spousal support and economic status (Laksmi, 2009). LTCM including IUD usage is still relatively low among women of childbearing age who are affected by many factors such as social, demographic, economic, infrastructure and quality of service (BKKBN, 2011). Maryatun 2007 stated that the low use of IUDs due to several factors, including lack of education, knowledge excess to IUD, the quality of services seen from the availability of contraceptives, medical skills of health workers, husband support, the existing norms in society, feeling reluctant or embarrassed. Nationally, the combination of contraception percentage for each participant of IUD is as much as 6.82%; MOW 1.16%, MOP 0.16%, 6.45% implants; injections of 50.95%; 28.07% pills, condoms 6.38%. The majority of the new FP dominated the use of non LTCM amounted 85.41% (BKKBN, 2013).

Based on BKKBN South Sumatra Province Achievement of new FP provincial level in 2012, it is as many as 504 661 (124.33%) for the active family planning participants achieving the greatest contraceptive injections per mix which is as much as 40.87%, 26.72%, on the other hand, pill IUD 4.79%, implants 18.03%, MOP 0.42%, MOW 3.2%; condoms 5.98%. (BKKBN South Sumatra Province, 2012) in Palembang, the active participants of family planning program from all health centers in Palembang in 2012 mostly used injection 45.03%; pills 38.44%, while for FP implant LTM 5.80%; IUD 4.59%; MOP 0.18%; MOW 2.76% (BKKBN Palembang, 2012).

## RESEARCH METHODS

The method used in this research was analytic survey with cross sectional approach. The population in this study were all the active family planning acceptors of long-term contraceptive methods (IUDs and implants) at the community health centre where the study had (6 community health centre) with 4927 number of acceptors. The sample in this study was taken by means of systematic random sampling and there were 100 samples obtained.

## RESULTS AND DISCUSSION

This research was conducted with the primary data collection, namely direct interviews with respondents using a questionnaire with 14 variables studied namely age, education, parity, employment, family income, knowledge, attitudes, sense of safety, value, availability of information, the husband support, medical staffs support, availability of resources, and medical staffs skills.

Table 1.1. Determinant factors associated with the use of IUD in community health centre in Palembang in 2014

Characteristic	Contraceptive Device Usage				P value	OR	CI (95%)
Age	Old	26	74.3%	9	25.7%	0,3	0,191-1,448
	Young	55	84,6%	10	15,4%		
Education	High	20	66,7%	10	33,3%	0,0	0,105-0,829
	Low	61	87,1%	9	12,9%		
Parity	High	43	79,6%	11	20,4	0,9	0,832
	Low	38	82,6%	8	17,4		
Occupation	Employed	28	80	7	20	1	0,906
	Unemployed	53	81,5	12	18,5		
Family Income	High	33	78,6%	9	21,4%	0,7	0,764
	Low	48	82,8%	10	17,2%		
Knowledge	Good	33	86,8%	5	13,2%	0,3	1,925
	Lack	48	77,4%	14	22,6%		
Attitude	Positive	72	84,7%	13	15,3%	0,0	3,962
	Negative	9	60%	6	40%		
Sense of Security	Yes	28	77,8%	8	22,2	0,7	0,726
	No	53	82,8%	11	17,2		
Score	Accepted	27	73%	10	27%	0,1	0,450
	Less Accepted	54	85,7%	9	14,3%		
Information Availability	Yes	33	76,7%	10	23,3%	0,4	0,619
	No	48	84,2%	9	15,8%		
Husband Support	Yes	45	80,4%	11	19,6%	1,0	0,909
	No	36	81,8%	8	18,2%		
Medical Staffs Support	Yes	64	78%	18	22	0,1	0,209
	No	17	94,4	1	5,6		
Medical Staffs Skills	Skillful	71	81,6	16	18,4	0,7	1,331
	Less Skillful	10	76,9	3	23,1		
Resources Availability	Yes	73	83	15	17	0,2	2,433
	No	8	66,7	4	33,3		

Table 4.8 Analysis of the determinant factors associated with the use of IUD based on multiple logistic regression

Varabel	Koef (B)	SE (B)	P Value	OR
<b>Pre Mode</b>				
Education	-	0,582	0,545	0,333
Attitude	1,101	0,713	0,086	3,370
Medical Staffs Support	1,215	1,255	0,003	0,404
Resources Availability	-	1,010	0,514	0,157
Child Value	1,851	0,608	0,002	7,135
Constants	1,965	1,188	0,299	3,434
<b>Post Mode</b>				
Education	-	0,567	0,038	0,308
Attitude	1,177	1,262	0,073	0,104
Resources Availability	-	0,944	0,025	8,267
Constants	2,266	1,074	0,052	8,047
	2,112			
	2,085			

### **The Relationship between Age and the Use of Contraceptives IUD in Community Health Centre in Palembang**

Based on the results of chi square test, it showed that there was no significant relationship between age of respondent with the use of contraceptive IUD where  $p$  value was  $= 0.232 > \alpha$ . According Hartanto (2010) age suitability of a woman can affect the accessibility of a particular method. The age factor is very influential on aspects of human reproduction, especially in the setting of the number of children born and the time of delivery is much related to maternal health. Age also affects contraceptive choice, the older mothers prefer contraceptive choice and highly effective tool that has the long-term contraceptive methods. (Pinem, 2009) The increasing age of a person who has ideal number of children will encourage couples using contraceptive IUD. Young women tend to use injectable contraceptives, pills and implant, older women tend to choose long-term contraception (BKKBN, 2008).

The results of this study were not consistent with a research conducted by Maryatun, et al (2012) in Sukoharjo community health centre, it was indicated that there was a significant relationship between maternal ages and the use of contraceptive IUD with  $p$  value was (0.000). Winarti's research results, et al (2010) showed that age associated with the use of IUDs, FP IUD generally in older aged women compared with other planning participants. This study did not affect a person's age using contraceptive methods IUD although in theory at the oldest age is so risky, so that mothers are encouraged to choose a long-term contraception and young age can use another form of contraception for pregnancy.

### **The relationship between education and the use of IUD in Community Health Centre in Palembang**

From the research results of chi-square test, it showed that there was no significant correlation between the respondents' education and the use of contraceptive IUD where  $p$  value was  $= 0.035 < \alpha$ . According Hartanto (2010) education is a determining factor in the lifestyle and status of life in society showed that the level of education does not only affect the willingness to use family planning but also the selection of a method. The results are consistent with research conducted by Viviroy (2008) showed that the

level of education of a woman has a strong influence on the reproductive behavior and the use of contraceptives. The level of education strongly influence a person to act and find the cause and solution in his life. Highly educated people will usually act more rational and more receptive to new ideas (Notoatmodjo, 2014).

### **The relationship between parity with the use of IUD in Community Health Centre in Palembang**

From the results of the chi square test, it showed that there was no significant relationship between the parity of respondents and the use of contraceptive IUD with  $p$  value was  $= 0.902 > \alpha$ . Parity woman can affect whether or not a method is suitable medically. BKKBN in the Biological Research 2008 generally stated that the use of contraception in line with the number of children of IUD acceptors mostly have the number of children  $> 3$ . In this study was not consistent with the theory of Winkjosastro (2012) in which parity affect the use of contraceptives that is due to the increasing number of children. High parity  $> 3$ , the risk of high parity should be prevented by doing contraception because the higher the parity, the more risk that the mother had to thin out her pregnancy by using contraceptives such as IUDs long term. In this study, the parity was not related to the use of IUD. It was possible because of the low parity women who have had enough with the number of children and in accordance with the BKKBN program of having two children is enough so that more people choose IUD.

### **The relationship between Occupation and the use of IUD in Community Health Centre in Palembang**

Chi-square test results showed that there was no significant relationship between respondents occupation and the use of contraceptives IUD where  $p$  value was  $= 1.000 > \alpha$ . One option for contraception which is recommended for women is IUD, because contraception to prevent pregnancy is safe in the long term, in contrast to injectable contraceptives should be done regularly every month and the contraceptive pill should be eaten every night (Media Indonesia, 2010). This study is not consistent with a research done by N. G. Anggraeni, 2012 on maternal sociodemographic characteristics relationship with IUD use in

Klungkung regency in 2010. It showed that there was a significant relationship between mother's occupation and the use of IUD with p value  $< \alpha$ .

### **Relationship between Family Income and the use of contraceptive IUD in Community Health Centre in Palembang**

From the results of the chi square test, it showed that there was no significant relationship between family income with the use of contraceptive IUD where p value was  $= 0.788 > \alpha$ . This study did not concur with Anggraini's study (2011) with the result of the significance relationship between income and the use of IUD ( $P < 0.05$ ). Research done by Radita (2008) showed similar results with this analysis that there was no significant relationship between level of family welfare and the use of contraceptive. In this study, women with a low-income family backgrounds preferred IUD for the economical and practical reasons rather than other contraceptives.

### **The relationship between knowledge and the use of contraceptive IUD in Community Health Centre in Palembang**

Chi-square test results showed that there was no significant relationship between the respondents' knowledge and the use of contraceptive IUD where p value was  $= 0.366 > \alpha$  (0.05). The results of this study differ from Nurbaity's Research (2013) in community health centre Simpang Tiga in Pidie district in Aceh. It declared a significant relationship between knowledge and the use of IUD with p value was  $< \alpha$ . It is different with the result of a research done by Viviroy (2008) which indicated that there was a significant relationship between knowledge and the use of IUD. Someone who has a good knowledge of a particular type will be influenced in choosing a contraceptive, including freedom of choice, suitability, effective selection or discomfort.

### **The relationship between attitudes to the use of contraceptive IUD in Community Health Centre in Palembang**

Attitude is enclosed response to the stimulus or object that already involves factors of opinions and emotions of someone. Chi-square test results showed that there was a significant relationship between respondents' attitudes to the use of contraceptive IUD with p value was  $= 0.036 < \alpha$ . In line with the research conducted by

Dewi H (2008) in Gede, Yogyakarta, the result showed that there was no influence between maternal attitude towards the election of IUD use with X count 2,354. A positive attitude will bear lasting behavior; otherwise the behavior which is not based on a positive attitude will not last in a long period. In this study, for the respondents who have a positive attitude because the respondent has an emotional, psychological, and positive belief in IUD, a person's attitude is determined by emotional reactions or beliefs toward what is considered right about an object including the IUD. The lack of experience at all with an object tend to form a negative attitude towards the object, the influence of others in social life including the use IUDs are very influential on the formation of attitudes in the selection of contraceptive IUD use.

### **The relationship between a sense of security and the use of contraceptive IUD in Community Health Centre in Palembang**

Based on the results of chi square test, it showed that there was no significant relationship between a sense of security and the use of IUD where p value was  $= 0.276 > \alpha$ . The results of the research in the working area of community health centre in Batuah Kertanegara Kuti (2012) showed that many women feel less secure and comfortable with the IUD, frightened by the IUD. In this study, although most respondents declared unsafe during installation or after installation did not dampen the desire to do contraceptive IUD due to space or to prevent the need for pregnancy which are quite effective and also the possibility of free installation costs because it was installed during the last safari contraceptive.

### **The relationship between the value toward the installation of IUD in Community Health Centre in Palembang**

Chi-square test results showed that there was no statistically significant association between value and the use of IUD where p value was  $= 0.912 > \alpha$  with OR 0.450. Based on BKKBN (2012), family wishes to have a child which is closely linked with each other's views about the value of children's families. The higher the family awareness about the value of children and the desire to have ideal number of children is the higher awareness of participants' family planning. The results of this study showed that the respondents were not only viewed from the view of the value of children in the family, but



by other factors that also affected long-term contraceptive use, less hassle and the effectiveness of contraception.

#### **The relationship between the availability of information and the use of contraceptive IUD in Community Health Centre Palembang**

Based on the results of chi square test, it showed that there was no significant correlation between the availability of information and the use of contraceptive IUD where  $p$  value was  $= 0.493 > \alpha$ . According to Notoatmodjo 2008, the researcher says that more information obtained will increase one's knowledge and with that knowledge, it ultimately raises awareness to behave according to their knowledge. Results of a research done by Marandita 2008 in Subang hospital showed that the availability of information has a major influence on the survival of the mother to use the IUD, especially information obtained from health workers will add knowledge and awareness for mother who became acceptors. Research result conducted by Lili 2009 is not the same as the results of this study which stated that there was a significant relationship between the availability of information covering a wide range of media associated with the use of IUD with  $p$  value was  $= 0.049$ . The results of this study indicates that respondents stating the lack of availability of information from medical staffs, keep using the IUD because there are many ways to get information at this time when the present is the digital era. Information can be easily obtained from print, electronic, online and from the experience of others.

#### **The relationship between staff's support and the use of contraceptive IUD in Community Health**

Chi-square test results showed that there was no significant correlation between staff's support and the use of contraceptive IUD where  $p$  value was  $= 0.183 > \alpha$ . This study is not consistent with a research done by Angraini, 2011 in the District Kalungkung which aimed at assessing the relationship between the mother's sociodemographic characteristics and the use of IUD. It was showed that the IUD usage variables associated significantly ( $p$ , 0.05) was the impulse clerk and convenience fees. Support or motivation given by officers greatly affect the stability of the mother in using a method of contraception (Manuaba, 2010). In this research officer support factor did not affect the use of IUD. It was due to the influence of acceptors

experience who have installed IUD and other reasons.

#### **The relationship between husband's support and the use of contraceptive IUD in Community Health Centre in Palembang.**

Based on the results of chi square test, it showed that there was no significant relationship between husband's support and the use of contraceptive IUD with  $p$  value was  $= 1.000 > \alpha$ . This research differs from research conducted by Nurbaiti (2013) in community health centre Simpang Tiga Aceh Pidie Regency. It was stated that there was a significant relationship between husband support ( $p$  value  $< 0.05$ ) and the use of IUD. This study is in line with the results of research done by Radita K (2008) which showed no significant relationship between the partner support and the use of IUD with  $p$  value was  $> \alpha$ . The role of the husband is very dominant and holding power in the decision whether the wife will use contraception or not, because the husband is seen as a protector, breadwinner in the household and decision-makers (Effendi, 2008). Husband's support factor did not affect wives in to use IUD, the wives who have lack of support from her husband chose IUD due to family economic status consideration, so the wives took the decision to determine the choice to use contraceptives in which they do not have to spend a lot and get benefit of long-term protection.

#### **Relationship availability of resources and the use of contraceptive IUD in Community Health Centre in Palembang**

Chi-square test results showed that there was no statistically significant association between the availability of resources and the use of contraceptive IUD where  $p$  value was  $= 0.234 > \alpha$ . The results of this study differ from research done by Siswanto (2007). It was reported that there was no significant correlation between the availability of services and the use of IUD ( $p$  value  $= 0.001$ ), which is access to services relating to the availability of the source of both the availability of service of staffs, facilities, equipment, and infrastructure. Research and development centers and Family Welfare KB BKKBN 2011 carried out about the factors that influence the use of LTCM in six regions of Indonesia, Bali, and Nusa Tenggara. It indicated that the variable availability of services has a significant relationship with  $p$  value was  $= 0.01$ . In this research, the availability of sources of

contraceptives did not affect the respondent's use of IUD, because in addition to the government-owned health facilities undertaking planning services. Respondents can also get IUD services at midwife clinics and through service in the implementation of family planning safari activities.

### **The relationship between the staff skill and the use of IUD in Community Health Centre in Palembang**

Based on the results of chi square test, it showed that there was no significant relationship between skills of officers and the use of contraceptive IUD with p value was = 0.708. This study is in line with the results of research conducted by Devi 2012 in the District of Semarang Padurungan. It was found that there was no relationship between the skills of the officer or the quality of service with the installation of IUD with p value was 0.502. Skills of health workers in family planning services greatly affect the achievement of targets in family planning programs, especially coverage for contraceptive IUD is in need of special skills.

### **CONCLUSION**

Education, Attitude, Medical Staffs Support, availability of resources and the value of children associated with the use of IUD in Palembang. Availability of resources is the most dominant factor affecting the use of IUD.

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# THE FACTORS AFFECTING THE HEALTH WORKERS WHO WORK IN REMOTE AREAS, BORDER, AND THE ISLANDS TO SURVIVE WORKING IN SANGAU REGENCY WEST KALIMANTAN, 2014.

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## ABSTRACT

In 2006, Indonesia has crisis on healthcare workers especially those stationed in remote areas (WHO, 2006). Health worker crisis caused by the lack of interest of health workers in DTPK and less inequality. The providing of incentive is one way the government to improve the retention of health workers in remote, border and island areas. The purpose of this study was to describe the factors that influence the health workers who works in remote, border and island areas, to remain working in West Kalimantan Sanggau Regency, 2014.

This research is descriptive quantitative research with cross sectional approach. This research was conducted in Sangau regency of West Kalimantan with respondents that are health workers in DTPK, where the data used is primary data analysis is performed using bivariate test smirnov for Kolmogorov-determine the factors that influence health professionals who work in remote, border and island , to remain working. Sampling technique used total sampling, with sample number as many as 77 respondents who entered the inclusion criteria.

The result showed that as many as 77 respondents of health workers who remain working in DTPK based length of work mostly working 0-5 years (45%) while working 6-10 years (27%) and > 10 years (27%). Most of the health workers who last worked in DTPK has aged 31-40 years (40%), education diploma (70.2%), income > 1500000-2500000 (53%), with the employment PTT status (12%) , female gender (77%), and grade 3 (41.6%). Kolmogorov-Smirnov test results showed there was a significant relationship between the age of length of work (p-value: 0.00), the income of the length of work (p-value: 0.00), employment status and length of work (p-value: 0, 01), rank / class towards the long work (p-value: 0.00), education towards the length of work (p-value: 0.00), and no significant relationship between the gender of the length of work (p-value: 0 , 17).

**Key words:** Health worker, border area, survive working

## INTRODUCTION

According to WHO, in 2006 Indonesia as one of the countries that have a crisis in health workers, especially for those who want to be placed in remote, border and island (DTPK), while people living in disadvantaged and remote areas should have access to health workers competent. The crisis is also aggravated by the low retention of health workers to dedicated in remote, border and island (DTPK).

Crisis in health workers caused by various factors, among others, the lack of interest of the health workers themselves in place in DPTK area. Less inequality in the distribution of health workers can be view by the ratio of health workers.

The latest data from the Ministry of Health in 2013 showed that the ratio of doctors in island and outside the island of Java is not

balanced; the rate is estimated lower again for the underdeveloped and remote area.

The limited amount, type and quality of health workers in the area due to various constraints such as the limited formation of a civil servant in a region, the unavailability of educational institutions for the types of certain health workers, lack or absence of rewards or good incentives, retention of health workers and inadequate management health workers well for demand planning, recruitment and selection, placement distribution, career development, training and good supervision of the presence/ attendance and performance of Health workers at the job site. (Ministry of Health, Ministry of Health Regulation No. 9 in 2013).

Many effort has been made by the government among others issued several related policies namely conducting,

managing, supervising and help the education of health workers, establish the use and deployment of public and private health workers, removal of PTT, and other policies. However, those efforts are still perceived height Turnover (displacement) of health personnel on duty in remote, border and island (DTPK).

Providing of incentive is a factor that is important to attract health workers to work in remote areas. This is in line with WHO program to achieve the Millennium Development Goals (MDGs), namely Recommendation Increasing Access to Health Workers in Remotes and Rural Areas Through Improves Retention, there are four aspects that must be intervened separately to increase the availability of health workers in remote areas: education, policies, incentives and support for the personal and professional. (WHO, 2010).

Providing incentives for health workers in remote, border and island (DTPK), is one of the ways the government to improve the retention of health workers in remote areas, border and island (DTPK), which is regulated through the Ministry of Health Regulation No. 9 Year 2013 on Special Assignment Health Personnel and the Ministry of Health Regulation No. 7 Year 2013 regarding the Appointment and Placement Doctor And Midwives.

Based on the results regarding the Effect of Incentive to Health Workers in remote area, border and island (DTPK) Papua Province in 2011 explained that the providing incentive is one of the factors that influence the retention of health workers in DTPK. From these results, it is suggested to conduct another depth study on equitable incentives for health workers in DTPK, because of differences in the amount of the cost of living in each region. (Fitriana, Irma, 2011)

From the problem above, it is needed for stacking study incentive components of health workers in DTPK in order to improve retention and assessment conducted in two districts (hospitals and

health centers) in DTPK to be compared and the results of the study will be input for policy incentives of health workers in remote areas, border and island (DTPK).

## RESEARCH METHOD

This research is quantitative descriptive cross sectional study conducted in Sanggau West Kalimantan with respondents that health personnel in DTPK, where the data used is primary data analysis is performed by using bivariate with Kolmogorov-Smirnov test to determine the factors that affect power health work in remote, border and island areas, to remain working. Sampling technique is used total sampling, with sample as many as 77 respondents who entered the inclusion criteria.

## RESULT AND DISCUSSION

The health Worker work in remote, border and island based on length work category, the highest is 0-5 years as many as 45%, the most respondents aged 31-40 years was 49%, the highest respondent as many 34% educated D3 midwifery, high-income respondents > Rp. 1500000-2500000 as much as 53%, the majority of employees are already civil servants by 73%, and the highest gender Female respondents as much as 77%, the highest of all respondents of grade 3 as many as 41.6%.

Table1. Frequency of Univariate Analysis Distribution of Respondents by Health Workers Who Work in DTPK in Sanggau

Characteristic	Percentage (n=77)
<b>Length of work</b>	
0-5 years	45%
6-10 years	27%
>10 years	27%
<b>Age:</b>	
20-30 years	35%
31-40 years	40%
>40 years	25%
<b>Education</b>	
SPK	1.3%
Farmasi	3.9%
Diploma	70.2%
Dokter	18.2%
S1	6.4%
<b>INCOME</b>	
Rp. 0	6%
> Rp. 1.000.000-1.500.000	10%
>Rp. 1.500.000-2.500.000	53%
>Rp. 2.500.000-4.000.000	30%
<b>Employment status</b>	
Civil Servant	73%
Non civil servant	1%
Contract	5%
PTT	12%
Special assignment	5%
Volunteer	4%
<b>Sex</b>	
Laki-laki	23%
Perempuan	77%
<b>Grade</b>	
Grade 2	27,3%
Grade 3	41,6%
Grade 4	5,2%
No grade	26,0%

Table 2. Bivariate Analysis Based on Health Workers Who Work in DTPK in Sanggau West Kalimantan in 2014

Variable	Length of work		
	0-5 years	6-10 years	>10 years
	%	%	%
<b>Age</b>			
20-30 years	28,6	5,2	1,3
31-40 years	14,3	15,6	10,4
>40 years	2,6	6,5	15,5
<b>Education</b>			
SPK	0,0	1,3	0,0
Pharmacy	0,0	1,3	2,6
Diploma	31,2	19,5	19,5
Doctor	10,4	5,2	2,6
S1	3,9	0,0	2,6
<b>Income</b>			
0	5,2	1,3	0,0
>1.000.000	9,1	1,3	0,0
0 – 1.500.000			
>1.500.000	23,4	18,2	11,7
– 2.500.000			
>2.500.000	7,8	6,5	15,6
0 – 4.000.000			
<b>Employment Status</b>			
civil servant	23,4	22,1	27,3
Non civil servant	0,0	1,3	0,0
Contract	3,9	1,3	0,0
PTT	10,4	1,3	0,0
Special assignment	3,9	1,3	0,0
Volunteer	3,9	0,0	0,0
<b>Sex</b>			
Male	11,7	9,1	2,6
Female	33,8	18,2	24,7
<b>Grade</b>			
Grade 2	10,4	10,4	6,5
Grade 3	13,0	10,4	18,2
Grade 4	0,0	2,6	2,6
No grade	22,1	3,9	15,6



According to the table 2 regarding health personnel who work in DTPK based on the age towards length of work are in the average of age 20-30 years with length work 0-5 year (28.6%) test results with kolmogrov-Smirnov statistic in obtaining p-value = 0, 00 ( $\alpha < 0.05$ ). Age is a factor that can influences the formation of knowledge, and characteristics associated with the age of maturity for mental and intellectual faculties. This was confirmed by Hartono 2003, the older the person, the knowledge, wisdom and emotional maturity of someone are growing. So it is in line with the theory described.

Regarding to the health workers who work in DTPK based on length of work education is Diploma (31.2%) test results with kolmogrov-Smirnov statistic in obtaining p-value = 0.00 ( $\alpha < 0.05$ ). by education, people can understand what their needs, according to Gagne learning contributes to the adaptation necessary for developing a logical process, so the development of the behavior is the result of learning are cumulative effect (Gagne, 1968) , Furthermore, he explained that learning is not a single process. Learning cannot be defined easily, because learning is complex. So that it is in line with the theory described.

Regarding the health workers who work in DTPK based income towards length of work as many as > 1500000-2500000 with length of work 0-5 years (23.4%) test results with kolmogrov-Smirnov statistic in obtaining p-value = 0.00 ( $\alpha < 0.05$ ). According to WHO in 2010 as a form of attention to health workers in remote areas in the DTP, the government has provided incentives to attract health workers to perform duty that area. This incentive is given to increase the income of the personnel. As mentioned above, health workers especially midwives protested when enacted provisions limiting the PTT. This ensures that incentives are adequate and more than adequate, so that health workers are reluctant to release their PTT status. Minister of Health Decree No. 1307/ Menkes/SK/IX / 2010 regarding Income

and Special Incentives and Employee Variable Doctors and PTT midwife. So that it is in line with the theory described.

Regarding the health workers who work in DTPK based on employment status of length of work are civil servant as many as 0-5 years (23.4%) test results with kolmogrov-Smirnov statistic in obtaining p-value = 0.01 ( $\alpha < 0.05$ ). According to Rousseau (1995), the psychological contract is a major influence on the behavior in the workplace and when a large number of individual workers to have a positive relationship with the organization, then the individual will contribute the loyalty, cooperative behavior, and obedience. However contrary when less positive psychological contract, the workers responded with uncooperative behavior with organization. So that it is in line with the theory described.

Regarding the health workers who work in DTPK based on the gender are at most that women with length of work 0-5 years (33.8,%) test results with kolmogrov-Smirnov statistic in obtaining p-value = 0.17 ( $\alpha > 0.05$ ). Meanwhile, according to Dyne and Graham (2005) in general, women face greater challenges in achieving their career, so that the commitment is high. This is due to female employees feel that their household responsibilities are in husband hands, so that the salary provided by the organization is not something that is very important to them. So that it is not compatible with the theory described.

Regarding the health workers who work in DTPK by grade towards length of work at most that there is no longer working group with 0-5 years (22.1,%) test results with kolmogrov-Smirnov statistic in obtaining p-value = 0, 00 ( $\alpha < 0.05$ ). According to Siagian (2009), Promotions is the transfer of an employee or employees' position or place in the office or other places of higher and was followed by duty, responsibility and authority higher than previously occupied positions. in general, promotion followed by an increase in income as well as other amenities. The award for the

performance is usually expressed in the form of promotion. So that the increase grade would make the workers are willing to stay longer at work, even to the remote area. However it is in line with the theory described.

## CONCLUSION

1. The results of univariate analysis in this research showed that the distribution of frequency most by length of work mostly working 0-5 years (45%) while working 6-10 years old (27%) and > 10 years (27%). Most of the health workers who last worked in DTPK has aged 31-40 years (40%), education diploma (70.2%), income > 1500000-2500000 (53%), with the employment status PTT (12%), female gender (77%), and grade 3 (41.6%).
2. The results of the bivariate analysis found no correlation between age, education, income, employment status, grade with length of work, and no relationship between the genders with length of work.

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## THE EFFECT OF FERRO SULFATE PROVISION on pregnant *Rattus norvegicus* to THE WEIGHT OF THE FETUS

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### ABSTRACT

Number 88 of 2014 states that the iron tablet must be given to pregnant women every day during pregnancy or at least 90 tablets. A research by Casanueva & Viteri (2003) showed that a dose of 60 mg / day during pregnancy in normal pregnant women can cause hemoconcentration, decreased birth weight and increase prematurity. Pregnancy is highly susceptible to oxidative stress that caused by arising production of reactive oxygen species (ROS) which can lead to excessive pathological pregnancy such as abortion, KPD, preeclampsia and IUGR.

**Purpose :** Proving the effect of the ferrous sulfate provision in *Rattus norvegicus* pregnancy to weight of fetus  
**Method:** This study used Wistar type *Rattus norvegicus* pregnant rats that consisting of four treatment groups. This research was a laboratory experimental design with post test only control group. This study measured the weight of the fetus in pregnant rats were given ferrous sulfate with different duration of administration.

**Result:** Results of research on pregnant rats showed that there were significant differences on weight of the fetus ( $p < 0.05$ ). The mean weight of fetus in the control group and the given group of early-gestation, mid-gestation and late gestation, respectively ( $4.79 \pm 0.80a$ ,  $1.52 \pm 0.26b$ ,  $0.39c \pm 2:56$  and  $3:15 \pm 0.03d$ ) found a mean reduction in fetus weight in line with the length of time of administration of ferrous sulfate.

**Summary:** The longer the time the provision of ferrous sulfate in pregnant *Rattus norvegicus* can lose the weight of the fetuses

**Key words:** Provision, Ferro Sulfat, Pregnancy of *Rattus Norvegicus*

### INTRODUCTION

Indonesian National Program currently recommends giving 60mg iron tablet to prevent anemia. Ferrous sulfate is iron supplement that oftenly used in Indonesia due to its inexpensive compounds and can be absorbed nearly 20% (Linda et al, 2007). Regulation of the Minister of Health of the Republic of Indonesia Number 88 of 2014 states that the iron tablet must be given to pregnant women every day during pregnancy or a minimum of 90 tablets (MoH RI, 2014). This may imply that every pregnant woman should consume iron tablet every day or at least 90 tablets during pregnancy without considering the iron status of pregnant women. a research by Casanueva & Viteri (2003) showed that a dose of 60 mg / day during pregnancy in normal pregnant women can cause hemoconcentration, decreased birth weight and increase prematurity. This research concluded that 60mg iron supplementation / day is too high for normal pregnant women. However it is still being debated because iron supplements should be available universally, either optimal time period as well as the recommended dosage. Although iron is an important element in human metabolism, but in high level it would be toxic to the cells and tissues in the body.

Heinrich et al (1969) stated that the chemical properties of iron compounds are absorbed passively through paracellular pathway so that most of the iron in the gut can be absorbed directly by the blood. Transferrin saturation reaches a third under normal circumstances, but when it pressed by passive diffusion it will be saturated and NTBI (non-transferrin bound iron) circulates in the plasma that aborted through mechanisms that are not regulated by the endocrine and cardiac cells that causing oxidative stress. Even NTBI is can be observed before transferrin saturation (Dresow et al, 2008). NTBI is free iron that not binds to the transferrin. NTBI in serum and plasma is able to produce free radicals that are highly reactive and cause a variety of organ damage (Cabantchik, 2014). The redox reactions contribute to the occurrence of Fenton reaction that produces free radicals that can cause oxidative stress and result in cell damage to proteins, lipids and DNA (Ma, 2010; Zein, 2014).

Oxidative stress is an indicator of an imbalance between oxidants and antioxidants. When ROS production exceeds the antioxidant capacity, so there will be a condition called oxidative stress. The fetus is protected from the damaging effects of ROS during the phase of embryogenesis and organogenesis for their antioxidant defense mechanisms both internal and external, especially where the expression of antioxidant enzymatic

antioxidants is essential for embryonic development process (Lunghi, 2007). Increased oxidative stress in pregnancy generally occurs at gestational age of 10-12 weeks and peaked at the beginning of the second trimester (Burton & Jauniaux, 2011). Myatt & Cui (2004) stated that pregnancy is very vulnerable to the state of oxidative stress arising from excessive ROS production in early placental development and pathological pregnancy such as preeclampsia and IUGR. Oxidative stress in pregnancy can lead to miscarriage, preeclampsia, premature rupture of membranes (PROM) and intra-uterine growth retardation (IUGR) (Burton & Jauniaux, 2011).

Based on this theory, the researcher was interested to find the effect of ferrous sulfate supplementation on body weight of fetuses in pregnant rats.

### RESEARCH METHODOLOGY

This research was a laboratory experimental design with post test only control group. This study measured the weight of the fetus in pregnant rats were given ferrous sulfate with different duration of administration.

This study used 24 impregnated rats and then divided into four groups so that each group consisted of six mice without any treatment (control group), pregnant rats were given ferrous sulfate from day one to day 20 of gestation (start early pregnancy), pregnant rats were given ferrous sulfate from day 8 to day 20 of gestation (from mid gestation), pregnant rats were given ferrous sulfate expansion day 15 to day 20 of gestation (starting in late pregnancy). Each treatment group was given ferrous sulfate which has been diluted with distilled water, orally administered via feeding tube at a dose of 1 ml / 200 g body weight is equivalent to a dose of 5.4 mg / 200 g body weight of rats.

### RESULT AND DISCUSSION

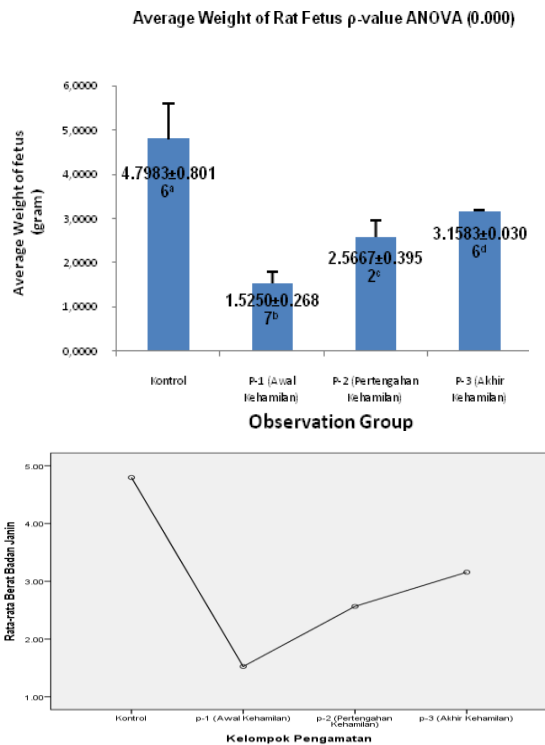
The results of data analysis on normality test was done by using the Shapiro-Wilk test against large-scale data, namely the ratio of the weight of the fetus of pregnant rats were given ferrous sulfate. Based on the results of the Shapiro-Wilk test showed that the fetus weight in pregnant rats for each group of observations have demonstrated p-value greater than the significance level  $\alpha = 0.05$ . So all the data has met the prerequisites of parametric test, which proved the data was normally distributed.

Based on the results of one-way ANOVA test on fetal weight data was obtained no significant difference in mean body weight of mice fetuses of all observation sample groups, as shown by the p-value = 0.000  $< \alpha$ . Furthermore, the multiple comparison test (Multiple Comparisons) to the

Least Significant Difference test / LSD (Least Significant Difference / LSD) showed that there were significant differences mean fetus body weight between the control group (untreated pregnant rats) ( $4.79 \pm 0.80a$ ) with treatment group that given ferrous sulfate supplementation starting from the first day of pregnancy until the 20th day of gestation (from early gestation) ( $1:52 \pm 0.26b$ ), with the provision that starts from day 8 to day 20 of gestation (from mid gestation) ( $2:56 \pm 0.39c$ ), and also a significant difference to the treatment group that was started on day 15 to day 20 (starting in late gestation) ( $3:15 \pm 0.03d$ ). The mean value of fetus weight increased with decreasing timing of ferrous sulfate, or the longer time ferrous sulfate supplementation then decreased the fetus weight. The average value of the lowest fetus weight in the treatment group given ferrous sulfate supplementation started early gestation ( $1:52 \pm 0.26b$ ) compared to the other treatment groups. It can be said that in this study the provision of ferrous sulfate was considered the most capable of suppressing the rate of weight loss was the late provision time.

IUGR in humans has always been associated with preeclampsia where infections occur from mother's blood circulation to the placenta and the high pressure in the spiral arteries of the uterus resulting in stunted fetal blood supply so that the transfer of nutrients from maternal to fetal disrupted and lead to the of intrauterine growth and development (Yung *et al*, 2008). Trophoblast invasion into decidua tissue were also affected by changes in the spiral arteries that became wider. Additionally diameter spiral arteries increased to 4-6 times bigger resulting in increased blood flow to 10,000 times compare to non-pregnant women and so it needed adequate blood flow to supply O<sub>2</sub> and fetus nutrition which was a major requirement in the success of pregnancy. A change in spiral arteries was only in the deciduas arteries and other blood vessels largely in a state of vasoreactive. It increased resistance to blood flow, which in turn led to insufficiency and ischemia. (Poston & Rajmakers, 2004 ; Al Gubory *et al*, 2010 ; Burton & Jauniaux, 2011). In line with Casanueva & Fitri (2003) who stated that a dose of 60 mg of iron during pregnancy caused hemoconcentration, prematurity and birth weight loss.

### Figure 1. Histogram average weight of fetuses in pregnant rats were given ferrous sulfate



**Figure 2. Figure trends mean changes in fetal weight in pregnant rats were given ferrous sulfate**

#### SUMMARY

The earlier of the ferrous sulfate provision meant the lower fetus weight in pregnant rats (*Rattus norvegicus*).

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# THE FACTORS AFFECTING WOMEN BECAME PROSTITUTES IN THE TRADITIONAL MASSAGE BROTHELS "KT" PALEMBANG

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## ABSTRACT

Prostitution is one of forms of society illness that must be halted its spread, without ignoring the efforts of prevention and improvement. The statistics shows, that approximately 75% from the number of the prostitutes are young women under 30 years. They generally enter the world of prostitution at a young age, namely 13-24 years and the most is the age of 17-21 years. As for the views of the cause is due to economic factors, because they want to quickly generate money (42%), do not have the necessary skills (34%), less get parents' affection (4%), loneliness (2%), broken heart (6%), the influence of the association (8%), lifestyle (4%), violence (13%), the debt trap (7%), fraud (73%). The research objectives that affect women be prostitutes. The research was conducted in a traditional massage brothel "KT" Palembang. This research was a study of the descriptive analysis using qualitative approach. Social situation in this research is women who were in the Traditional Massage Brothel (TMB) "KT" Palembang; there were 3 prostitutes as informants registered in the "KT" MPT Palembang and in accordance with the intended criteria and were able to represent other Prostitutes. The results obtained from 3 informants who became informants in this study are all informants said that the major factors made her plunging as prostitutes due to economic reason, one of them said that violence and disappointment against the couple's behavior was a supporting factor which made her to be prostitute. In this case, the environment is also very influential, because 2 among the informant entered the world of prostitution because the invitation of friends and one of them as a result of being deceived. The environment is also very influential in this because 2 among informants into the world of prostitution because the invitation of friends and one of them as a result of being deceived. It is recommended to the Prostitutes in general and Prostitutes at "KT" Traditional Massage Parlor (TMP) especially for looking at his health from Sexually Transmitted Diseases (STD) and IMS. In addition, they have to get an injection of vitamins and antibacterial drugs (antibiotics) every month; they should also recommend the guest to wear a condom for the sake of the health of both.

**Key Words: Prostitutes, women, traditional brothels**

## INTRODUCTION

According to Kartono (2012), Prostitution is one of forms of society illness that must be halted its spread, without ignoring the efforts of prevention and improvement. Prostitution is derived from the latin *pro-stituere*, which means allow themselves to do adultery, to whoredom, fornication, and concubinage. Being prostitute is whore or prostitute. Known by the term Prostitute.

Immorality or not debauchery interpreted as less civilized due to extravagance sexual relations in the form of submission on many men for sexual gratification and get the services reward or money for their services. Immorality also can be interpreted as one of the behaviors, not cohabitants or failed to adapt to the norms of debauchery. Then, the prostitute is a woman who did inappropriate behavior and can bring misfortune / calamity and diseases, both to other people who associate with herself and as well as themselves (Kartono, 2012).

In Asia, on 1996 was estimated that the number of children that prostituted reached 840 thousand people. In Taiwan recorded as much as 60 thousand of children forced to work as a CSW (Commercial

Sex Workers). In Bangladesh, in a port of Naratangi city outside Dhaka is reported to have 1600 sex workers who lived there with their family. In India, the number of children who plunged in the world of prostitution is more pathetic i.e. around 400-500 thousand children. Meanwhile around 300 thousand women from Nepal reportedly have been sold in the brothels in India (Suyanto, 2012).

In South Africa, reported the young women trafficking of Mozambique to brothels in Capetown and Johannesburg have also increased. In Singapore, according to the records of Brazil (2005), nowadays, it was estimated that the number of adult prostitutes in the country with the Merlion symbol is around 6,000 people, and most of them are young women who come from India, Philippine and Indonesia.

In many countries, prostitution is prohibited even imposed penalties. It also considered as a despicable act by all the society members. However, since the existence of the first human society so that the world will end soon, the prostitutes' "livelihoods" will remain there, difficult, even almost impossible eradicated from the earth, as long as there is still sexual desire

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which is out of control from willingness and the heart of conscience. Then, the emergence of the prostitution's problem as pathological symptoms i.e. since the existence of sexual relations and the imposition of norms of marriage (Kartono, 2012).

Although in Indonesia has been ratified by Law No. 23 of 2002 about child protection and various attempts to eliminate the commercial sexual exploitation against women, but it is estimated that the number and scale of the problem is thus still continue to grow. In a National Seminar and Workshop forum against sexual exploitation of children in Jakarta has revealed that the number of girls who were prostituted to have reached the 40-70 thousand. The existence of prostituted children was not only widespread in the big cities such as Jakarta, Surabaya, Bandung and Medan or Yogyakarta, but also widespread in all the archipelago of Indonesia (Kartono, 2012).

In Indonesia, according to a study conducted by Suyatno (2002) in Semarang, the mechanism of recruitment of girls to be traded and be victims of commercial sex exploitation is through fraud (73%), accompanied by violence (13%), the debt trap and cadre recruitment or learning (7%) (Suyanto, 2012).

A study done by Suyanto (2002) about *Child Trafficking* found that the most frequent mode was developed in search of girls recruitment into prostitution is fraud (73%). The guidance of commercial sex workers (prostitutes) is still considered insufficient by social service because the number of commercial sex workers continues to increase every year despite localization formally has been closed by the provincial government. Based on the annually data from social services to rehabilitate prostitutes around 100 people in South Sumatra spread across in regency and city which amount reached 1,116 people. But the rehabilitation has not been able to reduce the number of Commercial Sex Workers (CSW) in South Sumatera. The head of Social Service of Provincial Government South Sumatera Ratnawati to Trijaya said that approximately 1/2 billion rupiah allocated for the rehabilitation of prostitutes amounted to 100 people every year. The Rehabilitation is conducted for 6 months in a year. It also continued to increase the rehabilitation budget in the coming years and will also improve the quality of the rehabilitation of Commercial Sex Workers (CSW) (Trijaya, 2011).

Based on the above-mentioned problems, the author is interested in conducting the research with the title **"the Factors Affecting Women Became Prostitutes in the Traditional Massage Brothels "KT" Palembang 2015 "**.

## RESEARCH METHOD

This research was a descriptive analysis study using qualitative approach. This qualitative approach was to obtain comprehensive information about the factors affecting women became homeless women in the traditional massage brothel massage "KT" Palembang 2015. The type of data in this research was the primary data obtained through direct interviews with samples and secondary data obtained from data PKBI Palembang City. The social situation in this research was as follows: In Palembang city, there were 27 traditional massage brothels. From the number of massage brothel, there were 24 massage brothels that "Plus" (the employees unconstitutional become prostitutes). In this research the selected location was the massage brothel at Jln. Kol. Atmo which were located in the downtown, crowded and many shops are nearby each other so it was assumed that many males who came to the massage brothel. In Jln. Kol. Atmo there were 3 massage brothels. From the number of massage brothels were taken of the massage brothel "KT" of which had prostitutes most that were 16 people.

The samples in this research were 3 people, namely female prostitutes that were considered more experienced, where these prostitutes were the employees of the massage brothel that basically provided massage service but unconstitutional as prostitutes and provided sex service.

The sampling technique in this research was to use Non Probability Sampling. In this research the sample was taken through purposive sampling. In taking the samples also used 2 resources, that were 2 staffs of PKBI Palembang and 2 participants that were 1 male pimp and 1 female pimp.

The technique of data collection was done manually, by writing the answers given by the informants as a primary data source. The instrument in this research was in the form of an interview and tape recorder. The data collection was done by writing it down and recording it to explore the factors that affecting a woman to become prostitutes.

The technique of data analysis in this research was done through qualitative analysis techniques. In this technique used inductive thinking process. Where inductive thinking process was started from the specific decisions and then taken the conclusion in general to find a logical answer to what became the center of attention in the research.

## THE RESULTS AND DISCUSSION

### The subject of the BL

The age of BL was 24 years. The age that had been mature enough and new 5 months joined in a traditional massage brothel KT. Originally BL was invited by the co-workers. The co-workers were quite capable of convincing BL to be able to work in the traditional massage brothel KT and the prostitutes can also interested with the invitation of their friends. The system which is used in the traditional massage brothel KT was the hourly earnings system but only in the count of massage services, while sex services was becoming the full rights of the prostitutes.

The prostitutes got money from the hourly earnings massage services, sex services and also the tips of the visitors. BL was only able to complete primary education up to Junior High Schools. Due to the BL was derived from the family of less capable farmers.

According to her utterances, BL had the profession as prostitutes due to the economic problem, which BL is the backbone of the family and provide the cost of children, besides BL must also settle the debts of the former husband and redeem the rice fields owned by the parents.

### The subject of TR.

The age of TR was 29 years. TR was categorized as a senior prostitute in the PPUT KT. TR had five years working experience as a prostitute in the PPUT KT. The reason of TR working here was merely to find the money to sustain both her son and her parents. TR considered the lawful work was difficult to look for the money, therefore she chose to work as a prostitute, besides her work was easy to look for money.

TR said she was convenient to work here because even though she only got 8,000 from the actual salary from the female pimp, the tips and sex services money became the full rights for each prostitutes. From the tips and sex services money TR was capable of saving the money and sending her family money in the village.

TR actually had realized that her work was the wrong work in the human eye, but it was because of the cost of living and her sons also needed the huge cost TR continued to undertake this work. TR had two sons who must be supported. It was because TR was a widow.

According to her utterances, TR was never forced to work like this, TR was also never experienced traumatic, only the desire to marry again was very

small because the fear of repeated things which will be ended up with divorce. The relationship of TR with family, relatives and neighbors was good, there is no difference or dispute. TR comes from the village of Muara Kuang, Ogan Ilir, South Sumatra.

TR planned to work for 4 or 5 years longer. After that TR is planning to leave this job. TR did not want to spend her old ages in the massage brothel

### The subject IN

IN comes from Palembang. Since 2003 IN had become prostitute already. But joining in PPUT KT is only 6 years, IN was categorized as the most senior prostitutes. IN was also active in the assembly of the Indonesian' prostitutes and often followed the counselings and meetings. The age of IN was already very adult that was 36 years.

Like the utterances of BL and TR, IN also said that the system in PPUT was the prostitutes got money of 8,000 per hourly earnings from the female pimp to serve one guest, IN got enough money from the sex services and tips from her guests. To select the prostitutes of guests can be seen from the existing photos on receptionist.

IN only completed the education to the junior high school. Once she worked in one factory in Tangerang, and not long after that IN married and then had one child. The husband of IN did not work, due to that problem they divorced and IN backed to Palembang. In Palembang IN did not have the work while she and her son needed the cost of living. IN was shy to ask for the money to her parents. Finally IN went to Malaysia to become Men power. In Malaysia IN only survived 2.5 years that should be contracted for 3 years, this also made IN get nothing for becoming Men power. IN finally came back to Palembang and worked the odd jobs in the 16 market.

From the 16 market IN knew someone who led her to the world of prostitution that she runs until now. IN argued that it was because of the situation to become prostitutes, and IN also said that she, her son and her family needed money for living costs. IN did not mention of the trauma as an excuse to become prostitutes. In the social community IN was very open-minded, and could get along with anyone. This was made her found a friend's false that finally sold her on the pimps. According to the utterances, IN was willing to stop working if there was a rich man who loves her sincerely.

### The Age of Prostitutes in PPUT "KT" Palembang

The results of the data were collected from most participants FII and in-depth interviews revealed

that the identity of prostitutes in PPUT KT in the age range from 20 to 50 years. This means that the age of prostitutes in PPUT KT varied from the age that grew up to the adult age. This could attract guests who came to select the intended prostitutes based on their age. So in particular, the prostitutes in PPUT KT were adult.

### **The History of Becoming Prostitutes and Working Period in PPUT "KT" Palembang**

The results of the data were collected from the participants FII and in-depth interviews revealed that the working period and history of them working there had variation, there was a new by month but there had also been for many years. There was just joining for 6 months, 5 years and there was also 6 years. The prostitutes came from Subang West Java, Muara Kuang, Palembang, and other cities. The first time they worked as prostitutes there all kinds of reasons such as some were invited friends and there were also trapped by friends.

In fact, most prostitutes were from West Java and Palembang and also mostly were invited by friends by an offer to work with reintegration of getting money easily.

### **Prostitutes Activities in the PPUT "KT" Palembang**

The results of the data were collected from the participants F II and in-depth interviews revealed that prostitutes activities in PPUT KT they mostly said that the system in PPUT KT was they wore allotments system from the female pimp. They got money around 8,000 per hour from one guest served. While the tips and sex services money became the full rights of each prostitute. The money got from the female pimp usually could be taken after one month and get the pieces to the cost that it was not known by the prostitutes.

The prostitutes mostly hope very much from the additional money from the tips and sex service money of each guests who came. The additional money was used by the prostitutes to meet the needs of the day-to-day or to return to the village and to the cost of family life in the village.

### **The Educational Background of Prostitutes in the PPUT "KT" Palembang**

The results of the data were collected from the participants F II and in-depth interviews revealed that the last education of prostitutes in PPUT KT mostly from junior high school graduates. The prostitutes could not continue because of the plentiful school costs. Most of them came from a less capable family, their parents were not able to

finance the schools. It is therefore that they did not continue their school and decided to look for the money though as sex workers. But at the first time there was also working as a salesperson, female workers, free lancers and others. However, it was due to the low income from the work that they switched to become prostitutes.

### **The Economic Factors that Affect Women Became Prostitutes**

#### **The Economic Factors that Affect Women Became Prostitutes**

The results of the data were collected from the participants FII and in-depth interview revealed that insufficient economic factors dominates the women became prostitutes. Economic problem, release, the cost of living is getting higher, the cost of the children school and is concerned about the condition of the parents, this became the main factor of women to be prostitutes.

#### **The Violence Factor that Affects Women Become Prostitute**

The results of the data collected from the participants FII and in-depth interviews revealed that violence is not too standing out as the main factor of women became prostitute. But there were also women who revealed that they became a prostitute was caused by the behavior of their husband and their husband left with the accumulated debt, and during becoming a spouse, their husband also often be harsh to them due to not to get money that want to gamble. These were the main having wrong behaviors, for example they started smoking and finally dared to become prostitutes.

#### **Environmental Factors that Affect women became prostitutes**

The results of the data collected from the participants F II and in-depth interviews revealed that the environment have a very important role in this case affects women become WTS. Because according to the WTS, they plunged as WTS most because of invitation friend, although there are also trapped. But it is the same as the result of association. Associate with friends applicants who in this area so that participate engaged therein.

### **CONCLUSION**

All informants said the main factor of them became prostitutes because of the economic factors, one of them said that the violence and disappointment over the couples' behavior became the supporting factor of them became the prostitutes. The environment was also very influential in this case, because 2 among informants got into the world of prostitution because of the invitation of friends and one of them as a result of being deceived.



It is recommended to the prostitutes in general and prostitutes in the PPUT "KT" in particular take care of their health from venereal disease and IMS. They should also recommend the guest to use a condom for the sake of the health of them.

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# ANALYSIS OF THE NIPPLE SHAPE FACTORS AND THE MOTHERS KNOWLEDGE WITH THE MOTHER'S CONFIDENCE IN BREASTFEEDING

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## ABSTRACT

Newborn babies need a lot of nutrients to grow and develop. However, coverage of exclusive breastfeeding is still very low. One of the factors that makes a mother feel unable to breastfeed is when she has flat nipples or inverted nipples. The feeling of not being able to breastfeed is a sign of low mother's self-efficacy to breastfeed their babies.

This study is aimed to determine the correlation between the shape of the nipple and knowledge about breastfeeding with mother's self-efficacy.

The research method used in this study is descriptive analysis with cross sectional approach. The sampling technique used in this study is purposive sampling in which the sample size is 48. Besides, the analysis of this study also uses Spearman Rank Test.

The results of analysis show two (2) points: the correlation between a mother's nipples and her self-efficacy in breastfeeding shows p value = 0.0827, while the correlation between a mother's knowledge in breastfeeding with her self-efficacy in breastfeeding shows p value = 0.000.

To conclude, there is no connection between the shape of nipples towards mother's self-efficacy. On the other hand, there is a significant connection between knowledge in breastfeeding and mother's self-efficacy

**Key words: Nipple Shapes, Confidence, Breastfeeding**

## INTRODUCTION

A mother must fulfill her baby's nutritional needs by giving breastfeeding. A newborn baby needs a lot of nutrition to growth and to develop, especially brain growth and brain development. At this period of time, the baby's organ maturation occurs in almost all systems. It would be perfectly fulfilled if a mother breastfeeding her baby from the beginning of baby's life. The advantages in giving breastfeeding as baby's nutrition has been studied widely and has been proven by the research. It is also recommended by WHO (World Health Organization) in giving exclusive breastfeeding for babies up to six months.<sup>1</sup>

The coverage in early breastfeeding is as much as 50.8%, but mother who gives additional formula milk at the same age is as much as 31.5%. One of the reasons for mothers to give formula milk because of mother milk production is stuck at the first days after delivery. Low breastfeeding coverage on newborn babies in Indonesia caused by internal and external factors. Internal factors are low of mothers knowledge, mothers attitude, mothers feeling in having small breast, not having nipples, lack of family support, lack of support from medical officer and government, the invasion of formula advertisement, social and culture, and also lack of availability in mothers and children health facilities. Based on the previous research, it can be concluded that the basic cause of low exclusive breastfeeding coverage was due to low access. Based on the results of some variables in

related to the mothers attitude that knowledge and mothers confidence greatly affect mother's decision in giving breastfeeding for their babies.<sup>2</sup>

The mother's confidence in breastfeeding influenced by the increase of their knowledge and the support from medical officers.<sup>3</sup> The information and facilities supports in breastfeeding can increase the confidence of breastfeeding mothers.<sup>4</sup>

The others supporting factors that influence to the success in breastfeeding are the mother's knowledge in breastfeeding, the mother's confidence in breastfeeding, the medical officers role in giving counseling and promoting the breastfeeding is also important. The mothers ability and willingness are because the mothers knowledge on breastfeeding. That knowledge is a learning process that can produce changes in behavior that expected. Meanwhile, the knowledge and mothers confidence can affect breastfeeding after delivery.<sup>5</sup> Self-confidence is a person's belief towards the symptoms of excess aspects by the individual and the belief able to reach the life goal. Self-efficacy include self-confidence towards one's ability to arrange and implement actions to reach the set goals, and to try in finding solutions if problems arise in the process of achieving goals.<sup>6</sup>

*Self-efficacy* in breastfeeding is a mother belief in her ability to breastfeed her baby and predict to breastfeed or not, the how much efforts to expended breastfeeding, the willingness to increase mindset or to broke her mindset, and to find ways to overcome the difficulties in breastfeeding.<sup>7</sup>

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A lot of mothers who lack of self-confidence or even do not have confidence in exclusive breastfeeding for their babies can cause milk production disturbed. Many mothers are not confidence because of their small breast shape or short nipples, lack of milk production, and also they consider that formula is good as milk from her breast.<sup>4</sup>

Breastfeeding mothers with low level confidence on their abilities in breastfeeding their babies significantly have obstruction in breastfeeding after two weeks delivery. Others research showed that 27% breastfeeding mothers with low level confidence in breastfeeding during prenatal can stop breastfeeding at one week postpartum.<sup>7</sup> The failure in breastfeeding happens around four-five times to a woman who has low level confidence on newborn babies.<sup>8</sup>

## RESEARCH METHOD

The research is continuing analysis from the previous research held in Panembahan Senopati District Hospital, Bantul, Yogyakarta. The research is correlation research with cross sectional approach. The sampling technique used purposive sampling with 48 samples. The inclusion criteria was postpartum woman day 1-3 who deliver babies in Panembahan Senopati District Hospital as the respondents.

The research instrument was using questioner. The questioner was mothers knowledge in breastfeeding consist of three aspects were the advantages in breastfeeding, breastfeeding definition, and breastfeeding techniques. As much as 22 questions had been tested by the expert in maternity fields with the result 0.825 (>0.750).

Mother confidence questioner consist of three aspects were *Breast feeding Self-Efficacy* measured *technique, interpersonal thought, and support*. The questioner were closed questions adopted from BSES (*Breastfeeding Self Efficacy Scale*) in simple format which was BSES-SF (*Breastfeeding self-efficacy scale-short form*) with 14 questions. BSES-SF questions had been used in the research involved 491 women in Canada in breastfeeding term, and the showed that BSES-SF is valid instrument.<sup>8</sup>

Data analysis used univariate to describe each variable, and used bivariate analysis by using *Spearman Rank test*.

## RESULT AND DISCUSSION

The result of respondent's characteristics as follows:

**Table. 1 Postpartum Mother Characteristics**

Characteristics	N	(%)
Age		
< 20 Years	0	0
20-35 Years	43	89.6
>35 Years	5	10.4
Education		
High Education	5	10.4
Middle Education	22	45.8
Low Education	21	43.8
Jobs		
Housewives	21	43.8
Private Labour	11	22.9
Entrepreneur	9	18.8
Gov. Employee	1	2.1
Lecturer	1	2.1
Students	1	2.1
Parity		
Primipara	16	33.3
Multipara	31	64.6
Grandemultipara	1	2.1

*Data collected and analyzed, 2016*

The result showed that the average age of mothers was in health reproductive age. Pregnant women in age between 20-35 years old had lowest risks in health problems as much as 15%. These age has good reproductive systems maturation, emotional, and social aspects. So women in these age are ideal to get pregnant and giving a birth.<sup>9</sup>

According to the education level, obtained that the average of mother education level was graduated from high school. The education level of mothers will influence towards the ways of thinking, knowledge, and mother's confidence. At school or at college can be said as the most environmental role for someone to build self-confidence after family. It can be said from the socialization matters that family environment is less individual than at school or at college.<sup>10</sup>

Job or career mothers is also one of the causes that exclusive breastfeeding interrupted for babies. It is because of the activities of working mothers, so they take short or easy way in giving nutrition for their babies by giving formula. When mothers come home, they would prefer to take a rest because they were tired with their activities after working and abandon their obligation as wife or mother. A housewife mother has more time to breastfeed and take care the babies optimally than working mothers.<sup>11</sup> The previous research showed that after maternity leave from work (after 3 months babies), mother tend to stop breastfeeding and giving formula.<sup>12</sup>

Mother with parity more than one has experiences to take care and breastfeed babies. The knowledge and experienced multiparous mothers formed or started in the beginning breastfeeding of the previous child.

Multiparous mothers independence has been formed because of their experiences in taking care their previous child, but some mothers still don't understand breastfeeding in newborn babies because of lack experience by themselves or by other mothers which make the mothers doubt or not confident in breastfeeding their babies again.<sup>12</sup>

**Table. 2 Research Variable Distribution**

Variables	Frequency	Percent(%)
Nipple Shapes		
Stick Out	32	66.7
Flat	16	33.3
Sinking	0	0
Sel-confidence		
High	34	70.8
Medium	14	29.2
Low	0	0
Breastfeeding Knowledge		
Good	17	35.4
Adequate	17	35.4
Less	14	29.2

Data collected and analyzed, 2016

Based on nipple shape, most women have stick out nipples (66.7%). This condition because of the mother's characteristics as multi-parity. The shape of multi-parity more stick out and curved because they had breastfed before. Based on lactation management theory, by doing breastfeeding technique correctly, the nipple will stretched by the pressing on areola area with fingers to form as bottle nipple.<sup>13</sup>

The confidence of breastfeeding mother mostly have high confidence as much as 70.8%. Confidence can be formed because of previous experiences. According to the characteristic of multi-parity mothers mostly had experiences in delivering babies and breastfeeding because of the previous experiences. Experiences are also real knowledge sources. In this research, the mothers have good and adequate knowledge as the same amount as much as 35.4%.

**Table. 3 Nipple Shapes and Mother's Knowledge in Breastfeeding with Mother's Confidence in Breastfeeding**

	Self-Confidence			CI%	p
	High	Medium	OR		
Nipple Shapes					
Stick out	23 (67.6)	11 (32.4)	1.16 2	(0.314- 4.297)	0.827
Flat	9 (64.3)	5 (35.7)			
Knowledge					
Good	15 (44.1)	2 (14.3)	0.50 8	-	0.000
Adequate	15 (44.1)	2 (14.3)			
Less	4 (11.8)	10 (71.4)			

Based on the result obtained that mothers who have stick out shape nipples and also have high confidence was as much as 67.6%, meanwhile mothers who have flat nipples and also have high confidence was as much as 64.3%. The result of cross distributional mothers who have stick out nipples more confidence, but the difference was not significant. So, from the result of *Spearman Rank* analysis obtained *p value* as much as 0.827, which means there is no correlation between nipples shape and the mother's confidence.

Mothers with flat nipples or sinking nipple be able to breastfeed their babies. It is because the babies feed on the mother's areola, not the nipple of the mothers. So in general, in what shapes of the mother's nipples, babies can still feed from mothers breast well.<sup>15</sup> But less knowledge about breastfeeding, mothers can become not confident that they can breastfeed well.<sup>12</sup> Based on cross tabulation of the correlation between mothers knowledge and mothers confidence obtained that mothers who have good knowledge in breastfeeding and have high confidence was as much as 44.1% as the same amount with mothers who have adequate knowledge and who have high confidence. Meanwhile, mothers who have less knowledge but have high confidence was as much as 11.8%. It can be seen from the distribution that the higher knowledge of breastfeeding mothers, the higher confidence to breastfeed the babies. This can be proved with the *Spearman Rank* analysis result obtained *p value* as much as 0.000 which means there is a significant correlation between mothers knowledge in breastfeeding.

The research conclusion is that there is no correlation between nipples shape and the mothers confidence in breastfeeding their babies, and there is there is a significant correlation between mothers knowledge in breastfeeding.

This research limitation is the correlation between nipple shape and mother confidence in breastfeeding that was not done by doing *case control* between flat nipples or sinking nipples and the stick out nipples.

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## NEW BORN LENGTH AND STUNTING CASES ON TODDLER (24-59 MONTHS) AT KARANGREJEK WONOSARI GUNUNGKIDUL

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### ABSTRACT

Children's growth can be analyzed by conducting nutritional status examination. Nutritional status is based on Height/Age. Stunting is the condition if the status is lower than the standard of Height/Age. Continuous stunting causes several problems to the babies such as low immune system which can ease the children to get infectious disease that can lead to death. One of the factors that influence stunting cases is short height of new born babies. Short height of new born babies can cause chronic diseases until the death of the babies. The objective of the study was to investigate the correlation between new born length and stunting cases on toddler (24–59 months) at Karangrejek Wonosari Gunungkidul.

The study employed analytical survey with case control design and retrospective approach. Chi square test was used as bivariate analysis. The populations of the study were 111 toddler (24–59 months) with 37 respondents in case group and 74 respondents of control group. Sample taking technique of case and control groups used total sampling.

The result of the study showed that 37 of 111 respondents had stunting. Most of the children who were stunting had the history of short height of new born baby. Under-five children with short height of new born baby would have possibility to stay short during the aged of 24 – 59 months, and babies with normal height of new born baby had possibility to stay not short during the aged of 24–59 months.

There was correlation between the length of new born baby and stunting cases on toddler (24–59 months) at Karangrejek Village Wonosari Gunungkidul. Parents are expected to be able to process ingredients that can be found in the environment to be more various and more interesting for children with balanced nutrition

**Key words:** Newborn, Stunting, Toddler

### INTRODUCTION

Nutritional status represents nutritional fulfillment which has been accepted by a baby. Stunting is the reflection from cumulative impact toward malnutrition, so it can further become chronic malnutrition and the impact possibility from the infection since the partum process or since the babies are still in mother's womb. Generally children with malnutrition including stunting children have clinical symptoms such as obstructed growth, almost zero subcutaneous fat (fat cell still exist) causing wrinkle skin on children, bloated stomach, shrinking muscle tissue (cell disturbance of muscle neuron) (WHO,2014).

Toddler (24-59 months) who have stunting can be infected disease more easily. Thus, stunting on Toddler (24-59 months) can be a high risk of children mortality as the impact of the infection on children (UNICEF, 2013).

According to WHO (World Health Organization) in 2006 – 2012, stunting cases on Toddler (24-59 months) reached 24.7%. Three countries with the highest stunting rate are Timor Leste (57.7%), Burundi (57.5%), and Madagascar (49.2%). Those three countries are developing countries. Meanwhile, in Indonesia the stunting cases reached 39.2%. it means that stunting cases in Indonesia are still high compared to other countries in the world (WHO, 2014).

National stunting prevalence in 2013 reached 37.2% increasing to 35.6% in 2010 and 36.8% in 2007. Therefore, it means that around 8 million Indonesian children did not have optimum growth, or it is one of three Indonesian children did not maximum growth. Stunting prevalence in Indonesia is higher than South East Asia Countries like Myanmar (35%), Vietnam (23%), and Thailand (16%) (Health Department of Yogyakarta, 2014).

Based on the data map of nutritional status situation in Yogyakarta Special Province in 2013, there were very short children with 4.44% and short children with 11.44%. The survey

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shows that 37% children have under the standard height or stunting (Health Department of Yogyakarta, 2014).

From five regencies in Yogyakarta Special Province, in 2013 Gunungkidul Regency had the highest stunting prevalence with very short children 7.72% and short children 14.17% (Health Department of Yogyakarta, 2014).

Short height of new born baby (< 48 cm) can be called as new born baby stunting. Stunting on new born baby can influence baby's growth that is not optimum if there is no effort to increase nutritional status adequately as well as to improve the baby's growth stimulation. 1000 first days during new born baby's life become the most important stage of both baby's growth and baby's development (Health Ministry of Indonesia, 2014).

Based on the study conducted in Kendal Regency Central Java, the result finds that there are meaningful variables that have been proven as the risk of stunting; those are shot height new born baby, pregnancy age, and first eating age. Among those variables, the height of new born baby still becomes the most influential factor of stunting cases (Meilyasari et. al., 2014).

Health professionals especially midwives have significant role in the effort of promoting and preventive aspect of nutritional status improvement by controlling the growth of the babies and early detection of malnutrition. Since the babies are born until five years old, the babies should get weight measurement to analyze their growth. The effort can help to analyze earlier their growth disturbance, so health professionals can take action as early as possible (Health Ministry of Indonesia, 2014).

Based on the preliminary study at Wonosari 1 Primary Health Center Gunungkidul, the result obtained that the numbers of new born babies in 2015 were 317. The numbers of short babies (<48 cm) with pregnancy age <37 weeks were 5 babies (3%). Besides, the numbers of short new born baby with > 37 weeks pregnancy were 20 babies (6%). Thus, based on the data the total numbers of short new born baby were 29 babies (9.2%). The village which had the highest stunting prevalence in Wonosari I Primary Health Center Gunungkidul working area was Karangrejek with total numbers 37 babies (19.37%). The objective of the study was to investigate the correlation between the length of new born baby and stunting cases on toddler (24

– 59 months) at Karangrejek Village Wonosari Gunungkidul.

## RESEARCH METHOD

The study employed analytical survey method with case control research design and retrospective approach. The study was conducted at Karangrejek Village Wonosari Gunungkidul on 19, 30, and 31 August 2016. The populations of the case were all under-five children who had stunting at Karangrejek Village Wonosari Gunungkidul in February 2016 with 37 cases. However, the control populations were under-five children who did not have stunting at Karangrejek Village Wonosari Gunungkidul in February 2016 with 111 respondents. The samples of the case were 37 under-five children with total sampling technique, and the control samples were 74 under-five children with total sampling technique.

Data collecting instrument used microtoise and data observation sheet consisting of names, sexes, ages, the length of new born baby, recent height of the baby, mother's education, mother's occupation, mother's height, HB level during pregnancy, arm circle during pregnancy. In the study, the analysis of two variables correlation used Chi Square. P value < 0.05, so Ho is rejected (Sulistyaningsih, 2012).

## RESULT AND DISCUSSION

The characteristics of the respondents in the study will be thoroughly explained including mother's education, mother's occupation, mother's height, arm circle during pregnancy, and HB level during pregnancy.

Table 1.  
Respondent's Characteristics

Characteristics	Cases		Control	
	n	%	n	%
Mother's Education				
Primary School	6	16.2	4	5.4
Junior High School	17	45.9	29	39.2
Senior High School	13	35.1	38	51.4
University				
<b>Total</b>	1	2.7	3	4.1
	37	100.0	74	100.0
Mother's Employment Status				
Employment	6	16.2	25	33.8
Unemployment	31	83.8	49	66.2
<b>Total</b>	37	100.0	74	100.0
Mother's Height				
Short	19	51.35	19	25.68
Normal	18	48.64	55	74.32

Characteristics	Cases		Control	
	n	%	n	%
<b>Total</b>	37	100.0	74	100.0
Arm circle during pregnancy				
Chronic Energy Deficiency	7	18.9	14	18.9
Not Chronic Energy Deficiency	30	81.1	60	81.1
<b>Total</b>	37	100.0	74	100.0
HB Level during Pregnancy				
Anemia	20	54.1	12	16.2
Not anemia	17	45.9	62	83.8
<b>Total</b>	37	100.0	74	100.0

Table 1 shows that most of mother's education in both case and control groups was from junior high school and senior high school. Most of mother's employment status in both case and control groups was unemployment. Mother's height and arm circle during pregnancy in both case and control groups were mostly normal. However, HB during pregnancy with anemia in case group was higher than in control group.

Table 2. The Correlation between the Length of New Born and Stunting Cases

Risk Factor		Stunting Cases				P value
		Normal		Short		
		F	%	F	%	
Length of New Born Baby	Short	16	41	18	46.2	5 12.8
	Not Short	58	80.6	13	18.1	1 1.4
	Total	74	66.7	31	27.9	6 5.4

Table 2 shows that there is correlation between the length of new born baby and stunting cases on under-five children aged 24 – 59 months old at Karangrejek Village Wonosari Gunungkidul.

The short length of new born baby can be caused by several factors. One of them is nutritional fulfillment during pregnancy. A mother who has low HB level (anemia) has risky factor to deliver babies with short height new born baby (Najahah & Imtihanatun, 2014).

The result of the study based on the respondent's characteristic shows that there were a lot of mothers who still had anemia. It shows that Fe intake for the baby's growth process during pregnancy is still insufficient, so it can cause less perfect of baby's growth and development process (Sukarni & Wahyu, 2013).

Short length of new born baby can cause growth deterioration if it is not prevented and handled well. The first 2 year becomes the most significant period to stimulate the body growth of the babies. Thus, if there are babies with

short length of new born baby (<48 cm) and without having dwarf heredity factor, further stimulation can be given to optimize the growth of the baby, so they can reach proper height suitable to their age (Ernawati et. al., 2013).

Stunting on under-five children is a form of chronic malnutrition which can represent nutritional history of the children in a long period, so the cases show how the condition of nutritional status is (Kartikawati, 2011).

The result of the study shows that most of education level of the mothers was Junior High School and Senior High School. It means that most of the mothers still have limited knowledge to the case of stunting on their children although their education is more than junior high school. It shows that knowledge rate of the parents to nutritional need of the children does not have correlation to education level of the parents.

Based on the result of depth interview to the respondents, most of the respondents did not know the information that the first two year period becomes the most significant period for baby's growth and development process, so during those years children should be given good and adequate nutritional stimulation based on the need of the children.

It can be concluded that health professionals especially midwives should have active role related to the obstacle and difficulties faced by the society. Midwives are expected to give several counseling such as how to cook well and properly and how to make nutritious food from ingredients that can be found in the environment. Thus, parents can make interesting food variations for children, and children are interested to consume the food.

Based on the result of the study, it shows that the respondents with short (stunting) body also had the history to have short height of new born baby (<48 cm). Nutritional status during pregnancy has significant influence to baby's growth and development especially during the first two year of the baby's life (Ernawati, 2013). One of the factors that influence the stunting case of under-five children less than 5 years old was the length of new born baby (Demirchyan A et. al., 2016).

Stunting case on children has long term impact that can influence their growth and development. If stunting continuously happens

to children, they can get chronic diseases like obesity and glucose intolerant. Besides, stunting can improve hypertension risk. If it is not prevented and cured appropriately, it can lead to death (Puspita Y, 2015).

In addition, severe stunting on children that happens in a long term can influence children's mentally growth and development, so children cannot study optimally at school compared to children with normal height (Puspita Y, 2015).

## CONCLUSION

There is correlation between the length of new born baby and stunting cases on toddler (24–59 months) at Karangrejek Village Wonosari Gunungkidul.

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# RELATIONSHIP OF DENTAL AND ORAL HEALTH OF THIRD TRIMESTER PREGANANT WOMEN TO BIRTH WEIGHT AT BAHU HEALTH CENTER OF MALALAYANG SUB-DISTRICT OF MANADO

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## ABSTRACT

Dental and oral health services to pregnant women is done to maintain and improve public health in the form of prevention, treatment / care and health care in an integrated, integrated and sustainable way. This research aimed at determining the relationship of Dental and Oral Health of third trimester pregnant women to birth weight in bahu Health center of Malalayang sub-district of Manado City.

This was an analytical study using cross sectional approach. The population of the study was all pregnant women in the antenatal check with a sample size of 30 pregnant women. The research was conducted from April to October 2015. Data analysis ws done by bivariate analysis used to determine the relationship between the two variables using the Chi-square test and multivariate analysis in this study by using logistic regression.

Results of analysis showed that there was no relationship between the Dental and Oral Health of third trimester pregnant women and Birth weight in Bahu Health Center with p value of 0.690. Although in this study there was no connection but dental and oral health showed a risk of low birth weight in newborns. Therefore, it is recommended the need for oral health examination during pregnancy by setting out the oral and dental examination in MCH book along with antenatal care.

**Keywords: Dental and Oral Health; Birth Weight**

## INTRODUCTION

Efforts to improve maternal health, including oral health, is a strategy that is achieved in accordance with the target number 5 of the Millennium Development Goals (MDGs) by 2015. The MDGs aim at 5 points of interest in line with the Pregnancy Risk Assessment Monitoring System (PRAMS) which is to improve and increase oral health of pregnant women; this is because poor oral health in pregnant women can give effect to the fetus, such as premature babies and low birth weight in addition to the baby's oral health in the future (Sumidarti, 2011).

Problems of toothache and swollen gums during pregnancy in pregnant women often occur. It is important to maintain the oral health and hygiene during pregnancy. Research results published in National Institute of Dental and Craniofacial America in 2008 showed 18% of pregnant women experienced gum disorders such as gums swollen and bright red and blue teeth. Swelling is characterized by gums that bleed spontaneously when a pregnant woman brushes her teeth (Bakrie, 2014).

According to the Basic Health Research (Risksedas), oral health problems experienced by the Indonesia's population in 2007 were

caries and periodontal disease. People who experience oral health problems of course included pregnant women. According to Mona et al (2004), one of the goals of Healthy People 2010 is to increase the proportion of subjects who used the system of oral health care services and the prevalence rate of dental care during pregnancy and it was reported that of 23-43% of pregnant women studied, approximately 58% had no dental treatment during pregnancy.

Gingivitis is an oral and dental problem frequently found among pregnant women in which the 5% -10% have swollen gums. The record from PDGI reinforced the findings of the Journal of Periodontology published in 1996. Research recorded that 7 of 10 pregnant women who suffered from gingivitis had potentially large children born prematurely. The data reinforced the 2002 National Health Survey which stated that 77% of pregnant women suffering from gingivitis gave birth prematurely (Republika, 2009).

According to the Journal of Obstetrics Gynecology in 2010, mothers with infected gums can infect the fetus through the placental circulation. In the cases studied, it is proved germ *Fusobacterium Necleatum* infecting the gums of pregnant women is found in the fetus and causes miscarriage; several other studies

prove the inflammation of the gums at risk of preterm birth (less than 37 weeks) and low birth weight (less than 2500 grams) (Bakrie, 2011).

Dental or mouth infections during pregnancy will result in increased hormone prostaglandin. Increasing this hormone will make the uterus tense and contracted, and when it happens continuously, it can suppress the uterus to contract and cause premature birth (Erna, 2012). Pregnancy Gingivitis or gums disease is found in 80-100% of pregnant women, occurring in the second and third trimester of pregnancy, rising in the eighth and decreasing after ninth month (Yoto, 2013).

Pregnancy is a natural process which leads to changes in women that include physiological and psychological changes. Changes during pregnancy can affect the health system in the body and result in changes in some parts of the body including the oral cavity. One of the changes that occur during pregnancy is hormonal changes that cause plaque excessive response and result in pregnancy gingivitis (Yoto, 2013).

Research results published by the Journal of Periodontology prove dental and oral care benefits to pregnant women that reduce the risk of pregnancy poisoning or Preeclampsia by 5-8%. The results of the Academy of General Dentistry Research shows that pregnant women suffer from dental and oral health (periodontal disease) have 3-5 times greater risk of giving birth to premature babies and low birth weight babies. Journal of Periodontology says that healing therapies of dental and oral health disorders suffered by pregnant women may reduce the number of premature births and babies with low birth weight by 68% (Agustia, 2011).

According to the Times of India, a new study suggests a link between oral health of pregnant women and fetal health. Pregnant women who have periodontal disease are seven times more likely to have a premature baby. Gingivitis (gum inflammation) during pregnancy is a complication of the mouth that affects many pregnant women such as bleeding, swollen, red gums and bad breath as a symptom of gingivitis during pregnancy (Marcela, 2012).

According to research by Retnoningrum (2006) in the journal entitled *Gingivitis in Pregnancy as a Risk Factor of the Occurrence of pre-term Low Birth Weight Infants at Dr. Kariadi*

*Hospital of Semarang* concluded that there is a relationship between pregnancy gingivitis in pregnant women and low birth weight (LBW) with the risk of gingivitis in pregnant women 8.75 times to delivering preterm low birth weight babies (POR = 8.75 95% CI = 2.56-29.94) compared with women who do not experience gingivitis, with a significance level of  $p = 0.000$ .

Bahu Health Center is one of the public health care facilities in the city of Manado which provides curative, preventive, promotive and rehabilitative services. According to a preliminary survey conducted by the author, pregnant women's visit to check the health of teeth and mouth to the dental clinic was about 3.8%. Complaints are cavities and periodontal diseases such as gingivitis and periodontitis.

Socialization of the maintenance of oral health during pregnancy rarely occurs in Puskesmas Bahu of Malalayang sub-district of Manado City. Pregnant women perform checkups for their pregnancy compared to oral health.

Data obtained in Bahu Health Center in 2014 showed that the number of pregnant women in the third trimester who had checkups was 515 people and mothers who checked their teeth at Dental Clinic were only 16 pregnant women (3.10%) with complaints of pain due to dental cavities, infections and pulpitis.

Based on the results of preliminary interviews with doctors and dental nurses in Dental Polyclinic of Bahu Health Center, pregnant women who came to check his teeth had already been in a state of infection, while the results of dental examinations conducted on February 20, 2015 showed that the majority of pregnant women suffered from dental caries and of five pregnant women, 4 (80%) of pregnant women were included in poor category and 1 (20%) of pregnant women was in good category.

Oral health care in pregnant women in Bahu Health center of Malalayang sub-district of Manado City needs to be improved to maintain public health in the form of prevention, treatment and care of health in an integrated and sustainable way. It therefore requires the cooperation of all stakeholders in the improvement of education and training on the importance of oral health in pregnant women to prevent unwanted pregnancies with antenatal care and oral health in pregnant women.



## RESEARCH METHOD

This was an analytical study using a cross sectional approach. The study was conducted by direct examination with a view and check of the health of teeth and mouth, without giving the treatment of the sample and following of the current third trimester pregnant women until the baby was born.

This research was conducted in April-October 2015, at Bahu Health Center of Malalayang sub-district of Manado City. The population of this study was all pregnant women in the antenatal check at their third trimester. Sample size was 30 pregnant women.

Bivariate data analysis was used to determine the relationship between the independent variables and the dependent variable using Chi-Square test. Multivariate analysis in this study used logistic regression.

## RESULTS AND DISCUSSION

This research collaborated on dental nursing consultant and dentists from pregnant women dental and oral examinations until the results of dental examination. Results of research showed that the majority of pregnant women (66.7%) had moderate oral hygiene. It shows most expectant mothers did dental and oral care. This was similar to the results of research by Kaunang et al (2013), about Behavioral Dental and Oral Healthcare of Pregnant Women in Bahu Health Center Manado where the results of the study demonstrated that the knowledge, attitude and practice of pregnant women on the maintenance of oral health in Bahu PHC Manado belonged in good category.

**Table 1. Relationship of OHIS to Birth Weight**

ohis	BW		TOTAL	P VALUE
	> 2500 gr	≤2500 gr		
good	4 (14,8 %)	0	4 (13,3 %)	0,690
moderate	18 (66,7 %)	2 (66,7%)	20 (66,7 %)	
poor	5 (18,5 %)	1 (33,3%)	6 (20%)	
<b>total</b>	<b>27 (100%)</b>	<b>3 (100 %)</b>	<b>30 (100 %)</b>	

Oral hygiene has an important role in the field of dental health, because poor oral hygiene can lead to the emergence of a variety of both local

and systemic diseases (Retnoningrum, 2006). The process of pregnancy causes physiological changes including the oral cavity.

Changes in the oral cavity is affected by the hormonal system in conjunction with local irritation factor in the oral cavity. The best treatment time is in the second trimester. Care and maintenance of dental health during pregnancy is an important part of health surveillance entirely (Hasibuan, 2004).

Dental and Oral Health Status (OHIS) of Dental and oral hygiene in this study was measured using an Oral Hygiene Index Simplified (OHIS). Most of the dental health status of respondents was moderat (66.7%), good (13.3 %) and poor (20%). During pregnancy, there is an increase of estrogen and progesterone that result in blood vessels to become more permeable; it allows the bacteria to cause gingivitis plaque that is on the teeth that can enter the blood vessels, resulting in pregnancy to be 8.75 times at the risk of low birth weight, as research conducted by Retnoningrum in 2006 at the hospital Dr. Kariadi Semarang, related to oral hygiene, but it did not affect the incidence of preterm low birth weight infants with a value of  $p = 0.093$  (POR = 2.55, 95% CI 0.84 to 7.72). In this study, the results of relationship analysis test between OHIS and birth weight showed  $p$  value of  $0.690 > \alpha (0.05)$ , suggesting that  $H_0$  was accepted and  $H_a$  was rejected meaning no association between OHIS and birth weight in Bahu PHC of Malalayang sub-district of Manado city.

Most of OHIS was moderate / poor and labor was done with SC action. Maternal nutrition is very important in pregnancy, due to the development of the baby, so that pregnant women should have enough nutritional needs. In the assessment of nutritional status, it showed that less nutritional status of pregnant women had high-risk categories to give birth to babies with preterm low birth weight. This meant that during pregnancy, maternal nutrition is an important factor for the development of the fetus to be born with normal weight and age.

**Table 2. Relationship of Gingivitis to birth weight**

ginggi vitis	Birth Weight		total	p.value
	> 2500 gr	≤2500 gr		
None-mild	22 (81,48 %)	2	24 (80 %)	0,227
moderate-severe	5 (18,5 %)	1	6 (20 %)	
<b>TOTAL</b>	<b>27</b> <b>100 %</b>	<b>3</b> <b>100 %</b>	<b>30</b> <b>100%</b>	

Gingivitis status of the respondents was mostly mild (80%), and the rest was moderate-severe category (20%). Excessive accumulation of plaque on the teeth of pregnant women can cause gingivitis that has resulted in her pregnancy that is 8.75 times at the risk of having a child with low birth weight. Changes in body condition during pregnancy cause nausea and vomiting so that pregnant women can be lazy in brushing their teeth plaque, especially if the mother has caries in teeth (Retnoningrum, 2006).

The results of relationship analysis test between gingivitis and birth weight showed p value of  $0.227 > \alpha (0.05)$ , suggesting that  $H_0$  was accepted and  $H_a$  was rejected meaning that there was no relation between birth weight and gingivitis in this study.

This was in contrast with the opinions through the theories and the results of research conducted by Retnoningrum (2006) that gingivitis and nutritional status of pregnant women related significantly and was a risk factor for low birth weight infants (LBW) less than a month. This was reinforced by the Republika Newsroom in 2009, quoted from Hartati et al (2011) published on the National Health Survey of 2002 stating that 77% of pregnant women suffered from gingivitis gave birth prematurely. The research results of Academy of General Dentistry quoted by Novianto (2010) also showed that pregnant women who suffered from gum infections had 6 times higher chances to give birth to premature babies and babies born with low weight.

Gingivitis in pregnant women and the significant relationship is a risk factor for preterm low birth weight babies, but poor oral hygiene is not related to preterm low birth weight. The nutritional status of pregnant women is also associated significantly and as a risk factor for preterm low birth weight babies (Retnoningrum, 2006).

**Table 3. Relationship of caries to birth weight**

caries	BW		TOTAL	P. VALUE
	> 2500 gr	≤2500 gr		
good	9 (33,3 %)	1 (33,3 %)	10 (33,3 %)	1,00
bad	18 (66,7 %)	2 (66,7%)	20 (66,7 %)	
<b>total</b>	<b>27</b> <b>(100 %)</b>	<b>3</b> <b>(100 %)</b>	<b>30</b> <b>(100 %)</b>	

On the results of research analysis, the relationship caries and birth weight showed p value of  $1.00 > \alpha (0.05)$ , suggesting that  $H_0$  was accepted and  $H_a$  was rejected meaning that there was no relation between birth weight and caries in this study.

At the time of the study, there were several pregnant women who refused dental cleanings, so the investigators at the time gave informed consent to motivate pregnant women to undertake and assist pregnant mothers to undergo dental and oral examination in advance; after that, they went through the examination of the ANC. In addition to oral hygiene inspection, another inspection was the examination of gingivitis and caries.

The results of the study showed only 10% of pregnant women who did not suffer from gingivitis while 6.7% of pregnant women showed severe gingivitis state. Newman (2000) says that gingivitis during pregnancy is caused by plaque bacteria, similar to the non-pregnant state. Therefore, gingivitis will not happen during pregnancy when there is no cause of these local factors. Besides, the significant factor during pregnancy is an increase in the hormones estrogen and especially progesterone, resulting in a high degree of severity of gingivitis. Setiono (2004) says that pregnant women are prone to have caries. This is because the vomit usually mixes with stomach acid. If pregnant women do not clean or rinse their mouth after vomiting, then the remaining vomit is easily stuck between the teeth that can damage tooth enamel and eventually perforate it. The results showed 20 (66.7%) of pregnant women experienced caries in bad categories and 8 (40%) of pregnant women underwent labor with the SC with an indication of operations.

The results of the analysis of Dental and Oral Health (OHIS, gingivitis, caries) using Chi Square analysis showed no association between Dental and Oral Health in Pregnancy and Infant Birth Weight. According to the results of research by Abednego in 2014 there was no association between gingivitis and newborn birth weight.

Although in this study there was no connection but at risk of low birth weight in newborns, it is recommended the need for oral health examination at the time of pregnancy and setting out in Maternal and Child Health (MCH) Book.

## CONCLUSION

Dental and Oral Health of third trimester pregnant women in Bahu health center of Malalayang sub-District of Manado City shows:

1. Most of women have moderate status of dental and oral health, therefore requiring increased care services, especially in oral health examination in conjunction with the examination of the ANC.
2. Most pregnant women do not suffer gingivitis
3. Most of women suffer from caries with bad category..

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## RELATIONSHIP VIOLENCE DURING PREGNANCY AND LOW BIRTH WEIGHT IN OGAN KOMERING ULU DISTRICT

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### ABSTRACT

**Background:** Low birth weight (LBW) one of the risk factors which contributes to infant mortality during perinatal period and the greatest contributor to neonatal mortality in Indonesia. Some studies show that there is significant relationship between violence during pregnancy and LBW delivery. At District of Ogan Komering Ulu (OKU) there were 18 cases of violence during pregnancy where as the prevalence of LBW in 2014 was 7.1%.

**Objective:** To investigated whe ther violence during pregnancy is a risk LBW delivery.

**Methods:**This study design was an observational unmatched case control study and both quantitative and qualitative approaches. Subject of the study consisted of case and control groups with a ratio of 1: 2. Data was analysis using stata software consists of univariable, bivariabile with chi square ( $\chi^2$ ) and the multivariable analysis using logistic regression analysis and analysis of qualitative data content analysis.

**Result:** Bivariable analysis showed that the group of LBW had physical violence 3 times greater during pregnancy than the group with normal birth weight (NBW); and the group of mothers having LBW infants had psychological violence 2.5 times greater than the group NBW delivery. Sexual violence, age, education and economic status statistically had no significant relationship with LBW; whereas frequency of antenatal care (ANC) had relationship with LBW delivery. Frequency of ANC was a modified effect and was not assumed as confounding variable. Multivariable analysis showed that the group of LBW had 2.5 times greater for violence during pregnancy than the group NBW. Qualitative analysis showed that factors contributing to violence during pregnancy were husbands who were unemployed, erroneous, alcoholic, gamblers, had another woman and did not like female children, had a wife who was fussy, could not maintain the household and was disobedient to her husband.

**Conclusion:** The group of LBW had more violence during pregnancy than the group of NBW. Frequency of ANC, apart from violence during pregnancy independently had significantly associated with LBW delivery.

Keywords: Violence during pregnancy, low birth weight

### INTRODUCTION

At least one in five women in her life has experienced physical or sexual violence committed by men. Women with a history of physical and sexual abuse are also at increased risk for experiencing an unwanted pregnancy, sexually transmitted diseases, and unfavorable pregnancy outcomes (Hakimi et al, 2001).

In developing countries, there are 20 million of low birth weight (LBW) incidences and more than half are in South Asia, while in Indonesia, LBW is ranging from 3 to 13% and a year around 89,000 babies die or every 6 minutes there is one neonatal death and 29% of it is caused by LBW ( Unicef, 2006; Department of Health, 2011).

The study of violence during pregnancy in Nicaragua reported mothers of LBW

experienced more physical violence by 5.35 times compared to those of NBW (Valladares et al, 2002).

Heise et al (1999) state that stress and anxiety because of violence during pregnancy causes premature labor or impaired fetal growth by elevated levels of stress hormones or changes in immunology, while continuous stress because of violence during pregnancy is the cause of adverse pregnancy outcomes, the bad behavior of mothers and complications of pregnancy (Coker et al, 2004).

Cokkinides et al (2006) suggest that direct impacts of physical or sexual violence involve the abdominal trauma that can cause abruption of the placenta and can result in death of the fetus, abortion, premature rupture of the membrane and premature birth, whereas indirect impacts include no or lack of access to antenatal, bad behavior such as smoking, use of

alcohol and drugs, and inadequate maternal nutrition (Coker et al, 2004). LBW is also influenced by maternal factors, fetal factors, placental factors or a combination of all three (UNICEF, 2006)

Based on the data in OKU and the magnitude of the risk of morbidity and mortality due to violence during pregnancy and LBW, this research is held to see if there is a relationship of violence during pregnancy to LBW in OKU District.

The results of this study are expected to be useful for policy makers of reproductive health programs and health care providers in order to deliver the right services concerning violence during pregnancy and LBW

## RESEARCH METHOD

This was an observational study with unmatched case control study design and quantitative and qualitative approaches. The subject of research was in the ratio 1: 2, consisting of a group of cases (the mother who gave birth to LBW 55samples) and the control group of the mothers with NBW babies (110 samples) so that the sample size in this study was 165.

Selection of research subjects used quantitative probability sampling, while the distribution of the samples was determined with probability proportionate to size because it was expected to represent all regions of the OKU District. Qualitative research subjects were selected by purposive sampling. Qualitative data collection was with in-depth interview intended to explore the experience of physical violence, psychological and sexual violence during pregnancy and carried out by the researchers themselves. Quantitative data analysis used statistical analysis that included univariable, bivariable and multivariable, while qualitative data analysis used content analysis that aimed to complement and reinforce the results of the analysis of quantitative data.

The research was conducted in OKU Regency, South Sumatra in January to June 2015. Data collection was conducted by researchers and assisted by 28 midwives in the region selected as a research site. Midwives involved in data collection were given briefing on materials about violence during pregnancy, the dynamics of violence case assessment, gender-responsive counseling, common perception questionnaire

as well as the ethical and safety issues, according to WHO (1999)

## RESULTS AND DISCUSSION

The bivariate analysis was done between the independent variables of violence during pregnancy (physical, psychological, sexual) on the dependent variable (LBW) and between the independent variable on the extraneous variables (maternal age, frequency of ANC, education, economic status) on the dependent variable (LBW).

In the LBW group, the mothers experienced more than 3 times physical abuse during pregnancy compared to the NBW group and was statistically significant (95% CI; 1.1 - 8.5). LBW group experienced more psychological violence by 2.4 times compared to NBW and statistically significant (95% CI; 1.12 - 5.73), whereas the correlation analysis of sexual violence with LBW was not statistically significant.

In this study, there was a significant relationship of the ANC frequency to LBW , whereas age, education and economic status showed statistically significant relationship with LBW.

**Table 1** Bivariate analysis between the independent variables on the dependent variable and between the independent variable on the external variables

Variable	Group		p	OR
	LBW	NBW		
Violence during Pregnancy				
Yes	44(80%)	67(61%)	0.01	2.56
No	11(20%)	43(39%)		
Violence during pregnancy				
Physical				
Yes	13(24%)	10(10%)	0.01	3.09
No	42(76%)	100(90%)		
Psychology				
Yes	43(78%)	65(59%)	0.01	2.48
No	12(22%)	45(41%)		
Sexual				
Yes	25(45%)	36(33%)		1.71
No	30(55%)	74(67%)		
Age				
< 20 or ≥				



35	8(15%)	11(10%)	0,38	1,53
≥ 20 - 35	47(85%)	99(90%)		
<b>Frequency of ANC</b>				
< 4 times	34(62%)	45(41%)	0,01	2,33
≥ 4 times	21(38%)	65(59%)		
<b>Education</b>				
Low	38(69%)	62(56%)	0,11	1,73
High	17(31%)	48(44%)		
<b>Economic status</b>				
Low	34(62%)	50(46%)	0,04	1,94
High	21(38%)	60(52%)		

\*Bivariate analysis between the independent variables of violence during pregnancy (physical, psychological, sexual) on the dependent variable (LBW) and between the independent variable on the external variables (Age, frequency of ANC, education, economic status) on the dependent variable (LBW)

**Tabel 2** Logistic regression analysis of relationship violence during pregnancy and LBW by controlling external variables

Variable	OR	95%CI
Violence During Pregnancy		
Yes	2,47	(1,1 - 5,5)
No		
Age		
< 20 or ≥ 35	1,42	(0,5 - 4,1)
≥ 20 - 35		
Frequency of ANC		
< 4 times	1,88	(0,9 - 3,7)
≥ 4 times		
Education		
Low	1,42	(0,7 - 3,0)
High		
Economic status		
Low	1,77	(0,9 - 3,6)
High		
R <sup>2</sup>	0,08	
n	165	

The results of logistic regression analysis of relationship of violence during pregnancy to LBW after controlling the extraneous variables (maternal age, frequency of ANC, education and economic status) showing that LBW group

experienced 2.5 times more violence during pregnancy than NBW group and this was statistically significant (95% CI: 1.1 - 7.4). R<sup>2</sup> value inferred from the variable age, frequency of ANC, education and economic status contributed only 8% in predicting LBW.

Frequency of ANC showed a significant association with LBW. ANC frequency was statistically significant to physical violence and psychological abuse during pregnancy. Frequency of ANC was not a modification effect and was not suspected as a confounding variable in relationship of violence during pregnancy to LBW.

The impact of violence during pregnancy is delayed antenatal visits and the presence of significant relationship of ANC frequency in women who have experienced violence during pregnancy (Heise et al, 1999; Coker et al, 2004). Victimization and isolation in the mother leads to a lack or no access to antenatal care (Austin et al, 2000).

Other investigators had reported no significant relationship between maternal age, education, and economic status and the birth of LBW in women who had experienced violence during pregnancy. The same research in the United States and in Mulago reported that maternal age, education and economic status was not associated with LBW in mothers who experienced violence during pregnancy (Neggers et al, 2004; Kaye et al, 2006). These results are in contrast to studies in Mexico that age less than 20 years, education less than 12 years, and economic status were associated with violence during pregnancy and LBW (Lipsky et al, 2003).

### Experience of Physical Violence During Pregnancy

The group of LBW experienced more than 3 times of physical abuse during pregnancy compared to the group of NBW. The risk of physical violence found in this study was lower than the results of the study reported in Nicaragua that the LBW group experienced more physical violence by 5.35 times compared to the group of NBW (Valladares, 2002).

The dominant physical violence was slapping. The percentage of slapping on LBW and NBW groups was 24% and 8% respectively, pressing or pushing on LBW and NBW was 15% and 5%, and hitting with a fist or something else on

LBW and NBW groups was 10.9% and 2.7%. Severe injuries and abrasions on LBW group occurred at 3.6%.

In Yogyakarta and Central Java. It was reported LBW reached 4.5% in women who experienced physical violence during pregnancy (Hakimi et al, 2001) and 43.3% of mothers were reported experiencing physical violence during pregnancy. Lipsky et al (2003) in Washington reported that mothers who experienced physical violence during pregnancy were 3.29 times to have the risk of LBW. Another study reported a significant association of physical violence during pregnancy to LBW with  $p = 0.001$ . The same thing was found in Mexico that there was a significant relationship of physical abuse during pregnancy to LBW with  $p = 0.000$  (Austin et al, 2000; Castro et al, 2003)

Qualitative data analysis showed that respondents experiencing physical violence did not tell others because of giving embarrassment to themselves and disgrace to the family and partly because they did not know where to get help.

The victims of violence generally do not get help from neighbors because society considers domestic affairs are a private matter that other people should not be involved. Physical violence is accepted as fate brought by a woman when she is married, as well as the powerlessness of women in the economy and because of fear of divorce. Respondents experienced physical violence due also to bad behavior of the husband such as gambling, having a relationship with another woman and alcohol users.

Respondents who live in violence tend not to tell about the violence that happens to people outside the family. Among the respondents who have received physical violence, half had never told anyone about their situation or received various forms of help (Hakimi et al, 2001).

#### **Experience of Psychological Violence During Pregnancy.**

Distribution of psychological violence in the LBW group experienced more psychological violence (78.2%) compared to NBW group (59.1%).

Survey of domestic violence by Women Partners in Jakarta, Bogor, Depok, Bekasi and Tangerang shows that (99.8%) housewives have

experienced psychological violence. In Mexico it was reported 83% of psychological violence was experienced by the mother during pregnancy, while in Uganda 24.8 % of mothers experienced psychological violence during pregnancy (Murphy et al, 2001; Kaye et al, 2006).

In this study, the forms of psychological violence that were dominant in the group of LBW was being insulted and hurt feelings (72%), scaring or intimidation (49%), relationships with other women (13%) whereas in the NBW group, the dominant forms of psychological violence was being insulted and hurt feelings (55%), scaring or intimidation (31%) and relationships with other women (5%). The LBW group had 2.5 times more than the NBW group to experience psychological violence.

Valladares et al (2002) reported LBW group had 2.3 times more than NBW group to experience psychological violence, while Neggers et al (2004) reported women who experienced psychological violence during pregnancy had 1.4 times the risk of LBW. Greater risk was reported by Karaoglu et al (2005) in Washington that non-physical violence during pregnancy had 3.8 times the risk of LBW.

From in-depth interviews, it can be concluded that the form of psychological violence experienced was ranting that was considered normal and understandable by the victim's husband due to fatigue after working for a living for the family. Other forms of psychological violence the husband was having relationship with another woman, not providing a living, exploiting women as the main breadwinner in the household needs as well as the lack of access to antenatal care because they did not get permission from a husband or because the mother was busy working.

#### **Experience of Sexual Violence During Pregnancy.**

There was an insignificant relationship between sexual violence and LBW. The dominant form of sexual violence was being forced to have sexual intercourse when the mother did not want it (LBW group at 44%).

Research in Turkey reported no significant relationship of sexual violence during pregnancy to the incidence of LBW ( $p = 0.275$ ), while in Mexico it was reported that 33%

experienced sexual violence during pregnancy (Murphy et al, 2001; Kaye et al, 2006).

From in-depth interview on the experience of sexual violence, it can be concluded that the obligation of serving husband even though a wife was not in a state of desire. The obligation to serve the husband was based on fear of disappointment, fear of what her husband would do, afraid of being sinful to resist the desire of the husband.

Overall Violence Experience.

Violence not just one type of violence but layered violence was also found. In the group of LBW, 20% experienced three forms of violence while in NBW group, it was only 6%. Around 20% of LBW groups experienced double violence, ie, psychological violence and sexual abuse, while the NBW group was only 26%. A single violent form of physical violence in the group of LBW and NBW was not found, and multiple forms of violence between physical violence and sexual violence during pregnancy were not found either.

Meiyenti (1999) in West Sumatra reported pattern of layered violence that 36 (4%) had three kinds of violence and 54 respondents had experienced sexual violence and emotions without physical violence. Layered patterns of violence were in mothers who experienced psychological violence and sexual violence (15.9%), psychological violence and physical sexual (13.6%) and physical and psychological violence (4.5%).

The results of logistic regression analysis showed that age, frequency of ANC, education and economic status were not statistically significant. It indicated there was an independent association of violence during pregnancy and lbw. Qualitative data analysis on experience of physical, psychological and sexual violence showed that informants expressed feeling that they were very depressed during pregnancy.

In this case though the biological mechanism is not known but the relationship of stress during pregnancy and LBW occurs through activation of the hypothalamic pituitary adrenal axis neuroendokrine. Increased adrenaline and cortisol lead to vasoconstriction in Fetomaternal. Vasoconstriction also occurs in utero placental lining resulting in disruption of the delivery of nutrients and O<sup>2</sup> to the fetus. This

situation if it happens in a long time can result in LBW.

Research in Nicaragua reported that LBW group experienced a 4 times more violence during pregnancy than NBW group, with layered patterns of violence are physical, psychological and sexual, while the Ugandan study in women who have experienced violence during pregnancy had 3.78 times the risk of LBW (Valladares et al, 2002 Kaye et al, 2006).

Other investigators have reported violence layered form of psychological, physical and sexual abuse during pregnancy and found 40-45% of mothers who experienced physical violence were also forced to have sexual intercourse (Negger et al, 2004; Murphy et al, 2001)

### CONCLUSION

1. In the LBW group experienced more violence during pregnancy than the NBW group,
2. Frequency ANC independently had a significant relationship with LBW .
3. Circumstances that trigger violence during pregnancy is the husband does not work, alcohol, gambling, err, the other women in marriage and does not like girls, and or wife because of factors of economic powerlessness, surrender, fate, fear of divorce, chatty wife does not obedient and can not take care of the household.

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# PREGNANT WOMEN RISK FACTORS AND INCIDENCE OF LOW BIRTH WEIGHT AT SITI FATIMA MATERNAL AND CHILD HOSPITAL OF MAKASSAR

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## ABSTRACT

**Background:** Low birth weight (LBW) is one of the risk factors that contributes to infant mortality, especially in the perinatal period. The prevalence of LBW is estimated 15% of all births in the world and is more common in developing countries. Newborns less than 2500 grams in weight had the mortality rate by 35 times higher than those with more than 2500 grams in weight.

**Objective:** To obtain information on the risk factors of pregnant women with the incidence of low birth weight (LBW).

**Methods:** This was analytic survey with case control approach. Sample size was 67 cases with comparison of cases and controls 1: 1 so that the total sample was 34 mothers giving birth. Data were analyzed using 2 x 2 tables and odds ratio. **Result:** There was an significant influence between mothers upper arm circumference and LBW, but not for maternal age. Parity was a protective factor against LBW. Mothers aged <20 years and> 35 years are suggested to perform ealy examination and health workers are expected to provide education on the importance of nutrition intake during pregnancy

**Key Words:** Pregnant Women, Low Birth Weight

## INTRODUCTION

In 2012 there were approximately more than 80,000 newborns that die each year, at the age of less than a month and about 43 occur in the first 28 days of life. The infant mortality rate in Indonesia is 32 per 1,000 live births; this is due to three main causes, ie, asphyxia, infection, complications of premature birth.<sup>1</sup>

LBW cases in South Sulawesi in 2009 were recorded 2416 cases.<sup>2</sup> Based on the data of medical record of RSKDIA Siti Fatima of Makassar in 2012 the number of babies born weighing less than 2500 grams was 595 (14.30%) by the number of perinatal deaths caused by low birth weight by 33 persons (0.79%).<sup>3</sup> The high incidence of LBW in Makassar is especially influenced by various factors. Mother's condition during pregnancy is crucial circumstances.

Based on existing conditions, this research aimed to analyze the risk factors for pregnant mothers with LBW in RSKDIA Siti Fatima of Makassar.

## RESEARCH METHOD

This type of research was analytic survey with case control approach. The study was conducted in RSKDIA Siti Fatima OF Makassar for 2 months from April to May 2013. The number of

mothers giving birth at RSKDIA Siti Fatima of Makassar period January - March 2013 by 952 was as the population. The total sample was 134. Techniques of sampling used purposive sampling for the case group and simple random sampling for the control group by way of drawing samples of a given case by considering the ethics of research.

The research instrument used a checklist based on the data required to retrieve data from patient records.

## RESULTS AND DISCUSSION

The results showed most LBW cases were in the age group at risk (<20 and> 35 years) by 39 (58.2%), parity <3 had most BBLR by 58 people (86.6%), and mothers with upper arm circumference <23.5 cm were 40 (59.7%). The following data present research results of the bivariate analysis that has been done.

Table 1 : Bivariate analysis results on risk factors to LBW incidence at RSKDIA Siti Fatima of Makasar

Variable	BW		95% CI	
	Case	Control	OR	Lower
Age high risk	N 39	n 2	41.8	0.976
low risk	41.	3	3	-
	28	8	9	58.2
				3.855



parity							
high risk	13.	1					
low risk	9	4	5	22.4	0.53	0.217	
					8	-	
	58	6	2	77.6		1.333	
MUAC							
high risk	59.	2					
low risk	40	7	4	35.8	2.65	1.326	
					4	-	
	27	3	3	64.2		5.336	

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Based on the results of statistical analysis, OR value obtained 1.940, which means the tendency of pregnant women with age categories at risk had potentially two times into LBW. Statistical test results obtain OR value of 0.538 for the category of parity more than three but it was not significant on the incidence of low birth weight. In line with several previous study, Ismi Trihardini (2011) about the risk factors of low birth weight babies in North and East Singkawang Health Center stated that the majority of normal birth weight occurred in subjects who did not suffer from Chronic Energy Deficiency (CED). This study found that the size of the upper arm circumference was a risk factor for LBW. Statistical test results found that women with MUAC of less than 23.5 cm had 3 times the risk of experiencing LBW seen from the OR of 2.654.

## CONCLUSION

Maternal age and MUAC were two risk factors of the incidence of LBW.

## AKNOWLEDGEMENTS

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# RELATIONSHIP OF PARENTING AND PRE SCHOOL CHILDREN'S SELF-RELIANCE AT HASIRAH EARLY EDUCATION SCHOOL OF MAKASSAR

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## ABSTRACT

**Background:** the first five years of life is as a "golden age", the "window of opportunity" and "critical period". During this period, one aspect that needs to be monitored is self reliance. The role of parents as caregivers and environmental response is necessary for the child as a reinforcement for each behavior done.

**Objective:** this study aimed to determine the relationship of parenting to the child's self-reliance held in Hasirah school of makassar.

**Methods:** the study was an analytic survey with cross sectional and observation analytic approach using chi square. The population was pre-school children with a sample of 49 people using probability sampling technique by simple random sampling. Data was collected by questionnaire.

**Result:** Based on the analysis, there was a relationship between authoritarian, authoritative and permissive parenting and pre-school children's self reliance (p <0.05)

**Key words:** Parenting, Preschool, self reliance

## INTRODUCTION

Children are the world's most valuable resource and its best hope for the future' (John F. Kennedy) is a statement that asserts that children are the most precious wealth which determines the future of the nation. The development of children is a critical time, where necessary stimulation is useful for developing their potential, that requires attention. Psycho-social development is strongly influenced by the environment and interaction between children and their parents/other adults. One of the parameters used in assessing the development of early childhood development is personal social (personality / social behavior), the aspects related to the ability of self-independent ability, socializing and interacting with their environment.<sup>1</sup>

According to estimates of health development programs, the number of pre-school children in 2014 was 343,378.<sup>2</sup> Each year there is an increasing number of toddlers and preschool children. The number will be an asset for economic growth in the future. Children are an asset if the parents are able to guide and nurture

and provide good education. They should have an attitude of self-reliance and work, so as to bear the elderly and infants. This will make the Indonesian economy be streaking and poverty in Indonesia could be reduced, but if not, they will weigh on the country's economy.<sup>3</sup> Children are specially influenced by various factors. Mother's condition during pregnancy is crucial circumstances.

Based on existing conditions, this research aimed to analyze the relationship between parenting and pre-school children's self-reliance in Hasirah early childhood education of Makassar.

## RESEARCH METHOD

This type of research was an analytical survey with cross sectional design and analytic observation approach. The study was conducted in Hasirah early childhood education of Makassar for 6 months from February to August 2013. Total population was 97 children number of samples 49 children. The sampling technique used probability sampling by means of random sampling. The research instrument used questionnaires and the number list of children in Hasirah early childhood education of Makassar.

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## RESULTS AND DISCUSSION

The results showed the characteristics of respondents that most age was 62-65 months (53.06%), most gender was by 26 people (53.1%), child's self-reliance was 23 people (46.9%), authoritative parenting was 22 people (44.89%) and permissive parenting 14 (28.57%). The following data presented are research results of the bivariate analysis that has been done.

Table 1 : Bivariate analysis result on relationship of parenting to preschool children's self reliance

Parenting	Self-reliance				Total	Sig
	Yes		No			
Authoritarian	n	%	n	%		
yes	14	28,57	2	4,08	16	32,66
no	9	18,36	24	48,97	33	67,34
Authoritative						
yes	20	40,82	2	4,08	22	44,9
no	3	6,12	24	48,98	27	55,1
permissive						
yes	12	24,5	2	4,08	14	46,94
no	11	22,44	24	48,98	35	53,06

Based on the statistical analysis, the results obtained the value of  $\alpha = 0.05$ , which means there was a significant relationship of the authoritarian, authoritative and permissive parenting to children's self reliance.

Authoritative parenting is a parenting style that encourages children to become independent, but still puts limits and control over their actions. Research conducted by Suharsono, et al (2009) about the relationship of the parenting to socialization skills in preschool children in Pertiwi kindergarten North Purwokerto declared that there was a relationship between parenting and social skills.

## CONCLUSION

The conclusion that can be drawn from this study is that there was a relationship between authoritarian, authoritative and permissive parenting and the self-reliance of pre-school children.

## ACKNOWLEDGEMENT

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# SUPPORT HEALTH PROFESSIONALS IN THE SUCCESS OF EXCLUSIVE BREASTFEEDING

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## ABSTRACT

The Government of Indonesia has been targeting of 80% exclusive breastfeeding coverage. Health Basic Research 2010 showed the coverage of exclusive breastfeeding only reached 15,6%, while Health Survey of Indonesia Demographic 2012 reported that the success of 6-month exclusive breastfeeding only 3,4%. Prevalence of exclusive breastfeeding tends to decrease with variety of reasons. One of the reasons is the attitude of mothers in giving exclusive breastfeeding.

This study aims to show the prevalence of giving the exclusive breastfeeding in Matraman Health Center, East Jakarta.

The design of this research used cross sectional from the primary data which consisted of 134 respondents. This study was conducted on March - September 2014 by self-administered questionnaire of respondent. This data used analytical univariate, chi-square was calculated for bivariate analysis and multivariate used multiple logistic regression prediction model.

The result showed the proportion of exclusive breastfeeding on Primary Health Care of Matraman District, East Jakarta is 42,5%, lower than national target 80%. Factors that associated with this behavior is the support of health workers in breastfeeding. This variable is the dominant variable in exclusive breastfeeding after controlled with job variable. Mothers who had support of health professionals likely to provide exclusive breastfeeding 2,226 times compared to mothers who did not received the support . (p = 0.044, OR = 2,226, 1.021 to 4.850).

Summary : The role of health professionals to support the exclusive breastfeeding correlated with the success of giving the exclusive breastfeeding

## INTRODUCTION

The first two years of human life is a critical period to form the foundation of growth, Development and health in the long term. Hence it is very important to ensure that children aged 0-2 years to get optimal nutrition.

Efforts easier and cheaper to achieve this is by empowering mothers in exclusive breast feeding and continue giving breast milk to 2 years, as well as the quality complementary food.

Despite much evidence about the benefits of exclusive breastfeeding but coverage is still low above practices. According to the 2007 Demographic and Health Survey, only 32% of infants under 6 months were exclusively breastfed. When compared to the 2003 Demographic and Health Survey, the proportion of infants under six months receive exclusive breastfeeding decreased by 6 points. On average, infants Indonesia only breastfed for the first 2 months, is seen from a decrease in the percentage of IDHS 2003 as much as 64% to 48% in IDHS 2007. In contrast, 65% of

newborns get food other than breast milk during the first three days 1. Based on Riskesdas (2010), the percentage of exclusive breastfeeding achieved was 15.3% 2. While in 2012, Riskesdas reported that the success rate of exclusive breastfeeding until a baby aged 4-5 months by 3.4%, 6-8 months 3.4%<sup>3</sup>

Most mothers in many countries to stop breastfeeding long before the child was 2 years old. Many obstacles that arise in an effort to provide exclusive breastfeeding during the first six months of a baby's life, influencing factor is the factor of social, cultural, economic and political<sup>4</sup>.

In some studies have shown that parents' behavior is a strong supporter of variables in infant feeding choices. Parents who have the attitude and knowledge of the health benefits and superiority of breast milk have a more positive attitude towards breastfeeding than parents give the baby with formula, because they are more aware of the health benefits and nutritional excellence.<sup>5,6</sup>

Another problem in the practice of exclusive breastfeeding is the lack of mother's knowledge, and support the environment, provision of food

and drink too early, and the rampant promotion of infant formula for bayi.7 Linkages in 2002 reported that the traditional belief, mother's education and the mother's attitude toward breastfeeding low, as well as differences in residential areas of the constraints that affect the sustainability of breastfeeding <sup>8</sup>.

Mother's education level, occupation and antenatal classes also played a role in the success of exclusive breastfeeding. Information about the advantages of breastfeeding and lactation management should be a priority in antenatal classes. 9.10 The findings of Dhandapany, Bethau, Arunagirinathan and Ananthakrishnan in 2008 that awareness of breastfeeding in mothers who took a course better than those who do not follow. <sup>10</sup>

The success of the program exclusive breastfeeding is influenced also by birth attendants and organizers of health facilities. In many communities and hospitals, health workers' advice also affect the provision of this fluid. The study in Ghana showed 93% of midwives found fluids should be given to all infants from the first day of his birth <sup>11</sup>. In Egypt, many nurses advised mothers to give sweet water to the baby immediately after birth <sup>11</sup>. In addition, the success of breastfeeding mothers should also be supported by her husband, family, and community health workers. Health promotion of breastfeeding during antenatal benefit will affect the success rate of breastfeeding practices. <sup>13</sup>

Based on the sub-district of Matraman Health Center achievement of exclusive breastfeeding in 2012 reported only 42%, of the seven existing sub district, while the target achievement of exclusive breastfeeding nationwide is 80%. This indicates that the target is still far away from the expected. This issue needs to do an intervention to change behavior in exclusive breastfeeding mothers. Appropriate intervention is education or health promotion, because with this method although it requires a relatively long time, but the shape is a lasting change in behavior. For that every pregnant woman and her family should be given health education on the importance of exclusive breastfeeding and its management during pregnancy, parturition and lactation. The purpose of this study is to investigate the determinants associated with the success of exclusive breastfeeding. This research was conducted in PKM Matraman sub-district

## RESEARCH METHOD

The population in this study were women who came for treatment to IMCI poly and poly KIA on Matraman sub-district health centers from March-September 2014

The sample in this study were mothers who have children aged 6 months up to the age of two years and poly IMCI treatment in Matraman sub-district health centers. The minimum samples number formula used Lameshow which is the testing of two proportions. <sup>13</sup> Number of necessary samples of 134 respondents

The dependent variable in this study were breastfeeding, while the independent variables is the knowledge, attitudes, socio-demographic (age, parity, education, employment), the support of health workers and family support. Bivariate analysis is used in order to determine the determinant associated with exclusive breastfeeding 6 months, using a statistical test Chi Square (X<sup>2</sup>).

The research was carried out for eight weeks starting in March-September 2014 from Monday to Friday.

The place to be used is the sub-district Matraman Health Center, East Jakarta.

## RESULTS AND DISCUSSION

### Frequency Distribution of Knowledge, Attitude, Age, Education, Employed, Parity, Family Support, Support Health Workers In Exclusive Breastfeeding

Variable	(n)	(%)
<b>Exclusive breastfeeding</b>		
Successful	57	42.5
Not successful	77	57.5
<b>Knowledge</b>		
High	88	65.7
Low	46	34.3
<b>Attitude</b>		
Positive	73	54.5
Negative	61	45.5
<b>Age</b>		
20-35 years	113	84.3
<20 and >35 years	21	15.7
<b>Education</b>		
High	88	65.7
Low	46	34.3
<b>Employed</b>		
Unemployed	114	85.1
Employed	20	14.9
<b>Parity</b>		
1	54	40.3



>1	<b>80</b>	<b>59.7</b>
<b>Family Support</b>		
Support	<b>118</b>	<b>88.1</b>
Not support	<b>16</b>	<b>11.9</b>
<b>Support health worker</b>		
Support	<b>91</b>	<b>67.9</b>
Not support	<b>43</b>	<b>32.1</b>

Table 2 Distribution of Respondents According to Knowledge, Attitude, Age, Education, Employed, Parity, Support Workers Health and Family Support At Exclusive Breastfeeding

Variable	P value	OR (95% CI)
<b>Knowledge</b>	0.203	1.636 (0.783-3.419)
<b>Attitude</b>	0.381	1.440 (0.721-2.879)
<b>Age</b>	1.00	0.985 (0.384-2.524)
<b>Education</b>	1.00	1.020 (0.494-2.106)
<b>Employed</b>	0.094	2.516 (0.857-7.388)
<b>Parity</b>	0.373	0.684 (0.337-1.385)
<b>Family support</b>	0.594	0.710 (0.249-2.022)
<b>Support Health Worker</b>	0.005	2.160 (1.00 – 4.665)

In table 1 provides information that moms who successfully breastfed exclusively for 57 (42.3%) and that did not work for 77 (57.5%). It is certainly far from the national target of 80%.

Indonesia Demographic Health Survey (IDHS) in 2003 reported only 40% of infants exclusively breastfed. This number dropped in 2007 that only 32.8% of infants are exclusively breastfed. Data Riskesdas 2010 is alarmingly low, with only 15.3% only coverage of exclusive breastfeeding in Indonesia. While the results of Demographic and Health Survey 2012 reported that children exclusively breastfed 4-5 months amounted to 27.1% and the age of 6-8 months 3.1%.<sup>1,2</sup>

Mothers' knowledge of exclusive breastfeeding in the high category 88 (65.7%) and a low of 46 (34.3%). In this study revealed also that as many as 92 mothers stated that the colostrum (weaned) must be discarded.

A good knowledge become one of the mothers in the process of provision of exclusive breastfeeding. Domain knowledge is very important in shaping a person's actions. The action is based on knowledge will be lasting rather than behavior that is not based on

knowledge. Green said that the predisposition factors of person's attitudes or community is knowledge and attitudes towards what is done.<sup>15</sup> The result of the relationship between mother's knowledge with exclusive breastfeeding was found that statistically there is no relation between mother knowledge with exclusive breastfeeding (p value = 0.203) (Table 2) These results differ from Abdullah (2012) which states there is a relationship between knowledge and the success of exclusive breastfeeding (OR = 2.478), Subiyatin (2013) (OR = 2,182 95% CI: 1290-3691). 6,25Rachma say no relation between mother knowledge about the sustainability of breastfeeding until the child is two years old (OR = 3.119). 16 According Fikawati and Shafiq in the qualitative study of the causes of success and failure of the practice of exclusive breastfeeding in the PHC Jagakarsa, South Jakarta found that education, knowledge and experience of the mother is a predisposing factor to the success of breastfeeding eksklusif.<sup>17</sup>

However, despite the mother's knowledge is good but having a positive attitude in breastfeeding 73 (54.5%) and the negative attitude of 61 (45.5%). The result of the relationship between attitude with exclusive breastfeeding mothers found that statistically there is no relationship between maternal attitude with exclusive breastfeeding (p value = 0.381). The results of this study is different to what is said by Abdullah that there is a relationship between attitudes to the practice of exclusive breastfeeding (OR = 5.168) as well as those found Subiyatin revealed that attitude is a variable dominant in the success of exclusive breastfeeding, once controlled by the variable knowledge (p value = 0.001, OR = 5,892, CI = 3265-10644) 6.25. But the results of this study are consistent with Ida indicating that there is no relationship between maternal attitude with exclusive breastfeeding.<sup>19</sup>

The average maternal age in healthy reproductive age of 20-35 years amounted to 113 (84.3%), but they also found a high risk age of 21 (15.7%) (Table 1). The average age of respondents was 28 years old, the largest age of 27 years. The result of the relationship between mother's age with exclusive breastfeeding was found that statistically there was no correlation between mother's age with the behavior of exclusive breastfeeding (p value = 1). Similar findings were obtained by Abdullah, Subiyatin where the age group 20-35 years mothers who exclusively breastfed for 64.5%, according to

the age group that breastfeeding has many advantages and multi role is as wife, mother and employee as well as physical strength which still baik.<sup>6,25.</sup>

Elementary education is the lowest respondents as many as 8 people and the highest is PT / Academy as many as 16 people, the average education level of high school are as many as 73 people. Categories of higher education in this study amounted to 88 (68.7%) and low education 46 (34.7%). The result of the relationship between maternal education with exclusive breastfeeding was found that statistically there was no correlation between maternal education with exclusive breastfeeding (p value = 1)

The level of education is very influential on knowledge, especially in the formation of behavior, the higher the person's level of education, the higher the person's level of consciousness about things and the more mature judgment for someone to take a decision (Notoadmodjo, 2003).<sup>22</sup>

In terms of job most respondents are housewives 113 (84.3%) and only 20 (14.9%) working mothers. The result of the relationship between the mother's occupation of exclusive breastfeeding was found that statistically there was no correlation between the mother's occupation by the behavior of exclusive breastfeeding. Similar to the study of Ida was no relationship between the mother's occupation by the behavior of exclusive breastfeeding (p = 0.244), mothers who did not work was 27.9% exclusively breastfed, while the mother worked at 16.7%, different with Subiyatin which was a relationship between work and exclusive breastfeeding (p value = 0.780, OR = 0.926, 0.337-1433)<sup>19,25</sup>

Parity is the 54th lowest (40.3%) and highest in more than 80 (59.7%). The result of the relationship between mother parity with exclusive breastfeeding was found that statistically there was no correlation between maternal parity with the behavior of exclusive breastfeeding. Parity has links with breastfeeding intentions. The higher the parity the smaller intention to breastfeed, Knox et al added that babies born siblings a barrier in menyusui.<sup>23,4</sup> Parity is related to the behavior of exclusive breastfeeding (p = 0.043, OR = 2.333, CI: 1.084 to 5.022)<sup>17</sup>

By 118 (88.1%) of respondents support the family of exclusive breastfeeding and only 16

(11.9%) do not support. The result of the relationship between family support exclusive breastfeeding mothers found that statistically there is no relationship between family support exclusive breastfeeding (p value = 0.594).

This study is different from the report of Lisma Evareny, Mohammad Hakimi, and Retna Siwi Patmawati of multivariate analysis found no relationship between the father's role in breastfeeding practices by incorporating knowledge variable fathers, mothers, fathers and mothers attitude which is predicted at 12%. 24 The same thing was found by chance mother Ida that behaves exclusively breastfed 4.111 times compared with no family support (p = 0.002, OR = 4.111, CI: 1.705 to 9.912)<sup>18</sup>

As for the support of health professionals who support the 91 (67.9%) and that does not support the 43 (32.1%), while the statistical test the relationship between the support of health professionals with exclusive breastfeeding was found that statistically there is a relationship between family support exclusive breastfeeding (p value = 0.005).

The role of health workers is large enough to promote, and support breastfeeding. Health promotion of breastfeeding during antenatal benefit will affect the success rate of breastfeeding practices. Similar results were obtained by Ida that mothers who received support from health professionals have the opportunity 3.974 times behave exclusively breastfed compared to the lack of support of health workers (p = 0.0001, OR = 3.974, CI = 1.896 to 8.329).<sup>19</sup>

From Table 3 is the end result of modeling, the table shows that the controlled variable job, respondents who work have 2,631 times the possibility of exclusive breastfeeding compared with respondents who do not work (95% CI: 0.884 -7832)

Respondents who had the support of health workers after the controlled variable job has 2,226 times the possibility of exclusive breastfeeding compared with respondents who did not have the support of health workers (95% CI: 1021-4850)

Thus, the factors that are closely related to exclusive breastfeeding is the work (OR: 2,631) and the support of health workers (OR: 2,226). It concluded that the dominant variables associated with exclusive breastfeeding is the support of health professionals.

**Table 3**

**Last Model Independent Variables  
Multivariate Analysis On Determinants  
Exclusive Breastfeeding Exclusive  
Breastfeeding Success**

Variab le	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B) Lower Upper
Empl yed Suppo rt Health worke rs	0.96 7	0.557	3.019	1	0.082	2.63 1	0.88 7.832
Const ant	- 0.07 4	0.225	0.110	1	0.740	0.92 8	

**Summary**

The health professionals take role on exclusive breastfeeding. Variables that associated with exclusive breastfeeding is the support of health professionals. The prevalence of exclusive breastfeeding among respondents who had the support of 2,226 health professionals more successful than those who did not have the support, after the controlled variable job.

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## FACTORS ASSOCIATED WITH VISUAL INSPECTION ACETIC ACID (VIA) AMONG REPRODUCTIVE AGE WOMEN

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### ABSTRACT

According to WHO, 490,000 women in the world are diagnosed with cervical cancer each year and 80% are in developing countries including Indonesia. Every 1 minute one new case appears and every 2 minutes 1 woman dies from cervical cancer. The high incidence of cervical cancer is due to the low coverage of screening and 70% of cases of cervical cancer are detected in an advanced stage. The aim of the study was to know about the factors that affect the relation of Visual Inspection Acetic Acid (VIA) inspection in women of fertile age and early detection of cervical cancer. This study used a cross sectional method with a total of 108 respondents. Sampling was taken using a cluster random sampling technique. The results of multivariate analysis showed that the variables significantly associated with VIA inspection were employment and the distance to health services variable and the confounding variables were knowledge variable, attitude and level of education. The recommendation of this research is the need for dissemination of the importance of VIA inspection as early detection of cervical cancer through health education activities in coordination with other relevant institutions. Therefore, women can get more information about the VIA inspection.

**Keywords : VIA, Women of reproductive age, Cervical cancer**

### INTRODUCTION

Cervical cancer is a significant health problem for women around the world. This cancer is the second most common cancer in women affecting more than 1.4 million women worldwide (Ferlay, 2001). Every year there are more than 460,000 cases and about 231,000 women die of the disease (Parkin 2000; and Herdman Sherris 2000).

According to the World Health Organization (WHO), 490,000 women worldwide each year are diagnosed with cervical cancer and 80% are in developing countries, including Indonesia. Each 1 (one) minute appear 1 (one) new cases and every two (2) minutes one (1) woman dies due to cervical cancer. If not controlled, an estimated 26 million people will suffer from cancer and 17 million die due to cancer in 2030. Ironically, these events will occur more rapidly in poor and developing countries (Sobin, LH, Wittekind, 2009).

In Indonesia, every year there are more than 15,000 detected cases of cervical cancer, and approximately 8,000 of these cases end in death. The incidence of cervical cancer in Indonesia in 2011 reached 100 per 100,000 inhabitants / year and its spread accumulates in Java and Bali. This

figure is assumed to increase 25% within the next 10 years if no preventive measures are taken (Rasjidi, 2012).

The high incidence of cervical cancer screening is the low coverage and 70% of cases of cervical cancer are known at an advanced stage. This is due to the lack of understanding and awareness of society in general. On the one hand, it demonstrates a lack of systems and efforts to encourage women to pay attention to the health of the cervix (because the disease is asymptomatic), public policy, the medical profession, the media, or other elements in society. Therefore, the issue of cervical cancer becomes our duty to overcome it. The incidence of cervical cancer could actually be mitigated by doing primary prevention such as increase or intensify the activities of outreach to the community to run a healthy lifestyle, avoid risk factors for cancer, do immunization with the vaccine of Human papilloma virus (HPV) and perform early detection of cervical cancer through Pap smear or VIA (Visual Inspection Acetic Acid).

Visual inspection with acetic acid is a simple way to detect cervical cancer as early as possible by means of direct view (with the naked eye) of the cervix after applying the cervix with acetic acid solution of 3-5% (Bertiani, 2009). Reproductive age women's lack of knowledge



about their attitudes causes less to perform the inspection of VIA for detection of cervical cancer, therefore, most of the women come to visit with a diagnosis of advanced-stage cervical cancer (Wiknjosatro, 2005). Although the VIA inspection conducted is free to patients, there are still many women who would not check their health because of fear when the inspection results are not good.

Mother and Child Hospital of Budi Kemuliaan in Pekojan Branch has carried out an VIA inspection for four consecutive years on reproductive age woman in the Pekojan Village of Tambora sub-district, West Jakarta starting from the year 2011 to 2014. The village has a dense population with the number of 27,434 people, made up of many different cultures, characters and different educational backgrounds (West Jakarta Central Statistics Agency, 2015). According to the records from RSIA Budi Kemuliaan based on the results of the VIA inspection, there is one (1) women diagnosed with advanced cervical cancer and three (3) person with a positive VIA. Hence, there is a need to conduct early detection of cervical cancer among reproductive age women in the Pekojan Village area.

## RESEARCH METHODS

This was a descriptive and analytical (quantitative) research that aimed to reveal the correlation between variables (Arikunto, 2010). The objective of this study was to determine the factors associated with the VIA inspection among women for early detection of cervical cancer in Pekojan village of Tambora Sub-district, West Jakarta municipality. The independent variables in this study was the level of knowledge, attitudes, age, education level, employment, resources, support the husband, distance to get VIA service while the dependent factor in this study was an inspection of the VIA on reproductive age women.

This research was conducted at Pekojan, branch of RSIA Budi Kemuliaan in November 2014 until January 2015 using cross sectional approach. The population in this study was all reproductive age women who lived in the Pekojan village, with the selection of the sample using the formula Slovin totaling 108 people who fit the inclusion criteria (Notoatmojo, 2005). Sampling used random cluster sampling based on existing groups in the population and performed randomly. The data used in this study were primary data using questionnaires. Data analysis

was performed using bivariate with Chi Square test, and multivariate analysis with multiple logistic regression.

## RESEARCH RESULT

**Table 1 Respondent characteristic**

Category	VIA		No VIA	
	f	%	f	%
<b>Knowledge</b>				
Good	37	78,7	27	44,3
Bad	10	21,3	34	55,7
<b>Attitude</b>				
Positive	34	72,3	28	45,9
Negative	13	27,7	33	54,1
<b>Age</b>				
20-50	39	83,0	42	68,9
20-51 < 20	8	17,0	19	31,1
<b>Education</b>				
High	37	78,7	35	57,4
Low	10	21,3	26	42,6
<b>Employed</b>				
No	31	66,0	27	44,3
Yes	16	34,0	34	55,7
<b>Information</b>				
Yes	33	70,2	28	45,9
No	14	29,8	33	54,1
<b>Husband support</b>				
Yes	33	70,2	30	49,2
No	14	29,8	31	50,8
<b>Distance to service</b>				
Close	39	83,0	37	60,7
Far	8	17,0	24	39,3

**Table 2 Bivariate analysis**

Variable	VIA				N	$\chi^2$ (p)	OR (CI 95%)
	Yes		No				
	f	%	f	%			
<b>Knowledge</b>							
Good	37	57,8	27	42,2	64	11,670 (0,001)	4,659 (1,967- 11,034)
Bad	10	22,7	34	77,3			
<b>Attitude</b>							
Positive	34	54,8	28	45,2	62	6,546 (0,011)	3,082 (1,366- 6,955)
Negative	13	28,3	33	71,7			
<b>Age</b>							
0-52	39	48,1	42	51,9	81	2,122 (0,145)	2,205 (0,867- 5,612)
53 < 20	8	29,6	19	70,4			
<b>Education</b>							
High	37	51,4	35	48,6	72	4,525 (0,033)	2,749 (1,159- 6,517)
Low	10	27,8	26	72,2			
<b>Employed</b>							
No	31	53,4	27	46,6	58	4,191 (0,041)	2,440 (1,111- 5,359)
Yes	16	32,0	34	68,0			
<b>Information</b>							
Yes	33	54,1	28	45,9	61	5,432 (0,020)	2,778 (1,245- 6,200)
No	14	29,8	33	70,2			

Husband support							
Yes	33	52,4	30	47,6	63	4,005	2,436
No	14	31,1	31	68,9	45	(0,045)	(1,093-5,430)
Distance to service							
Close	39	51,3	37	48,7	76	5,319	3,162
Far	8	25,0	24	75,0	32	(0,021)	(1,2623-7,918)

**Table 3: The results of multiple logistic regression testing**

Parameter	B	Wald	P	OR	CI (95%)
Knowledge	0,888	2,270	0,132	2,430	0,765 – 7,713
Attitude	0,766	2,106	0,147	2,152	0,764 – 6,057
Education	0,721	1,573	0,210	2,056	0,667 – 6,339
Employment	1,399	8,069	0,005	4,052	1,543 – 10,641
Distance	1,399	6,515	0,011	4,052	1,384 – 11,864
Constant	-6,805	18,401	0,000		
-2 Log Likelihood = 117,912		G = 29,988		pv = 0,000	

The results showed that there was a relationship between the level of knowledge and inspection of VIA ( $p = 0.001$ ). Women of reproductive age who had good knowledge had an opportunity of 4,659 times to check VIA than those who had bad knowledge. It supported the research by Yuliawati (2012) that there was a significant relationship between the behavior of women in the early detection of cervical cancer methods of VIA and knowledge. Increased knowledge will not necessarily lead to changes in behavior, but show a positive relationship between the two variables so that if a high knowledge will result in the behavior that tends to be good (Green, 1980 in Notoatmodjo 2003).

At the attitude variable, there was a relationship between attitude and VIA inspection ( $p = 0.011$ ). Women with a positive attitude had the opportunity to carry out VIA inspection 3,082 times compared to those who had a negative attitude. The more positive attitude towards the VIA inspection on women will have a relationship with the high coverage of VIA inspection.

In the variable level of education, there was a relationship between education level and the inspection of VIA ( $p = 0.033$ ). Women with high education (high school level to university) had a chance to 2.749 times for VIA inspection than those with low education (primary up to junior high school). The study's findings differed from

Theresia (2011) that there was no relationship between education and female behavior in the VIA inspection. This difference could be made possible because of different research objects and the majority of respondents who conducted the VIA inspection had a higher education. Education has a positive effect on health awareness and direct impact on behavior. This is in line with the opinion of Green (1980 Notoatmodjo, 2003) that sociodemographic factors in this case education have major effect on health behavior. Level of education, particularly female education levels, affect health status. Education is not only acquired at school; informal education can also influence the health behavior in women, such as education in the family and in society.

There was a relationship between respondents who worked (employment) with the VIA inspection ( $p = 0.041$ ). Women who did not work have the opportunity of 2.440 times to check VIA than those who worked. This could be caused due to employed women that spent more time at work, and not took the time to examine VIA. VIA Operational inspection in health centers and hospitals is only done during working hours, while for independently practising midwives (BPS) or clinic, the VIA inspection services were conducted every day both in working hours and outside working hours. Thus, not working women had enough time to come to BPS / clinic for a VIA inspection.

Information had a significant relationship to the VIA inspection ( $p = 0.020$ ). Women with information had 2.778 times of the opportunity to have VIA inspection than those with no information. Information on VIA accepted by women led to positive behavioral change towards women to check them.

Support of husband had a significant relationship to the VIA inspection ( $p = 0.045$ ). Women who had good support of husband had chances 2,436 times to check VIA than those who did not have the support. The contribution of the support of people or groups nearby who have a good understanding of health can make an impact on the health of women. Husband and family is the closest to women to interact and make decisions, especially in terms of health. Therefore, in changing the paradigm of the intellectual community and the achievement of equality in terms of health, women are not only ones to become the main focus in the information on VIA, but men must also be included.

Distances to services showed a significant relationship to the VIA inspection ( $p = 0.021$ ). Women of reproductive age close to the service location had 3,162 times of opportunity to carry out VIA inspection compared with those who lived far from the location of the service. This could be caused because of distance to go to reach health care, because reaching it needs more time. Far distance to healthcare certainly will not be reached by foot, so it will require transportation and costs.

In this study, there was no significant relationship between age and the VIA inspection ( $p = 0.145$ ). The results of this study were not in accordance with the theory of Green (1980 Notoatmodjo, 2003), that the sociodemographic factors in this case the age effect on the differences in health behavior. It could also be the possibility of being related to knowledge, which is psychologically supposed that older adults are more precautions because they feel more vulnerable to certain health problems. In adult women, when they do not have good knowledge about the VIA inspection, their behavior for VIA checks tends to be lower.

Multivariate analysis found that the variables significantly associated with an VIA inspection were employment and distance to services where the level of knowledge, attitudes, and level of education were confounding to VIA inspection. The dominant variables related to the inspection VIA was employment and the distance to the service because they had the largest OR value compared to the variables of level of knowledge, attitudes, and level of education.

## CONCLUSION

In this study, we can conclude that statistically there is a relationship between the level of knowledge, attitude, level of education, employment, information, support of husband, and the distance and the VIA services in Pekojan of Tambora with  $p = <0.05$ . While the age variable had a value of  $p \Rightarrow 0.05$  so statistically there was no relationship between age and VIA inspection in Pekojan of Tambora. Of all the variables declared statistically significant relationship to the inspection VIA, variables of employment and distances to services were the dominant variables toward VIA inspection.

There is a need for socialization of the importance of VIA checking to women and families provided by the Pekojan Village in coordination with other relevant institutions through health education, counseling, and other

activities, expected to improve the knowledge and the support of husband or family. In order that the service can be affordable by most women, it is expected that health office can add the number of trained health personnel for VIA inspection in every RW in Pekojan the Village, so that no more women do not check themselves for reasons of far distance from services.

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## FACTORS RELATED TO VISIT EXAMINATION OF PREGNANCY IN CLINICAL PRATAMA 'P' JAKARTA

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### ABSTRACT

Pregnancy is one phase of the most important for women, during pregnancy the hormonal changes in women that lead to changes in the anatomy and physiology of the entire system at the woman, fetus in the womb develops in accordance with a gestational age, so if no strict supervision will be a problem either during pregnancy, childbirth and post-partum even cause maternal and infant mortality. The purpose of this study to determine the factors - factors related to the antenatal clinic visits Primary "P" in Central Jakarta.

The method used is descriptive correlation with cross sectional approach. The research objectives were 68 pregnant women at term who met the inclusion criteria by means exidental sampling in October 2015 till April 2016

The research found that the number of inspection visits trimester of pregnancy to three at the Clinic Primary "P" period October 2015 till April 2016 by 68 mothers, almost all the regular visit, was no association between maternal age with a visit antenatal, between education and visit antenatal, between jobs with antenatal visits, between parity with antenatal visits. between knowledge and antenatal visit, the attitude of the antenatal visits.

**Key words: Antenatal visit, pregnancy,**

### INTRODUCTION

Pregnancy is one phase of the most important for women, during pregnancy the hormonal changes in women that lead to changes in the anatomy and physiology of the entire body system woman, the fetus in the womb develops in accordance with a gestational age, so if no strict supervision will be a problem either during pregnancy, childbirth and post-partum even cause maternal and infant mortality.

Indonesia's maternal mortality rate is still quite high, in 2012 from the Indonesian Demographic and Health Survey (IDHS), showed that the maternal mortality rate (MMR) was recorded at 359 per 100,000 live births or an increase of approximately 57% when compared with conditions in 2007, which only amounted to 228 per 100,000 population based on data from Indonesian Demographic and Health Survey (IDHS) in 2007, IMR 34 per 1,000 live births, the infant mortality rate of newborn (AKN) 19 per 1,000 live births. Efforts to decrease MMR basically refers to the strategic intervention "Four Pillars of Safe Motherhood", one of which is access to antenatal care whose quality needs to be improved continuously. Good antenatal care and the availability of referral facilities for high-risk cases can reduce maternal mortality. Health workers should be able to identify risk factors associated with age, parity, history of adverse

pregnancy and bleeding during pregnancy (WHO, 2007).

Routine examinations during pregnancy or Ante Natal Care (ANC) is also a means of information for pregnant women to get advice and information about pregnancy and childbirth, so that pregnant women understand more about the things that happen during pregnancy. MMR and IMR can be prevented among others by carrying a pregnancy examination at least 4 times during pregnancy. The prenatal period is a period of physical and psychological preparation, which is the period of fetal growth and maternal adaptation,

so that the necessary comprehensive treatment program that includes assessment Antepartum during preconception, prenatal care during the first mission, and during follow-up visits prenatal (Cunningham et al, 2005). Maternal deaths are also influenced by the basic things such as the level of knowledge, attitudes, and behavior of pregnant women is still low, and understanding the importance of prenatal care to see the number of visits of antenatal care (K4) is still less than the standard national reference (Prawirohardjo, 2002).

K1 is the visit of pregnant women for the first time during pregnancy. K1 coverage below 70% (compared to the target number of pregnant women in the period of one year) showed that antenatal care affordability is low, which may be



caused by the pattern of services that have not been active enough. Low K1 shows that access to women officers still need to be improved.

Contact K4 is at least 4 times during pregnancy for antenatal care, which consists of at least 1 times the contact in the first trimester, one in the second trimester, and twice in the third trimester. K4 coverage below 60% (compared to the target number of pregnant women in the period of one year) indicates the quality of antenatal care is not adequate. Low K4 indicates a low chance to capture and handle high-risk obstetrics.

Maternal deaths are also caused some delays risk factor (Three Delays), whom late in pregnancy tests (late decision-making), late in obtaining delivery service of health personnel, and too late to health facilities when in emergencies. One prevention efforts are doing births attended by skilled health personnel in health facilities, according to the Standard Service Program Maternal and Child Health (MCH).

Antenatal visit is one form of behavior. According to Green, the factors associated with behavior there are three, namely: predisposing factors, enabling factors, and factors driving. Which included predisposing factors include: knowledge and attitudes towards health, tradition and public confidence in the matters related to health, the community system of shared values, educational level, socioeconomic level. Which termaksud supporting factor is the availability of infrastructure or health facilities, and the last one driving factor is the attitude and behavior of health workers (Notoatmodjo, 2007). From the above behavior theory, the researchers took factors knowledge attitudes, educational level, parity, as one of the factors affecting the regularity of maternal antenatal visits.

Clinic medical records of Primary "P" data obtained in 2012 the number of patients who check pregnant midwife (K1) 722, K4 332 (46%), in 2013 the number of patients who check pregnant midwife (K1) 534 and K4 263 (49.3 %) and similar studies have not been done, so the researchers are interested in examining what factors are associated with antenatal visit (K4) in the Primary Clinic "P."

## RESEARCH METHODS

This study used a descriptive design with cross sectional korelational. The design is intended to

describe each variable and examines the relationship between each dependent and independent variables at a time. The place of a study conducted at the Clinic Primary "P", Central Jakarta.

The population in this study were pregnant women at term patient midwife who did the ANC at the Clinic Primary P, numbering as many as 332/263 2012 data and 2013 taken rata2 be 298. Samples are 75 respondents Sampling technique uses accidental sampling with inclusion criteria: Mother pregnant at term who are willing to do research, which can read and write and complete filling of the research questionnaire. Data collector using a questionnaire which refers to the framework concepts studied, consisting of respondent characteristics, knowledge, attitudes and antenatal visits by tehnik *recall*. Researchers aided by several assistants who work at the clinic P. Primary data collection was done at the Clinic Primary P Jakarta. The collection of data by means of direct visits, interviews and questionnaires.

## RESULTS AND DISCUSSION

**Table 1 Distribution of respondents according Inspection Visits Pregnancy**

Variabel	F	%
Inspection Visits Pregnancy		
Regular	64	94.1
Irregular	4	5.9
Age		
20 – 35 thn	61	89.7
< 20 dan > 35 thn	7	10.3
Education		
High	66	97.1
Low	2	2.9
Work		
Does not work	39	57.4
Parity	29	42,6
Primi Gravida	27	39.7
Multi	41	60,3
Knowledge		
Good	47	69.1
Lack	21	30.9
Attitude		
Positive	36	52,9
Negatif	32	47,1

**Table 2: Distribution Relationship between Age Mothers with Pregnancy Examination**

Age	Pregnancy Exam				Total		P Value
	Regular		Iregular		F	%	
20-35 th	F	%	F	%	F	%	
<20	57	93,5	4	6,5	61	89,7	
atau >35 tahun	7	100	0	0	7	10,3	0,641

From the results in table 2 above, it was found that of the 68 respondents with 20-35 years of age almost all the antenatal regularly (93.5%) while the 7 respondents aged <20 or> 35 years all regular antenatal , Based on the results obtained Chi square test p value 0.641> 0.05 thus Ha is rejected, it means there is no relationship between the age of pregnant women with antenatal. This is consistent with the results of research Galuh (2009), that there is no relationship between age and visit K4 (correlation coefficient = 0.341)  $\hat{I} \pm = 0.05$ ). A good age for a pregnant woman is between 20-35 years and 20-35 years of age period is also a good period for childbirth (Hartanto, 1996). Healthy pregnant women who are at risk when pregnant women with age too young and too old. Pregnancy age too young (teenage pregnancy) with age <20 years will be at risk physiologically to face problems in pregnancy and childbirth. When the mother's age less than 20 years, the woman is still in its infancy, biological factors were ready but psychologically immature. Similarly, if the mother gave birth at the age of 35 years of health problems often arise with complications that required regular pregnancy tests.

**Table 3: Distribution Relationship Between Education Examination Mother Pregnancy**

Edu cation	Pregnancy Exam				Total		P Value
	Regular		Iregular		F	%	
High	F	%	F	%	F	%	
	62	93,9	4	6,06	66	97,05	0,720
Low	2	10	0	0	2	2,95	

From the results in table 3 above, it was found that of the 66 respondents with higher education almost all antenatal regularly (93.94%), while two respondents who rate low pendikannya all antenatal regularly. Based on the results obtained Chi square test p value 0.720> 0.05 thus Ha is rejected, meaning that there is no relationship between the education of pregnant women with

antenatal care. This is consistent with the results of research Bahtiar (2013) found no relationship between the level of education with a visit K4 (p = 0.916). But not according to research Galuh (2009) that there is a relationship between education and visits K4 (correlation coefficient = 0.178, sig 0.000  $\hat{I} \pm = 0.05$ ). According to researcher education levels has been undertaken by pregnant women can determine the mindset of mothers in obtaining information. The higher the mother's education, the more extensive insight regarding maternal antenatal visits, conversely the lower the mother's education obtained by the insights about the importance of prenatal care are increasingly less. compliance results of this study because the number of respondents with lower education only 2 or 2.95%, whereas almost all highly educated respondents (97.05%).

**Table 4: Distribution Relationship between Job with Pregnancy Examination**

Job	Ptrgnancy Exam				Total		P Value
	Regular		Iregular		F	%	
Work	F	%	F	%	F	%	
	37	94,87	2	5,13	39	57,35	0,574
Does not work	27	93,1	2	6,9	29	42,65	

From the results in table 4 above, it was found that of the 39 respondents who work almost all the antenatal regularly (94.87%), while of the 29 respondents who do not work nearly all antenatal regularly. Based on the results obtained Chi square test p value 0.574> 0.05 thus Ha is rejected, it means there is no relationship between the work of pregnant women with antenatal care.

This is according to research Bahtiar (2013) that there is no relationship between work and visit K4 (p = 0.877), but not in accordance with the research Galuh (2009) that there is a relationship between work and visit K4 (correlation coefficient = 387, sig 0.000  $\hat{I} \pm = 0.05$ ).

A pregnant woman who is a woman to work outside the home requires more attention during pregnancy. This is due to the risk of working during pregnancy is quite high, usually due to lack of rest so often the problems occur. As for a pregnant woman who is not working or housewives have more time to pay attention to the pregnancy and tend to be very cautious. But do not rule out the possibility that women may experience complications or problems due to

lack of activity (Irawan, 2003, in Paula, 2007) so that the mother works or does not need regular checkups.

**Table 5: The relationship between the distribution Parity with Pregnancy Examination**

Parity	Pregnancy Exam				Total		P Value
	Regular		Iregular		F	P	
	F	P	F	P			
Primigravida	25	92,59	2	7,41	27	9,71	
Multi	39	95,12	2	4,88	41	10,29	0,522

From the research results in the table 5, showed that out of 27 respondents primigravid almost all antenatal regularly (92.59%) of the 41 respondents multigravida while almost all antenatal regularly (95.12%).

Based on the results obtained Chi square test p value  $0.522 > 0.05$  thus  $H_a$  is rejected, meaning that there is no relationship between the parity of pregnant women with antenatal care.

This is supported by the MPS Strategic Plan 2001 - 2010 cited by Paula (2007), the relationship of pregnancy by examination very clearly and closely related. New mothers who experienced pregnancy (primigravida) will more often during their pregnancy because it has not had the experience and would like to obtain much information about her pregnancy. As for the mother multigravida / multiparas is experienced and has got the information they need. But did not rule nor multigravida primigravid women may experience complications or problems. So the primi and multi gravida women still have regular checkups.

**Table 6: Distribution Relationship between Knowledge with Examination Mother Pregnancy**

Know ledge	Pregnancy Exam				Total		P Value
	Regular		Iregular		F	%	
	F	%	F	%			
Good	45	95,74	2	4,26	47	69,12	0,363
Lack	19	90,48	2	9,52	21	30,88	

Table 6 shows that of the 47 respondents with a good level of knowledge of almost all regular antenatal (95.74%). Meanwhile, from 21 respondents who have less knowledge almost all regular antenatal counted (90.48%).

Based on the test results of chi - square showed that the p value  $0.363 > 0.05$  thus  $H_a$  is rejected, meaning there is no correlation between knowledge of pregnant women with antenatal care (K4).

This is not in accordance with the results of research Siti (2008) stating that there is a positive and significant relationship between knowledge and antenatal visit (p Value 0,000); Bahtiar study (2013) that there is a relationship between knowledge and K4 visits (p = 0.006). Assumptions researchers, it may be caused by several other factors, such as distance home relatively soon, pregnant women who are busy working can perform the inspection on Saturday (holiday), complete inspection facilities and comfortable, their prenatal classes, etc.

**Table 7: Distribution Relationship between Attitudes Mom Pregnancy Examination**

Attitude	Pregnancy Exam				Total		P Value
	Regular		Iregular		F	%	
	F	%	F	%			
Positif	35	97,22	1	2,78	36	52,94	0,263
Negatif	29	90,63	3	9,37	32	47,06	

From the research results in the table 7, it was found that of the 36 respondents with a positive attitude almost all regular antenatal much as 97.22% and 32 respondents with a negative attitude almost all regular antenatal much as 90.63%. Based on test results obtained chi-square value P value = 0263 ( $> 0.05$ ) thus  $H_a$  is rejected, it means there is no relationship between the attitude of pregnant women with antenatal care (K4). It is not in accordance with the results of research Bahtiar (2013) that there is a relationship between attitude with K4 visits (p = 0.035). Suharni study (2012) showed no relationship between attitude with K4 visit with p value 0.012. Newcomb, a social psychologist, states that it is an attitude of readiness or willingness to act, and not an implementation of a particular motif. Attitude is not an action or activity, but predisposes action behavior. If the attitude positive pregnant women and couples to antenatal care, tend to please and interest antenatal. Assumptions researcher attitudes towards pregnancy tests can be characterized by their sense of fun and loyalty to the place of service, proud to health care.

## CONCLUSION

Based on the analysis and discussion of the research results, it can be concluded as follows: The number of visits to the three trimesters of pregnancy examination at the Clinic Primary P period October 2015 till April 2016 by 68 mothers, with regular visits 64 (94.1%), irregular 4 (5.9%). Characteristics of mothers who visit to antenatal clinics in the Primary Paseban is aged 20-35 years (89.7%), age <20 or > 35 years (10.3%), highly educated (97.1%), less educated (2.9%), work (57.4%), did not work (42.6%), primi gravida (39.7%), multigravida (60.3%), good knowledge of antenatal care (69.1%), lack of knowledge (30.9%) and a positive attitude towards antenatal care (52.9%) and negative attitude (47.1%). There is no relationship between the age of pregnant women with antenatal visit with a P value of 0.641. There is no relationship between education and antenatal care visit with a P value of 0.720. There is no relationship between job antenatal visits with P value of 0.574. There was no association between parity with antenatal care visit with a P value of 0.522. There is no correlation between knowledge with antenatal visits with p value 0.363. There is no relationship between attitude with antenatal care visit with a P value of 0.263.

Recommendations, P Primary clinics to improve services to pregnant women by providing counseling to the community under the guidance of the importance of the visit K4 P, so that the better knowledge of pregnant women and the impact on the number of patients during their pregnancy increased primarily as a service provider BPJS. Should be continued research with the addition of variables: family support and support of health workers, source of information about the importance of prenatal care on a regular basis with the different methods of qualitative methods.

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# VISUAL INSPECTION EXAMINATION BY ACETIC ACID TEST IN WOMEN OF REPRODUCTIVE AGE AS CERVICAL CANCER EARLY DETECTION IN KLAMPOK BARU, SENDANGTIRTO, BERBAH, SLEMAN

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## ABSTRACT

IVA (visual Inspection with Acetate Acid ) is a screening examination of cervix cancer with visual inspection on cervix and acetate acid application. It is hoped, with visual inspection method that is easier, more simple, more capable, then the screening can be conducted with a wider scope and the finding of early cervix cancer will be more found. In other purposes, it is hoped that health development and the level of public health can be improved. The research purpose is to describe the IVA tes examination on woman of reproductive at Klampok Baru sub-village, Sendangtirto, Berbah, Sleman.

This research is descriptive research. The data collection was taken at Klampok Baru sub-village, Sendangtirto, Berbah, Sleman on 29 April 2015. The population was all women of reproductive by using *accidental sampling* as much as 117 then conducted IVA tes examination. The variable in the research was single variable of IVA tes examination result on woman of reproductive, then analyzed in univariate. It is known that woman of reproductive is majorly in the age of 31-45 years (70.94%), and the result of IVA tes examination on woman of reproductive is 100% negative

**Key words: IVA test, cervical cancer, women**

## INTRODUCTION

IVA (visual inspection with acetic acid) is the examination of cervical cancer by visual inspection in cervical with acid acetic application. By easier, simpler and more capable visual inspection method, so the screening can be conducted with more scope, so that it is expected that there will be more early findings of cervical cancer. On another side, the purpose of health development and level of community health can be improved.

The result report of WHO consultation mentions that IVA can detect on the *high-Grade Precancerous Lesions* with sensitivity around 66-96% and specification of 64-98%. Meanwhile, the *positive predective value* and the *negative predective value* each of which is between 10-20% and 92-97%.

In all countries, this program has been conducted for 20 years or more, the incidence of cervical cancer and the death rate decrease until 50 – 60%. It can be argued that since there is massive screening, there is an actual increase in the determination of *Precancerous Lesions*, so that it can increase the cervical cancer incident. Although it has been successful in detecting on most *Precancerous Lesions*, but most program conducted can be said to be successful. The less adequate result may be caused by some factors,

among others are the inadequacy of women in *high risk group* and the sample collection technique for cytology examination is wrong. The problem solving related to the women in high risk group and the sample collection technique relate to the screening program strategy, as well as the improvement on the laboratory ability.

Another problem in cervical cancer screening is the reluctance of women to be examined because of feeling shy. Other causes are inconvenience, doubt on the importance of examination, less knowledge on the importance of examination, anxiety on the fact of examination results to be faced, the anxiety to feel sick on the examination, unwillingness to be examined by male doctors or midwives and less of support from family, especially husband. There are many problems related to the patients that can be solved by giving education for the patients and good relations between doctors / midwives. In addition, the innovation of cervical cancer screening in community health service can be done simultaneously. The *cytology screening interval* is another important thing in this screening method. According to a research by Septadina, et.al, the cervical cancer prevention can be conducted by screening cervical cancer health examination because the symptoms of cervical cancer cannot be seen until more severe stadium. The examination by

using IVA method is more efficient and effective examination to prevent cervical cancer because can be conducted by health personnel, such as nurse, midwives, and general practitioners doctor as well as cheaper cost. The importance of conducting the dokter umum prevention to decrease the women death rate in Indonesia is required good cooperation and support from all parties. The cervical cancer examination by using IVA method is very easy and cheap, so that each health personnel in the first line such as *delima* midwives and community health center can provide this examination facility.

## RESEARCH METHOD

This type of research is quantitative descriptive namely describing on the IVA test examination results in women of reproductive of reproductiveage in Klampok Baru, Sendangtirto, Berbah, Sleman . The research takes place in Klampok Baru, Sendangtirto, Berbah, Sleman and the data collection technique was on April 29, 2015. The population in this study is all women of reproductive of reproductive age in the Klampok Baru, Sendangtirto, Berbah, Sleman by the number of sample of 117 women of reproductive of reproductive age with an accidental sample technique. The instrument in this research is the direct examination with IVA test, namely the cervical given a 3-5% solution of acetic acid and the results can be directly observed so that it can be immediately known by the women of reproductive of reproductive age. On 27 April 2015, the women of reproductive of reproductive age are given counseling about IVA test so that all who are present are eligible for IVA test examination. The IVA test and examination were carried out on April 29, 2015. The variable in this study is a single variable of IVA test results in women of reproductive of reproductiveage, and the results are analyzed by univariate to obtain a picture of IVA test results in women of reproductive of reproductive age.

## RESULTS AND DISCUSSION

The research results of IVA test examination in Klampok Baru, Sendangtirto, Berbah, Sleman are as follow:

Table 1.

The frequency distribution of women of reproductive of reproductiveage based on the

age in dusun Klampok baru, Sendangtirto, Berbah, Sleman.

Age	F	%
20 – 30 years old	34	29.06
31 – 45 years old	83	70.94
Total	117	100

Primary Data, processed in 2015

Based on the table above, it can be seen that the most women of reproductive of reproductive age conducting the examination are in the age of 31 – 45 years old (70.94%)

Table 2.

The frequency distribution of IVA test examination results in Klampok baru, Sendangtirto, Berbah, Sleman

Results	F	%
Positive	0	0
Negative	117	100
Total	117	100

Primary Data, processed in 2015

Based on the table above, it can be seen that the IVA test examination result in women of reproductive of reproductiveage is stated to be 100% negative.

From the research results, it can be seen that based on the age, the most women of reproductive of reproductiveage examined by IVA test are in the age of 31-45 years old, this indicates that after given the counseling or information about IVA test, there is a willingness to know on their cervical condition, meanwhile, for the women in the age of 20-30 years old in Klampok Baru, Sendangtirto, Berbah, Sleman , all women do not participate as the respondents. Based on the interview, there is a reluctance on the importance of examination, anxiety on the examination results to be faced, anxiety of sick feeling at the examination, reluctance to be examined by midwives and less support from family, especially husband. The examination result of IVA test is obtained 100% negative result, this describes that all women of reproductive of reproductiveage in Klampok Baru, Sendangtirto, Berbah, Sleman for screening cervical cancer is stated to be negative and still recommended to conduct examination once in 5 year because the IVA method is an examination

to prevent the cervical cancer which is quite efficient and effective.

## CONCLUSION

From the research results although the examination results in women of reproductive of reproductiveage is stated to be 100% negative but for women in the age of 20-30 years old, all women do not participate on the examination because after the counseling, there is still doubt to conduct the examination because of shy, anxiety of sick at the examination. Although the results show that all women of reproductive of reproductiveage is negative in Klampok Baru, Sendangtirto, Berbah, Sleman , it is recommended to conduct the examination once in 5 years. This is corresponding to a research by Septadina, et.al. namely the examination by using IVA method as the examination to prevent cervical cancer which is quite efficient and effective because it can be done by health personnel, such as nurse, midwives, and general practitioners as well as the cost is cheaper.

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## OVERVIEW OF CHARACTERISTICS OF CERVICAL CANCER PATIENT

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### ABSTRACT

In developing countries, cervical cancer ranks first as a cause of cancer deaths in women of reproductive age, which reaches nearly 80% of cases. In Indonesia, 70% of cervical cancer are known as advanced stage and most of them do not realize they are affected because they do not feel the symptoms. An increasing risk of cervical cancer incidence from year to year is a serious threat to women's reproductive health issues. The low awareness of women to do pap smear tests is another factor that aggravates the risk, so that knowing the factors that cause women do not perform the examination for early detection of cervical cancer is important. This paper aimed to provide an overview of the characteristics of patients with cervical cancer. This research data used secondary data with a sample size of 150. Analysis of the data included univariate and bivariate. Of the 150 respondents, the majority (69.3%) underwent pap smear test and 30.7% did not do early detection. After the chi-square test, of five variables, there was no significant variables on the incidence of cervical cancer. Midwives and health workers are expected to improve the education and skills of early detection of cervical cancer in all health care settings.

**Keywords:** cervical cancer, the Pap smear

### INTRODUCTION

The incidence and mortality of cervical cancer in the world ranks number two only after cardiovascular disease. Meanwhile, in developing countries, it ranks first as a cause of deaths in women of reproductive age, reaching almost 80% of cases (Prawirohardjo, 2006). Indonesia ranks first with 15,050 new cases and deaths in the year 7566 souls (Indarwati, 2012).

Adrian (2010) explains that according to the data Globocan 2002, there were 40,000 new cases of cervical cancer with about 22,000 deaths in women in Southeast Asia. In Indonesia, 70 percent of cervical cancer was discovered after patients had been in advanced stage and most of them did not realize they were affected because they did not feel the symptoms. Cervical cancer has a pre-malignant stage where it grows.

However, it will not spread yet, because the premalignant phase lasts several years. Therefore, to detect early cervical cancer is recommended by performing a Pap-smear test (Owen, 2005). Pap-smear test should be made by women to know at an early stage of cervical cancer incidence. Cervical cancer is included 10 cancers that attract women even it ranks first in developing countries, while in developed

countries it currently ranks 10<sup>th</sup> (Ramli, 2000) and is the leading cause of death in women worldwide.

Each year there are an estimated 500,000 new cases of cervical cancer worldwide, 77% of which exist in countries in the developing world. Cervical cancer cases in Asia are estimated at around 75% of reproductive problems. To solve the problem in developed countries, advanced early diagnosis is proven to reduce the incidence of invasive cervical cancer and improve prognosis. Pap-smear also has proven capable as a means of early diagnosis.

Unlike in Indonesia, Papsmear which has been known since the 70s has not been able to answer the problem of cervical cancer. As one of the problems in the implementation of the Pap-smear test as a means of early diagnosis of cervical cancer in Indonesia is that the Indonesian women are reluctant to check it because of ignorance, shame, fear, and cost factors.

Psychological factors such as fear occur because if women perform Papsmear test, they might know that they suffer from cancer, so that they prefer not to know it and avoid it (Evennett, 2004). This is generally caused due to the low level of education and knowledge of the

population of Indonesia on Papsmear (Soepardiman, 2002).

Lack of motivation to do a papsmear examination, lack of cross-sector cooperation, inadequate health care facilities, and success depends on early detection and effective treatment, so that the necessary motivation for women of childbearing age to want to follow the pap smear examination is needed. Motivation is closely related to how the behavior is initiated, supported, strengthened, directed, and the reaction is stopped subjectivity that arise within the organization.

The motivation is the desire to do something and determines its ability to act to satisfy individual needs (Robin & Judge, 2002). Things that affect the motivation is physical and mental, heredity, environment, age maturity, a person's intrinsic factors (knowledge, education and employment), facilities (infrastructure), social culture, and the media used.

Environmental factors affect the motivation for all the conditions that stem from internal and external influence and lead to the development and behavior of people and groups. Meanwhile, intrinsic factors that influence the motivation are knowledge, education and employment. Age affects the power of perception and mindset of someone. Increasing age will also be growing perception and thought patterns so that the knowledge gained is getting better.

In middle age, people will be more actively involved in community and social life as well as more preparations for the success of efforts to adapt to the old age; in addition, the middle age people will use more time to read. Theoretically knowledge is the result of human senses or results of knowing from a person against an object through the senses, among others, eyes, nose, ears and so forth (Notoatmodjo, 2005). Education means that a person gives guidance to the development of others toward certain ideals. The higher the level of education, the more a person accepts information, both from others and from the mass media. The more information gained, the more knowledge about health gained, too.

Conversely, the less education would hinder the development of a person's attitude towards the newly introduced values (Safa'ah, 2010). The work is an effort to fulfill the need for goods and services. By working, one will obtain the services and meet the needs. It is based on the

theory that the presence of job will make a person do a lot of time and effort to exchange opinions / experiences between friends (Safa'ah, 2010). Of the incidence of cervical cancer in the world, 85% percent occur in developing countries; the cause is the absence of an effective screening program for women with low socioeconomic status.

Therefore, screening program is currently implemented with the aim to detect signs of abnormal cell growth at an early stage so as to enable early and rapid treatment. One of the programs implemented in Indonesia is a program of Visual Inspection with Acetic Acid (VIA), which is a method of early detection of cervical cancer to identify pre-cancerous (Solekhah, 2012).

## RESEARCH METHOD

This was a quantitative analytical research with case control study design, comparing the case / cervical cancer incidence in the control group. This research was non experimental. Case control study was conducted to obtain data at the same time on the independent variable, ie, early detection (pap smear) with Cervical Cancer as the dependent variable made by reviewing secondary data; samples used for comparison were 150 with case:control by 1: 2.

### Cervical Cancer

From research on the cases and controls, Cervical Cancer was found in 33.3% of case group and 66.7% of control group. This occurred because the comparison between the case and control samples was 1: 2. The prevalence of cervical cancer by Riskesdas year 2013 was 0.8%. (Ministry of Health, 2014). The prevalence of Cervical Cancer was still considered the case because of the relatively little prevalence (<20%); therefore, the selection of case-control design in this study was appropriate.

In Indonesia, a priority program of cancer cases are in the two cancers, ie, cervical cancer and breast cancer. Case management and early detection of both cancers has been started since 2007 launched on April 21, 2008 through the Female Cancer Program (FCP). Until the year 2013 the early detection of cervical and breast cancer was developed in 32 provinces, involving 9500 health care arrangements through training on gynecologists, surgeons, and midwives in total number of 1,682 people.



Early detection examination results were 644 951 women (1.75% target of women aged 30-50 years) showing 28 850 (4.47%) to be positive IVA, 840 (1.3/1000) to be suspected cervical cancer and 1,682 (2.6/1000) to be suspected breast cancer. Cancer surveillance program in Indonesia in cooperation with NGOs is planned for five years (2010 - 2014) through the ICCP (Indonesian Cancer Control Program). This integrated program activities include aspects of prevention, early detection, diagnosis and treatment and rehabilitation undertaken in each province / region.

### **Age of Cervical Cancer Patients**

The data showed that of the 50 cases of Cervical Cancer, about 86% or 43 mothers aged <20 and> 35 years. Based on the calculation of chi square statistical test, there was no association between maternal age and Cervical Cancer

The result of this study was consistent with the theory that the main cause of cervical cancer is infection of HPV (human papilloma virus) that its spread is through sexual intercourse (Aziz, 2006) so that it can occur at any age.

This study did not correspond with the research by Solehah (2010) which showed that 59% of women at age> 35 years had checked IVA due to increasing age, level of maturity and strength that a person would be more mature in thinking and working so that in the age group of adults older women consider themselves more vulnerable to disease compared with young adults. This motivates older adult to be more precautions.

This research was in line with a research conducted by Herniyatun et al (2008) with 176 respondents in Kebumen showing no significant correlation between maternal age and Cervical Cancer prevention knowledge ( $p = 0.658$ ).

The researchers assumed that this study was in accordance with the theory that there are multiple risk factors for cervical cancer, ie, sexual behavior, partner characteristics, gynecologic history, smoking and diet (Rasjidi, 2009)

### **Occupation of Cervical Cancer Patients**

Data show that the majority of Cervical Cancer happened in women who did not work for 70% of the cases. Based on the calculation of chi square statistical test, there was no significant

relationship between occupation and Cervical Cancer. The results of the data analysis of this study showed that more mothers did not work, both in the case group or the control group (82%). This result was consistent with the theory that the good job will improve lives and provide access to better health. Revenue generated will affect mothers in meeting their needs. The mother's higher income is expected to get the better nutrition, especially from pregnancy to breastfeeding (Sarimawar, 2003)

The result of this study was supported by Mirayashi (2014) saying that more respondents had ever had cervical cancer early detection examinations that included housewives (37.5%) than self-employed working mothers (18.2%) and civil servants (10.2%).

This study was also in line with Al-Meer et al (2009) in Qatar that as many as 50.8% of women who had early detection of cervical cancer were housewives. However, the study was not supported by Notoatmojo (2011) stating that a person who worked would have a wider knowledge than someone who did not work for the working man will get a lot of information and experience.

The researchers argued the difference between the results of the study and the theory of probability due to housewives to have more time at home and have a higher social activity as well as more likely to follow education or health promotion by health workers in the home environment.

### **Education of Cervical Cancer Patients**

The data show that of the 50 cases of Cervical cancer is about 62% or 31 mothers had higher education. Based on the calculation of chi square statistical test, there was no significant relationship between maternal education and Cervical Cancer

The result of this study was consistent with the theory that low maternal education is usually mentally and emotionally immature and still overly dependent on others. (MOH, 2007).

This study was in accordance Mirayashi (2014) that, of 44 samples, 31.8% had performing the examination for early detection of cancer (IVA) were high school graduates. The result was also supported by Pasaribu (2013) that 55.4% respondents were high school graduates. This shows that women with higher education levels

have a higher consciousness to follow early detection.

The results supported the research by Herniyatun (2008) with 176 respondents in the District of Kebumen that there was no significant relationship between education and knowledge to prevent cervical cancer.

The researchers stated the education influenced the learning process; the higher the person's level of education, the easier the person receives the information so that more knowledge is gained. Someone who has high levels of education tends to have a more logical mindset. Education has a positive effect on health awareness and direct impact on health behaviors.

### **Parity of Cervical Cancer Patients**

The data showed that, of the 50 cases of Cervical Cancer, 36 mothers had parity  $\geq 2$ , or about 72% and 28% had parity  $<2$ . Based on the calculation of chi square statistical test, there was no significant relationship between parity and Cervical Cancer.

This result was consistent with Saifuddin (2006) that parity two to three was the most secure parity; parity one or more than three had the highest mortality rate. Higher parity, the higher the risk of maternal and neonatal mortality. The parity one can be dealt with better obstetric care, while the risk on high parity can be reduced or prevented by family planning (FP). The number of children more than four may lead to impaired fetal growth so that LBW and bleeding during childbirth because of the weak state of the uterus can happen (Sarimawar, 2003).

### **Examination of Early Detection in Patients with Cervical Cancer**

The data showed that most patients with Cervical Cancer in women who underwent early detection examination were 66% in cases and 71% in controls. Based on chi square statistic test, there was no significant relationship between early detection examination and cervical cancer. The results of data analysis showed that more women underwent early detection, both in the case group or the control group. This results was consistent with theory that early detection will improve lives and better health (Rasjidi, 2009)

This research was supported by Notoatmojo (2011) that early detection carried out intentionally by the mother determined the status of reproductive health. Early Detection obtained will affect the mother in maintaining a healthy life. The more regular checks conducted, the better early detection is expected to health, especially reproductive health status during lifetime.

The researchers had opinions that even though the results of this study stated that there was no relationship between checks-up by Early Detection and Cervical Cancer, early detection results obtained will affect the mother in maintaining a healthy life. The more regular checks conducted, the better early detection is expected to health, especially reproductive health status during lifetime although early detection does not pose risks to Cervical Cancer.

### **CONCLUSION**

1. Of the five variables, namely age, education, occupation, parity and early detection, no variable was related to cervical cancer
2. The results showed that, of 60% of mothers with higher education, 69.3% underwent papsmear test and it shows that education increases awareness of women to their own health.

### **ACKNOWLEDGEMENT**

1. Increase the knowledge and skills of midwives in the early detection examination, namely IVA and Papsmear in health centers and hospitals.
2. Measures to reduce the incidence of Cervical Cancer from maternal age and parity, ie, increase community's awareness especially childbearing age women to follow the family planning program and suggest no maternity  $<20$  years and  $> 35$  years old and not give birth to more than three children.
3. Improve health education about the importance of early cervical cancer detection by undergoing IVA and or pap smear in all health services, especially hospital.

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# EFFECTIVENESS OF ACUPRESSURE METHOD AT MERIDIAN POINT BL 32 AND GB 21 TO DECREASE THE PAIN LEVEL DURING CONTRACTIONS IN THE FIRST STAGE OF LABOUR

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## ABSTRACT

Pain during labour is physiological, associated with contractions experienced by childbearing women, different responses to pain, and inability to adapt to pain during the first stage of labor which may lead to other problems during childbirth. Acupressure is a nonpharmacological technique implemented by giving pressure at meridian points in the body for pain management during labour.

Acupressure has long been used in medication, but it has not been used in pregnancy and childbirth yet because the steps of acupressure to be analyzed are quite a lot so it is difficult to be implemented as a routine care during labour. Therefore, the meridian system and certain points focusing on reducing the pain caused by contractions during labor need to be determined; and taking into account the intensity of contractions is equally important. Specific acupressure points related to the effects of relaxation and pain reduction are meridian point BL 32 and GB 21.

The purpose of this study was to determine the effectiveness of acupressure method at the point BL 32 and GB 21 to decrease the level of pain of contractions during labor. This quantitative research done using experimental design used one-group pre-post test design. The population involved women during the first stage of labour in BPM Vivi Surabaya totaling 20 respondents. Data Analysis was done using SPSS 20 and Wilcoxon Sign Rank test with  $\alpha = 0.05$ .

The result showed that labor pain decreased after acupressure. The result of Wilcoxon signed rank test with significance level  $\alpha = 0.05$  showed that  $P = 0.002$  in which  $P < \alpha$  so that  $H_0$  was rejected; it means that acupressure at the meridian point BL 32 and GB 21 was effective to decrease the labor pain. Hence, midwives are expected to apply acupressure, especially at the meridian point BL 32 and GB 21 as an effort to reduce the pain as part of a routine care for childbearing women, especially during the first stage of labour.

**Keywords:** Acupressure, pain, labour

## INTRODUCTION

Labour is a natural process associated with the occurrence of contractions, especially in stage I and II which are accompanied by pain. Responses of childbearing women to pain are very different; even some of them cannot adapt to pain during the first stage of labor, especially those experiencing their first labour or those who are unable to control emotion and too tired, so they will cause other problems during childbirth process (Anik, 2010).

The first stage of labor takes a long time approximately 1-14 hours, especially in primigravida (MOH R.I, 2012). The prolonged first stage of labor causes prolonged pain so that it can lead to maternal fatigue resulting in emotional responses, such as anxiety and tension. Prolonged labor pain may lead to hyperventilation, which affects the level of

PaCO<sub>2</sub> of mother and fetus so that the fetal heart rate slows down (Marmi, 2012). The response to this pain also stimulates the increased catecholamines that causes interference on uterine contractions that become irregular/inadequate called uterine inertia, which causes prolonged labor. The prolonged labor increases the risk of *postpartum hemorrhage*, *chorioamnionitis* and complications in neonates/newborns. (Bobak, 2011)

Efforts to reduce pain can be done by means of pharmacological and nonpharmacological methods. Controlling pain can be done using pharmacological analgesics, such as inhalation, analgesic opioid, and regional anesthesia (Prasetyo *et al*, 2010). Whilst, nonpharmacological pain control includes relaxation, breathing techniques, position changes (Tamsuri, 2007), as well as *masage*,

*hydrotherapy, acupuncture, acupressure, hypnobirthing, intradermal water blocks, music, TENS (Transcutaneous, electrical Nerve Stimulation) and warm compresses (Anik, 2010).*

On the other hand, the onset of contraction as the source of pain is an important factor for the smooth progress of labor so that the selection of efforts to decrease the pain must consider the intensity of the contractions. It means that not all methods can be used safely and effectively during labour. Moreover, if the effort brings impacts on the intensity of the contractions, it will cause complications during labor, such as uterine inertia and prolonged labour. Pharmacological methods have a higher effectiveness in reducing pain than non-pharmacological ones. Yet, pharmacological methods may bring unexpected side effects, whereas non-pharmacological method has no side effects at all.

Research conducted by Sylvia T. Brown, EdD, RN, Carol Douglas, MSN, RN, and LeeAnn Plaster Flood, MSN, CNM used 10 nonpharmacological methods performed on the sample totaling 46 people showing that breathing techniques, relaxation, massage and acupressure are the most effective techniques to decrease pain during labor contractions. In fact, acupressure is used very rarely in providing maternity care. The common efforts done by almost every birth attendant only include breathing relaxation techniques, lying position and massage by back-rubbing, whereas acupressure is considered difficult because the large number of points are involved in this treatment. Acupressure is one of nonpharmacological techniques in pain management during labour. (Mehta, 2002). Acupressure is also called acupuncture without needles, or acupuncture massage; this technique uses suppression technique and massage along the meridian of body or energy flow lines so it is relatively easier to do than acupuncture itself (Sukanta, 2010). Acupressure is a method that has long existed, but its application in pregnancy and childbirth is a new development in midwifery care expected to reach mother-loving care.

Acupressure method has a system and many therapy points, including acupressure related to pregnancy and childbirth. If acupressure is done at the whole points, this method will be quite difficult to be implemented by the midwife or the patient's family as a routine care to childbearing women especially when contractions happen. Basically, each point on acupressure method has

specific functions according to client's physical needs. Results of research done by Lee, M., Chang, S. & Kang, D. (2004) showed that the implementation of acupressure method related to pregnancy and childbirth affected the pain scale and increased the contractions. Some points of acupressure method not only can reduce pain but also increase the intensity of the contractions to speed up the delivery (Chung et.al, 2003). In women with adequate contractions, the increasing intensity of the contractions can cause complications, such as uterine tetania and fetal distress.

Based on the considerations, we need to choose the method appropriate with specific system focusing on reducing the pain of labor contractions. Taking into account the intensity of contractions is also equally important, Specific acupressure points related to the effects of relaxation and pain reduction are BL 32 and GB 21. Therefore, the writer felt the need to analyze the effectiveness of acupressure method, especially on the meridian system point BL 32 and GB 21 to decrease pain during labor, especially in the first stage of labour.

## RESEARCH METHOD

This quantitative research done using experimental design used one-group pre-post test design. The population involves women during the first stage of labour in BPM Vivi Surabaya totaling 20 respondents.

Data collection is done through interviews and observation. The writer measures the pain level (pretest) prior to warm compress at a peak time of contraction after entering the active phase of the first stage by asking the respondents to point at the number in a pain scale when the peak of the contraction occurs.

The writer applies acupressure on the approval of the respondents and their husbands. Pain scale is measured using a Numerical Rating Scale (NRS) according to the theory proposed by Smeltzer, S.C and Bare B.G (2002), as quoted from Maryunani Anik (2010). Measurement performed before and after acupressure is the pain level that occurs at the peak of contraction that is the midpoint of the duration of the contraction.

Acupressure done for 1-2 minutes started when the contraction occurs until subsides, done in 3 occurrences of contraction (totaling 5 minutes). Data analysis done with a computer program uses Wilcoxon Sign Rank test with  $\alpha = 0.05$



## RESULTS AND DISCUSSION

The frequency distribution shows the pain level during contractions before acupressure on the meridian point BL 32 and GB 21.

**Table 1. Frequency distribution of pain level during contractions before acupressure**

Pain level	N	%
No pain	0	0
Mild pain	3	15
Moderate pain	6	30
Severe pain	11	55
Unbearable pain	0	0
Total	20	100

Table 1 shows the frequency distribution of pain during contractions before acupressure. Most of the respondents (55%) experience severe pain. In this condition, the pain threshold is 8-10.

The frequency distribution shows the pain level during contractions after acupressure treatment at the meridian point BL 32 and GB 21. Measurement of contractions is done in the period of contraction after the measurement of contractions before treatment.

**Table 2. Frequency distribution of pain level during contractions after acupressure**

Pain level	N	%
No pain	0	0
Mild pain	7	35
Moderate pain	9	45
Severe pain	4	20
Unbearable pain	0	0
Total	20	100

Table 2 shows the frequency distribution of the pain of contractions after acupressure treatment. Nearly half of the respondents (45%) have moderate pain. Moreover, nearly half of them (35%) experience a reduction in pain scale down to mild pain.

**Table 3. Frequency distribution of pain during contractions before and after acupressure**

Acupressure at meridian point BL 32 and GB 21	Menstrual pain level				Total
	No pain (%)	Mild (%)	Moderate (%)	Severe (%)	
Pre	0 (0)	3 (15)	6 (30)	11 (55)	20 (100)
Post	0 (0)	7 (35)	9 (45)	4 (20)	20 (100)
<i>Wilcoxon sign signed rank test</i>					
<i>Asymp Sig (2-tailed) = 0.002</i>					
<i>Negative rank = 14</i>					
<i>Positive rank = 0</i>					
<i>Ties = 6</i>					

Table 3 shows that among the respondents, 20 women experience the decrease of pain level after acupressure treatment at the meridian point BL 32 and GB 21.

The result of statistic test using Wilcoxon signed rank test shows that the pain level after acupressure treatment is smaller than before acupressure. Seen from its value, 14 respondents experience a decrease in pain level after receiving acupressure at the meridian point BL 32 and GB 21; and the value of posttest is greater than the value of pretest which scores value of 0. It means that no respondents experience the increasing pain level after receiving acupressure at meridian point BL 32 and GB 21. Moreover, the value of pretest is equal with the posttest which scores value of 6. It means that 6 respondents experience no change in pain level both before and after receiving acupressure at the meridian point BL 32 and GB 21.

Based on the result of Wilcoxon signed rank test using a computer program with a significance level  $\alpha = 0.05$ , it shows that  $P = 0.002$  in which  $P < \alpha$  so that  $H_0$  is rejected. It means that acupressure at the meridian point BL 32 and GB 21 is effective to decrease the pain level in the first stage of labor pain at the active phase.

Acupressure is a nonpharmacological management to reduce labor pain. Acupressure presses certain points on the body of a person with fingers, elbow, or some sort of small wooden blunt tool, a pen, and other similar things. Massage is done gently by making circles at that point. At first, it is recommended to give gentle pressure and not too hard. When it feels comfortable, press harder. Acupressure done for about 2 minutes is an easy action to do.

Acupressure can also give strength to women during childbirth and encourage the involvement of the couple to get closer to labor process and antenatal education. It is a non-invasive treatment that does not have any adverse effects for the patient so that it can be done by midwives or patient's family. In this study, the clients feel comfortable and experience pain reduction after acupressure treatment done by the family.

Acupressure conducted by the writer specifically at the meridian point, at which the point is the channel that can flow the vital energy throughout the body as well as the connector of all nerves to other meridian points. Besides, acupressure also works quite fast, usually for one until two minutes to reduce pain because the acupressure points can affect neurotransmitters in the body when stimulated. In this study, we can find various benefits of doing acupressure at the meridian point BL 32 and GB 21: to reduce pain without decreasing the intensity of uterine contractions and to increase muscle strength and pushing power during childbirth.

Acupressure at the meridian point BL 32 and GB 21 is effective to decrease pain through its effect on the release of endorphine. This hormone can block pain receptors to the brain so that clients will feel more relaxed. Pain and stress-related factors are known to influence the release of beta-endorphins- lipotrofin hormone and Adreno Cortico tropic hormone (ACTH). Beta lipotrofin is an endogenous substance in which the character is similar to morphine. Beta endorphin is a group of beta lipotrofin produced by the pituitary gland. This substance works as a carrier of chemical and works as a natural analgesia. Sukanta (2008)

Qualitative data was found by Brown et al (2001) and Wu (2003) quoted in Budiarti, 2011) which also states that positive feeling is usually felt and expressed by the patients when the health workers using acupressure or effleurage to relieve labor pain. Another study conducted by Rusdiatin (2007) in Bantul also stated that acupressure technique is effective in helping women to reduce labor pain. These results are in line with Mender's statement (2003, in Budiarti, 2011) that labour pain may affect the functional mechanism that cause disturbances in uterine contractions that may lead to uterine inertia. If this problem is not treated, it will cause prolonged labor. Acupressure in labor is proved to influence the decrease in the intensity of labor pain so that physiological stress responses can be reduced and prolonged labor can be avoided.

Some points involved in acupressure method not only reduce pain but also increase the intensity of the contractions to speed up the childbirth. The childbearing women with adequate contractions can also increase the intensity of the contractions that leads to complications, such as uterine tetania and fetal distress. In this study, the writer also observes the normal characteristics of contractions so that the effects of acupressure on contractions during labour can be evaluated. Based on the results of observation, no respondents is found with the increasing intensity of the contractions that exceeds the normal limits, nor vice versa. The decreasing pain levels not accompanied by the decrease of the intensity of contractions that can slow down delivery. Therefore, when the respondents feel comfortable with acupressure that has been done, then it is continued by a labor attendant after receiving explanations about how to do it to make sure that she has done it correctly.

## CONCLUSION

Acupressure at the meridian point BL 32 and GB 21 are effective to decrease pain level during contractions in the first stage experienced by the childbearing women in BPM Vivi Surabaya. Therefore, midwives are expected to apply acupressure, especially at the meridian point BL 32 and GB 21 as an effort to reduce pain as part of a routine care for childbearing women, especially in the first stage of labor. It is also necessary to conduct counseling during pregnancy and include the involvement of family or labour attendant considering that it is an easy method that can be done by anyone, of course, after receiving explanation from midwives. Moreover, educational institutions are expected to provide their students with acupressure so that they can apply it at the meridian point BL 32 and GB 21 as midwifery care during labour, and to increase knowledge and skills of the graduates in variety of care appropriate with the needs and the latest science and technology development.

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# THE CORRELATION OF NUTRITION PATTERN AND THE CONSUMPTION OF CALCIUM SUPPLEMENTS TOWARDS PREGNANT WOMEN WITH THE OCCURRENCE OF PREECLAMPSIA IN RSUD MAJALAYA AT BANDUNG REGENCY

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## ABSTRACT

According to WHO (World Health Organization) in 2012 the number of hypertension cases are 839 million cases. The case is estimated to be higher in 2025 with the amount of 1.15 billion cases or about 29% of the population in the world. Hypertension in pregnancy can increase the risk of death for the mother and baby to be born. Hypertension in pregnancy called preeclampsia, the occurrence of hypertension approximately 12% of maternal deaths worldwide. Preeclampsia and eclampsia began to creep up the cause of death in Indonesia especially in west java. Mentioning that lifestyle such as diet and low calcium intake is one of the trigger factors of preeclampsia.

The aim of the research is to identify the correlation of nutrition pattern and the consumption of calcium supplement towards the pregnant women with the occurrence of preeclampsia in RSUD Majalaya. The method used in this research is correlative analytic, with case control approaches which sample of 90 respondents (1: 2) were collected by accidental sampling.

The research result showed there is a significant correlation between nutrition pattern and the consumption of calcium supplementation on pregnant women to the occurrence of Preeclampsia. The high incidence of preeclampsia with the quantity of predisposing factors that affect, in particular nutritional patterns and consumption of calcium supplements should be used as a basis that a midwife should be able to improve ANC quality in terms of counseling, especially starting from the selection of food as good nutrition for pregnant and giving calcium supplements as early as probably from early pregnancy in an attempt to prevent Preeclampsia.

**Keywords: Nutrition Pattern, calcium supplements, Preeclampsia**

## INTRODUCTION

Hypertension is blood pressure at the upper limit of normal, hypertension included in a global problem that is sweeping the world. According to WHO (World Health Organization) in 2012 the number of hypertension as many as 839 million cases. The case is expected to be higher in 2025 with the number of 1.15 billion cases, or about 29% of the total population in the world. Globally, 80% of maternal deaths are classified into the causes of maternal death which is caused by bleeding (25%) usually postpartum hemorrhage, hypertension on pregnant women (12%), obstructed (8%), abortion (13%) and other causes (22%).

The Ministry of Health explained that hypertension is a dangerous disease, especially if it occurs to the pregnant women. Hypertension can cause death for the mother and the baby. There are no typical symptoms or signs as an early warning of this hypertension. Hypertension in pregnancy or called preeclampsia occurs as many as 12% of maternal deaths worldwide.

Ministry of Health in 2013 stated that hypertension increase mortality and morbidity in pregnant women (Ministry of Health, 2014).

Hypertension in pregnancy place at the first cause of maternal deaths in West Java (31%) replaced bleeding (30%) which is usually place at the top. The number of deliveries at Hospital of Hasan Sadikin Bandung from period January 1<sup>st</sup> 2009 until December 31<sup>st</sup> 2013 as many as 8275 deliveries by the number of preeclampsia and eclampsia cases as many as 1811 or (21.8%). The number of maternal deaths during this period were 106 and 61 cases or (57.5%) including preeclampsia and eclampsia. Preeclampsia and eclampsia started to rise as a main factor of death in Indonesia and especially in West Java. Various factors are a main factor of maternal mortality that caused by preeclampsia and eclampsia. It is ranging from maternal characteristics, previous disease history or other social factors (Hidayat, 2015).

Nutritional factors also allegedly associated with preeclampsia syndrome. The occurrence of

preeclampsia increased in some circumstances, such as lack of substance/ antioxidant vitamins (C, E or beta carotene), calcium deficiency and protein, excess of sodium salt or shortage of unsaturated fatty acids (Martaadisoebrata, 2012). Research conducted by Norwegian Institute concluded that the consumption of vegetables, fruit, and vegetable oils would prevent preeclampsia. Whereas consumption of processed meats, sugary drinks and savory snacks are increasing the risk of preeclampsia (Oci, 2012)

The impact that may arise from poor nutrition pattern towards pregnant women can cause complications in pregnancy, including preeclampsia. More specifically, good nutrition pattern or adequate prove can reduce the risk of preeclampsia (Bobak, 2005).

Research in other countries regarding preeclampsia is very low. In fact, the diet in that country contains very high levels of calcium. Furthermore, it comes the notion that low preeclampsia in the country is affected by a high calcium diet. The expertise's say that calcium deficiency is a cause of preeclampsia (Daliman, 2004).

Majalaya General Hospital is one of the Referral Hospital in Bandung regency with preeclampsia occurrence rate is quite high. In 2013, there were 146 cases of Preeclampsia from 2137 maternity (6.83%). In 2014, there were 136 cases of preeclampsia incidence from 2217 delivering mother (6.13%). Last, in 2015, there were 141 cases from 2425 delivering mother (5.81%). Despite a decrease in the occurrence of preeclampsia, but it is not significant considering that the impact caused death of mother and fetus.

## RESEARCH METHOD

The research design used correlative analytic method with case control approach. The variable in this research is nutrition, consumption of calcium supplements and the occurrence preeclampsia. Population and sample are whole pregnant women who come to visit the Majalaya Hospital both inpatient and outpatient during the period of April until May 2016 which collected by accidental sampling with the ratio 1: 2 from the sample as many as 90 respondents, 30 respondent cases and 60 respondents controls. The diagnosis of Preeclampsia obtained by medical record data, nutritional pattern defined how the pregnant woman choose, organize and consume food as well as eating habits every day during pregnancy. While the consumption of calcium supplements during pregnancy is the habit of respondents in taking calcium

supplements regularly or not or not consuming at all. Data collection techniques are by interview based questionnaire which examined by validity and reliability.

## RESULT AND DISCUSSION

A respondent with a bad nutrition pattern has a habit of consuming foods with high salt, and lots of added flavorings in cooking. Indonesia community has many culinary or snacks from children, adults and no exception pregnant women. Some foods are popular which are high in salt and greasy foods like seblak. Various types of fried food as well as a variety of meatballs in which we consumed too many can increased blood pressure and cholesterol. Characteristics of the Indonesian also has a habit of excessive eating which can lead to imbalances in the body such as eating instant noodles mixed with rice, breakfast with bread, rice and dishes as well as rice cakes and fried food.

**Table 1: Relationships of Nutrition Pattern towards Preeclampsia on Pregnant Women**

Pre eclampsia	Nutrition Pattern			Pv	OR
	Good	Bad	Total		
Yes (Cases)	9 30%	21 70%	30 100%		
No (Control)	39 65%	21 35%	60 100%	0.002	4.333
Total	48 53,3%	52 46,7%	90 100%		

**Table 2: Relationship of Calcium Supplements Consumption towards Preeclampsia to Pregnant Women**

Preeclam psia	Calcium supplement consumption		Total	Pv	OR
	Good	Bad			
Yes (Cases)	10 33,3%	20 66,7%	30 100%		
No (Control)	41 68,3%	19 31,7%	60 100%	0.002	0.205
Total	51 56,7%	39 43,3%	90 100%		

The high in calories and carbohydrates can raise the glycemic index, so that blood sugar rises in excess (Liniyanti, 2011). Dietary factor have been suggested to play a role in the prevention of hypertensive disorders of pregnancy (HDP), including gestational hypertension and preeclampsia, but inconsistent findings have been reported. A systematic review and meta-analyses



were performed to synthesize evidence from observational studies of reproductive-aged woman on the association between dietary factors and HDP (Schoenaker, 2014).

The providing of excess flavor may result in metabolic system of the body, especially the kidneys where the effectiveness of kidney function to drain the blood reduced as many as 20%, filtration glomerulus reduced as many as 30%, so ureum creatinine increased and also an expense of protein. Protein that comes out is one sign and symptom of preeclampsia (Ramayulis, 2010).

The higher gestational age the increase the nutritional needs, hence the desire of pregnant women to meet his nutritional needs sometimes do not pay attention to the nutrients contained. The example of eating processed and fast foods are can of sardine, instant noodles, corned beef, etc when we consumed in large quantities, it can cause an imbalance in the body because the preservatives in these foods interfere with the function of organs such as the disruption of the function of the heart and kidneys. Preservatives can damage the tissues of the heart that results in increased blood pressure. Decreased kidney function can lead to impaired renal filtration process and there was an increase in protein and creatinine urenum which can lead preeclampsia (Purwati, 2008).

Pregnant women who lack of calcium intake will lead to an increase in parathyroid hormone (PTH). This increase can cause a rise in intracellular calcium through increased cell membrane permeability to calcium, adenilsiklase activation and increased CAMP (Cyclecice Adenosine Monophosphate), as a result the mitochondria loose into the cytosol. Increased intracellular calcium levels of vascular smooth muscle will cause easily aroused to vasoconstriction which eventually increases blood pressure. The mechanism of preeclampsia associated with the role of cytosolic calcium ion. Hypocalcemia that occurs in the extracellular fluid cause depolarization of the plasma membrane stretching lionik nerve cells of the blood vessels during an action potential, calcium ions into the cytosol pass through the mechanism of the action potential. The numbers of calcium ions into the cytosol reflect the acetyl choline release. This calcium influx causes vasoconstriction. When this happened, it will occur hypertension. Besides hypocalcemia, it also causes contraction of striated muscle, and when it happens constantly arise eclampsia disease. (Daliman, 2004)

Based on the research regarding preeclampsia and relationships of calcium consumption and also

factors related to pregnant women showed that by 1500-2000 mg calcium supplementation during pregnancy may prevent preeclampsia. Therefore, it can be concluded that statistically 1000-1500 mg calcium supplement can reduce systolic blood pressure by 1.27 mmHg and for diastolic 0.24 mmHg (Rostika, 2012). Consumption of calcium during pregnancy has proven to reduce the risk of hypertension in pregnancy and preeclampsia, as well as lower mortality in newborns and preterm labor in developing countries (Imdad, 2011).

The survey results revealed that respondents with bad calcium have irregular habits of calcium consumption or even never take calcium during pregnancy. Respondents remember that a midwife in public health centers and midwifery practices gives more often a red tablet or tablet-added blood. The other respondents said that there are two kinds of drugs, but do not know the name because the midwife did mention it. Besides that, there are some respondents who were given calcium starts from over four months. If calcium intake in pregnant women is not fulfilling, it will result in preeclampsia. In addition to calcium supplements, it should be considered also the intake of calcium sources such as milk, cheese, anchovy, and others that are consumed by the respondent, but the researchers did not examine it.

Preeclampsia is one of the complications in pregnancy that can cause maternal mortality, but pregnant women are not too aware of these complications because there are no sign and symptoms as early warning. Preeclampsia symptoms and growth retardation are common in the second and third trimester, but pathologically occur in the first trimester. This is the reason that the prediction and prevention programs should actually be done in the first trimester so that the prevention efforts are not late (Pribadhi, et al 2015). At the time of this research, the average pregnant women who responded felt not so sign the symptoms caused by preeclampsia.

## CONCLUSION

Prevention of preeclampsia is very limited due to unknown of etiology. The role of midwives in conjunction with high blood pressure disorders during pregnancy or preeclampsia lies in the thoroughness in the examination, early identification and consultation with a doctor. Midwives should also maintain a high index of suspicion to identify women at risk as well as the findings of other predisposing factors (Varney, 2006).

The high number of preeclampsia occurrence with the number of affected predisposing factors, especially nutritional patterns and consumption of

calcium supplements. It should be used as a basis that a midwife should be able to improve the quality of service of the ANC in terms of counseling, especially starting from the selection of nutritious foods as good nutrition for pregnant women and early giving calcium supplements in pregnancy as an attempt to prevent preeclampsia.

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# THE INFLUENCE OF IUD POST PLASENTA TO THE EXCRETION PERIOD OF LOCHEA'S

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## ABSTRACT

This study is a quantitative in nature with cohort prospective approach. The population of the study was all post-partum mothers. The samples were taken using *accidental sampling* technique with 25 respondents in each case and control groups. The data were analyzed using *Chi Square* ( $X^2$ ). The result obtained p value 0.018 meaning that there is difference period on *lochea rubra* excretion on postpartum women who used IUD post placenta compared to those who did not use IUD post placenta. The analysis result obtained RR value with 2.6 (CI 95% : 1.090-6.204) meaning that post partum women who used IUD post placenta had 2.60 times bigger risk to experience prolonged *lochea rubra* excretion compared by post partum women who did not use *IUD post placenta*. The statistical result obtained p value 0.04 which means that there was difference of *lochea alba* excretion period on post partum women who used *IUD post placenta* compared with those who did not use *IUD post placenta*. The analysis result got RR value 2.20 (CI 95% : 1.18 – 6.60) meaning that post partum women who used *IUD post placenta* had tendency 2.20 times bigger in experiencing prolonged *lochea alba* excretion compared to those who did not used *IUD post placenta*. It is suggested that the result if the study can be a consideration of Family Planning program evaluation and is used as reference to make policies related to Family Planning.

**Key words:** IUD, Post plasenta, Lochea

## INTRODUCTION

Today, in the world pregnancy risk is 35% higher than before; the use of contraception can reduce 20 – 35% maternal mortality (Celen, 2011). After the partum process, women need effective and efficient contraception which can be used in a long term like (*Intra Uterine Device*) IUD. A study evaluated that the most effective contraception for women after partum process is IUD (Shukla, 2012).

*IUD post placenta* is an effective and efficient method for the infection risk of post partum period and uterus perforation in the inserting process after placenta exfoliating process is not higher compared with the setting during interval period with 3.9% (Charonis, 2009). According to the study conducted Kefiye (2006), women are motivated to use contraception during postpartum period since it is the most ideal period to postpone pregnancy and to insert contraception. A study conducted in Turkey in 2005 states that 95% post partum and 88% post abortus women are willing to use contraception method right after the partum process (Puzei, 2005).

The use of *IUD post placenta* can be categorized as low user due to lack knowledge of the benefit

of IUD in avoiding pregnancy. Besides, inserting IUD has side impact toward bleeding time or prolonging postpartum period (Grimes, 2010).

Based on the observation conducted in the research site during November 2014 – January 2015, among 125 women who had spontaneous partum process, there were 25.6% of them who use *IUD Post placenta* and 74.4% without using *IUD post placenta*.

The interview result done by the researcher to 6 postpartum patients who used *IUD post placenta* stated that some of them complained about painful feeling in their uteri area and had longer bleeding after partum process or postpartum period until  $\pm 48 - 52$  days.

Based on the study conducted by Paul (2005), using *IUD post placenta* causes longer post partum period and painful feeling after the partum process compared with those who do not use IUD. It happens since inserting IUD has impact to the change during postpartum period.

## RESEARCH METHOD

The study employed quantitative design with cohort prospective approach. The populations of the study were all spontaneous partum women with or without *IUD post placenta*. Accidental

sampling was used as the sampling technique; it is sample technique which concerns on incidental chance of using suitable subjects as the data sources (Sugiono, 2012).

The samples of the study were 50 respondents divided into two groups consisting of 25 respondents as treatment group and 25 respondents as control group. The sample criteria were subjects who did not get complication during partum process, those who had spontaneous partum, those who breast feed the babies, and those who were willing to be the respondents..

## RESULT AND DISCUSSION

The study involved 50 respondents with 25 respondents using *IUD post placenta* and 25 respondents without *IUD post placenta*. The respondents were post partum women without complication both using *IUD post placenta* and without using *IUD post placenta*. Post partum period was observed during 45 days.

**Table 1. Frequency Distribution of Postpartum Period Based on the Use of IUD Post Placenta**

Variables	IUD Post Placenta			
	Yes		No	
	N	%	N	%
<b>Lochea Rubra</b>				
Length	13	72,2	5	27,8
Normal	12	37,5	20	62,5
<b>Lochea Sanguilenta</b>				
Length	7	53,8	6	46,2
Normal	18	48,6	19	51,4
<b>Lochea serosa</b>				
Length	10	62,5	6	37,5
Normal	15	44,1	19	55,9
<b>Lochea alba</b>				
Length	11	68,8	5	31,3
Normal	14	41,2	20	58,8

Based on Table 1, it can be known that the respondent's characteristic based on the variables studied from the total 50 respondents is as follow:

### Lochea Rubra

The percentage of *lochea rubra* excretion was longer on the subjects who used IUD post placenta (72.2%) compared by the group who did not use IUD post placenta (27.8%).

### Lochea Sanguilenta

The percentage of *lochea sanguilenta* excretion was longer on the subjects who used IUD post

placenta (53.8 %) compared by the group who did not use IUD post placenta (46.2 %).

### Lochea serosa

The percentage of *lochea serosa* excretion was longer on the subjects who used IUD post placenta (62.5 %) compared by the group who did not use IUD post placenta (37.5%).

### Lochea alba

The percentage of *lochea alba* excretion was longer and more on the subjects who used IUD post placenta (68.8%) compared by the group who did not use IUD post placenta (31.3%).

**Table 2. The Impact of Using IUD Post Placenta to Lochea Rubra Excretion Period**

IUD post placenta	Lochea Rubra				P-value	CI 95 %
	Length		Normal			
	N	%	N	%		
Yes	13	52	12	48	0,018	1,090
No	5	20	20	80	-	6,204

Based on the statistical test, the result obtained p value 0.018 meaning that there is difference period on *lochea rubra* excretion on postpartum women who used *IUD post placenta* compared to those who did not use *IUD post placenta*. The analysis result obtained RR value with 2.6 (CI 95% : 1.090-6.204) meaning that post partum women who used *IUD post placenta* had 2.60 times bigger risk to experience prolonged *lochea rubra* excretion compared by post partum women who did not use IUD post placenta.

The result of the study has similar idea to Cunningham (2005) who states that during post partum period the excretion of *lochea rubra* is more than the other *locheas*. During this post partum period, blood excretion has different feature depending on its characteristic and the types of the *lochea*.

**Table 3. The Impact of Using IUD Post Placenta to Lochea Sanguilenta Excretion Period**

IUD post placenta	Lochea Sanguilenta				P-value	CI 95%
	Length		Normal			
	N	%	N	%		
Yes	7	28	18	72	0,747	0,456
No	6	24	19	76	-	2,984

Based on the statistical result, it obtained p value with 0.74 meaning that there was period

difference of *lochea sanguilenta* excretion on postpartum women who used *IUD post placenta* compared to post partum women who did not use *IUD post placenta*. The result analysis obtained RR value 1.16 (CI 95% : 0.456 – 2.984) meaning that post partum women who used *IUD post placenta* had tendency 1.16 times longer to have prolonged *lochea sanguilenta* excretion compared to post partum women who did not use *IUD post placenta*.

**Table 4. The Impact of Using IUD Post Placenta to Lochea Serosa Excretion Period**

<i>IUD post placenta</i>	Lochea serosa				P-value	CI 95%
	Length		Normal			
	N	%	N	%		
Yes	10	40	15	60	0,225	0,715-3,887
No	6	24	19	76		

Based on the statistical test, it obtained p value 0.22 meaning that there was no length difference of *lochea serosa* excretion on post partum women who used *IUD post placenta* compared with post partum women who did not use *IUD post placenta*. The analysis result obtained RR value 1.66 (CI 95% : 0.715 – 3.887) meaning that post partum women who used *IUD post placenta* would have tendency 1.66 times longer to experience *lochea serosa* excretion compared with those who did not use *IUD post placenta*.

**Table 5. The Impact of Using IUD Post Placenta to Lochea Alba Excretion Period**

<i>IUD post placenta</i>	Lochea serosa				P-value	CI 95%
	Length		Normal			
	N	%	N	%		
Yes	11	56	14	44	0,049	1,188-6,601
No	5	20	20	80		

The statistical result obtained p value 0.04 which means that there was difference of *lochea alba* excretion period on post partum women who used *IUD post placenta* compared with those who did not use *IUD post placenta*. The analysis result got RR value 2.20 (CI 95% : 1.18 – 6.60) meaning that post partum women who used *IUD post placenta* had tendency 2.20 times bigger in experiencing prolonged *lochea alba* excretion compared to those who did not used *IUD post placenta*.

In this case, longer *lochea alba* excretion period was influenced by strange object which is *IUD* that can bring impact to the excretion of prostaglandin, so it can cause pain and can prolong *lochea alba* excretion (Jones, 2001).

## CONCLUSION

The research site gives Basic Obstetric Neonatal Emergency Service which gives 24 hours partum service and contraception service. Based on the report of Working Area Control, the range of contraception service post partum *IUD Post Placenta* reaches 57% every year, and the range is still very low compared to the required range stated by the region with 75%. Based on the result of the study, the research can be used as the consideration of program evaluation of contraception service during post partum period, and it can also be used to form policies related to the program.

The suggestion for further researchers is that it is needed to conduct longer research with more respondents, so the impact in using *IUD post placenta* can be more obvious. In addition, further researchers are also expected to develop other variables.

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## MOTHER OF ANXIETY LEVEL IN DEALING WITH LABOUR

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### ABSTRACT

Pregnant women are prone to anxiety, moodiness, and easy tears. Anxiety of pregnant women might affect fetal brain growth. Realized or not, any emotions felt by a mother would have felt the baby. A lot of research that proves that a prolonged negative emotions on pregnant women will have an effect on the mentality and the character of the child. (Monk, 2001). If the Mother is not able to resolve the situation, then at the time leading up to and during the process of labor is usually the mother will experience anxiety and will give a response against or evade (fight or flight) that are triggered by the abundance of Catecholamines and hormones are triggered by the presence of fear and other forms of distress (Simkin and Ancheta, 2005). Information about childbirth experience frightening and not intact also adds to the anxiety of pregnant women (Andriana, 2007).

The purpose of this research is to know the level of anxiety of mothers facing labor. Research methods deskriptif the now HOUSEHOLD anxiety (Hamilton Anxiety Rating Scale) was used to measure the level of anxiety. Technique of data analysis used the Union's analysis of variat. Menemenian research results that the level of anxiety of mothers facing labor is located on a group of anxious light and medium (16 people) and not experiencing anxiety 24 people (60%).

**Keywords:** Anxiety, labour

### INTRODUCTION

Pregnancy is a wonderful thing because it concerns the changes in physiological processes, but is experienced by every woman. Bibring (Stotland & Stewart, 2001) mention that pregnancy is a period of crisis involving deep psychological factors, which occurs because of a change in a very big somatis.

Many factors may be the cause of the high BATTERY one is emotional condition of pregnant women during pregnancy until the birth of a baby (Sridadi, in Wulandari, 2006). While pregnant, the mother undergoes a significant change on the physiological and psychological. The process of adjusting to a new State itself against this then gives rise to anxiety. In addition to physical factors, psychosocial factors can increase anxiety in pregnant women (Gross & Helen, 2007).

Pregnant mothers prone to anxiety, moodiness, kekusaran and easy tears. Anxiety of pregnant women can affect the growth of brain janinnya. Realized or not, any emotions felt by a mother will be felt the fetus. A lot of research that proves that a prolonged negative emotions on pregnant women will affect the mentality and the character of the son of dikehidupannya.

Psychological changes during pregnancy that could not be handled by mothers who are pregnant will generally cause the onset of stress. According to the psychological part of

Handayani Clinical Child Psychology faculty of the University of Indonesia, the stress on the expectant mother can occur in three stages, namely the first stages in the early trimester, second stage on the third stage and the two trimester on trimester end (Apriani, 2005).

At the III trimester of pregnancy is always plagued by their feelings of fear more than ever before. This is because fear of the mother in the face of persalinannya. If the situation cannot be resolved by the mother, then at the time leading up to and during the process of labor is usually the mother will experience anxiety and will give a response against or evade (fight or flight) that are triggered by the abundance of Catecholamines and hormones are triggered by the presence of fear and other forms of distress (Simkin and Ancheta, Aprillia, 2005 in 2010). Information about childbirth experience frightening and not intact also adds to the anxiety of pregnant women (Andriana, 2007).

Factors that influence anxiety in pregnant women among them is the lack of information about the disease, family support, financial adequacy (Lexshimi, et al; 2007), the stress of the environment (Cury & Menezes, 2007), the frequency of nausea high danmuntah (physical health factors of pregnant women) (Swallow, 2004 dkk.), attitudes towards pregnancy (Gurung, Schetter, Collins, & Hobel, 2005), and ability mastery of pregnancy (Gurung, et al., 2005), the process of adjusting themselves against pregnancy (Bibring, in Stotland &

Stewart , 2001) both physically (Andriana, 2007) and psychosocial (Gross and Helen, 2007), as well as information about the frightening experience of childbirth (Andriana, 2007). Although reasonably occur in pregnant women, if excessive anxiety can bring harm to pregnant women as well as for the development of the fetus, such as causing a low APGAR score at birth babies (Berle, et al., 2005), increasing the likelihood the mother experiencing postpartum depression (Skouteris, et al., 2008), and can affect the physical and mental health of the mother and fetus (Ferti, et al, 2009), for example through a decline in the function of the placenta of mother (Glover Is, Bergman, Sarkar, & O'Connor, 2008) which then can affect the physical and mental health of the fetus, as well as terhambatnya growth of organs and physiological function and psychological development of infants (Monk, 2001).

The anxiety manifested in different levels ranging from mild to severe with. Awareness that binds on mild anxiety will decrease until the panic stage as well as the perception of the environment would suffer distrosi. They will be different levels of anxiety. Manifestations of anxiety that occurs depends on the personal maturity, knowledge or understanding in the face of tension, self esteem and koping mechanism (Barbara C Long 1996).

## RESEARCH METHODS

The research method was dekriftif to find out the average level of anxiety of pregnant women nullipara in preparation for childbirth at one of the Clinics in West Jakarta. the sample in this research are consecutive sampling that is in accordance with the order of arrival of the patient.

## RESULTS AND DISCUSSION

Before serving the research results about the level of anxiety of the mother while in labor, before going to the table presented data describing mothers who became characteristic of the research sample.

In table 1 it is known that most of the respondents have had the readiness of facing labor in terms of economic readiness (100%), presence of positive information about childbirth (45%), a good level of knowledge about childbirth (62.5%) and support a good husband (65%).

**Table 1**  
**The characteristics of maternity mother**

Variabel	N	%
<b>Economic Readiness</b>		
Ready	40	100
Not Ready	0	0
<b>Information about childbirth</b>		
Positif	18	45
Negatif	22	55
<b>Level of knowlwdge about Birth Mother</b>		
Good	25	62,5
Less	15	37,5
<b>Support the husband</b>		
Good	26	65
Less	14	35

**Table 2: Mother's anxiety level facing labor**

Level of anxiety	N	%
Skor < 6 (none)	24	60
Skor 6-14 (mild anxiety)	8	20
Skor 15-27 (middle anxiety)	8	20
Skor >27 (severe anxiety)	0	0
The number of	40	100

Anxiety in pregnant women can arise karenakan inappropriate mother's perception of the process of birth. Births are perceived as a scary process and cause tremendous pain so it make expectant mothers feel great anxiety ahead of the birth of her baby (Lanny Kuswandi, 2003).

Presence of mind-mind like a bore will always be followed by pain, will cause an increase in the working of the nervous system simpatetik. In this situation, the endocrine system, consisting of kelenjarkelenjar, such as the adrenals, thyroid, and pituitary (gland control center), releasing the expenditure of each hormone into the bloodstream in order to prepare the Agency on emergency situations. As a result, autonomic nervous system activate the adrenal glands that affects the hormonal system at epinefrin. The increase in the hormones adrenaline and noradrenaline or epinefrin and norepinephrine cause disregulasi biochemistry, physical tension so that it appears in pregnant women. The impact of this physiological process can arise in everyday behavior. Pregnant women become easily angry or offended, restless, unable to focus attention, hesitant, even likely to want to escape from the realities of life (Dariyo, 1997 in Aprillia. 2010).

The results showed that the majority of mothers experience not experiencing anxiety due to some

things that are conducive to coping with the mother owned the respondents i.e. keluarga support, a good knowledge of the process of childbirth, positif attitude toward labor and economic levels are adequate.

## CONCLUSION

Most pregnant women at health centers in West Jakarta territory X is not experiencing anxiety in the face of labor. 20% of mothers experience the anxiety of mothers and 20% are experiencing mild anxiety.

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# THE EFFECT OF SEFT (SPIRITUAL EMOTIONAL FREEDOM TECHNIQUE) THERAPY ON BLOOD GLUCOSE LEVEL AND ANXIETY ON GESTASTIONAL DIABETES MELLITUS

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## Abstract

The prevalence of gestational diabetes mellitus in Indonesia in 2014 reached 1.9% - 3.6%, while in Surabaya, it increased annually. In 2013, diabetes mellitus patients in Surabaya were 71 people, and in 2014, they increased to 86 patients. The purpose of this study was to determine the effect of SEFT therapy on blood glucose level and anxiety on gestational diabetes mellitus. The type of the study was true experiment with pre and post control. This study was conducted at the community health center of Surabaya City with the population of 80 patients. Sampling of this study used a purposive sampling with 40 control samples and 40 treatment samples. The statistical test used paired t test with  $p < 0.005$ . The result of the analysis found that there was a significant effect of SEFT therapy on blood glucose levels and anxiety with  $p = 0.000$ . The effective SEFT therapy effects on blood glucose level and anxiety on gestational diabetes mellitus.

**Keywords:** SEFT Therap, Blood Glucose Level, Anxiety, Gestational Diabetes Mellitus

## INTRODUCTION

The prevalence of gestational diabetes mellitus in Indonesia in 2014 reached 1.9% - 3.6%, while in Surabaya, it increased annually. In 2013, the diabetes mellitus patients in Surabaya were 71 people, and in 2014, they increased to 86 patients (Dinkes, 2014).

The increase number of gestational diabetes patients is due to patient's non-compliance against the therapy schedule and lack of knowledge about gestational diabetes mellitus. Anxiety is a collection of freshly fear, anxiety and powerlessness against something that is subjective and has several levels of low, medium and high (Stuart, 2007). The gestation period is a period of physical and psychological adaptation. Physiological changes during pregnancy in every semester, namely trimester I, II and III. In the first trimester, pregnant women often experience anxiety and worry about the real shape of the fetus inside their womb. Second-trimester, they feel anxiety and fears of a role change from the people who get love becomes people who give affection to their children growing in their womb, while the third trimester, the mother's anxiety is caused by fear of something happening to her fetus, for example disability, unsmooth delivery and pain due to the delivery (Bobak, 2011).

Nowadays, there is a developing alternative method by using SEFT therapy (Spiritual

Emotional Freedom Technique) that includes mind body Healing. This therapy is a combination of energy systems of the body, spiritual and tapping on the meridian points of the certain body so it can open the blocking energy in the body to relieve the body from five negative thoughts such as worry, fear, pretending, anger and sadness that can affect biochemical process in the body (Corwin, 2009; Sherwood, 2011). When the body is free from blocking energy, the body can achieve comprehensive physical, psychological, emotional, spiritual and social health (Zainudin, 2009). SEFT method can cope the increase of blood glucose level and anxiety by suppressing the hormone that can trigger the progressive increase of blood glucose such as epinephrine and lower cortisol levels.

Therefore, SEFT therapy can be recommended as an alternative therapy to lower blood glucose level and anxiety of pregnancy with gestational diabetes mellitus. The previous study that supports this study is Pebriani (2015) which stated that there was a significant effect between SEFT method at the set up stage and tune in to a decrease of blood glucose level on diabetes mellitus type 2 patients in Kintamura Clinic Pontianak. While Saktullah (2013) revealed the result of his study that SEFT could reduce aggression in children, Anwar and Triana (2011) stated that there was SEFT influence on phobia,



and Rajin (2012) stated that the SEFT method significantly affected the quality of sleep. Based on the study result above, the researcher is interested in conducting the study about the influence of SEFT method on blood glucose levels and anxiety in pregnant women with gestational diabetes. The purpose of this study was to determine the effect of SEFT on blood glucose level and anxiety in pregnant women with gestational diabetes mellitus.

## RESEARCH METHOD

The method of this study was the true experimental study with pre and post control. Data is collected in all health centers in Surabaya from November 2015 through December 2015. SEFT therapy was conducted for three days. The population of this study was 80 patients. The sampling technique used a purposive sampling with 40 control samples and 40 treatment samples. The inclusion criteria of the sample of this study were primigravida and multigravida parities, willing to be the subjects of study. The dependent variable of the study was random blood glucose, blood glucose 2 hours PP blood glucose and anxiety levels, while the independent variable in this study was SEFT therapy. The anxiety measurement instrument used the Hamilton Rating Scale For Anxiety (HARS). Statistical test using the paired t test (Dahlan, 2014; Murti, 2013)

## RESULT AND DISCUSSION

The normality test result was obtained that  $p = 0:30$ , which meant that the data were normally distributed ( $p > 0.05$ ). Based upon the data distribution, the data had been qualified to do paired t test.

Based on the distribution analysis showed that most of the study subjects prior to SEFT have random blood glucose level of  $> 140$  mg / dl was at 36.5%, and as 132- 137 mg / dl as 27.5% and 37% while 2 hours PP blood glucose before SEFT 160 mg / dl was at 20%, 166-167 as 64% while 170 was 3 % and 163-165 was at 13%. After having SEFT, the random glucose level was 110-115 mg / dl as 77% and 33% had 116-120 mg/dl random glucose level and the blood glucose levels of 2 hours Post Prandial 119 mg / dl was 12.5% and 120 mg / dl as 87.5% The level of anxiety before SEFT mostly experiencing moderate anxiety level that was equal to 73% and 27% at the level of severe anxiety, but after having SEFT, most of the study subjects were in low level of anxiety which was 87% and 13% felt less anxious.

**Table 1 the test result of paired t test group**

Group	Paired		Std. Error	95% CI		Sig
	Mean	Std Dev		Low	Upp	
Random Blood Glucose Pre & post	25.02	3.68	0.58	23.84	26.20	0.0001
Prandial Blood Glucose 2 hour Post & pre 2 hour Post Prandial Blood	45.77	2.66	0.44	44.87	46.67	0.0001
anxiety	0.69	0.29	0.04	0.59	0.78	0.0001

Table 1 explained that there was a significant difference among the random glucose, ( $p = 0.000$ ), 2 hours PP glucose ( $p = 0.000$ ) and anxiety ( $p = 0.000$ ) after having SEFT method with  $p$  value of  $< 0.05$

**Table 2 the test result of paired t test group**

Group	Paired		Std. error	Sig	
	Mean	Std Dev		95% CI	
Group 1 Random Blood glucose levels with SEFT	-17.35	6.38	1.00	-19.39-15.0	0.000
Random Blood Glukosa levels nonSEFT					
Group 2 2 hour blood glucose levels with SEFT	-5.27	3.91	0.61	-6.52-4.02	0.000
2 hour blood glucose levels non SEFT					
Group 3 anxiety	-0.11	0.21	0.03	-0.18 – 0.04	0.001

Table 2 illustrated that there was a significant difference among the random glucose, 2 hours post prandial glucose and anxiety in the control group and the SEFT method treatment group with p value of <0.05.

The result of paired t test explained that there was a significant influence among random glucose level and 2 hours PP glucose and anxiety before and after having SEFT therapy in the treatment group with p value of <0.05 (p = 0.000) and there was a significant effect on random blood glucose level (p <0.000), 2 hours post prandial glucose level (p = 0.000) and anxiety (p = 0.001) between the treatment group and the control group with p value of <0.05.

SEFT is non-pharmacological therapy method by using Psychology energy. Psychology energy has a principle that positive body energy can affect the physical, biochemical body, mind and behavior (Feinstein, 2008). SEFT method has three stages: the first stage is set up, the second stage called the tune in stage and the third stage is called the tapping stage. The set up and tune in stages are the stages of relaxation and meditation. Both of these stages can be done by performing a set of word and focusing on illness or disorder experienced by the body. Examples stage set word is "God ... I am sincere... I surrender ... I believe thou heals all my diseases." while the sample of tune in stage is "God I accept this condition ... and I am defenseless ... because I believe thou heals my pain". This is the stage of relaxation or meditation. Relaxation is able to inhibit the activation of the sympathetic adrenal modular and hypotalamushypofise adrenal to the adrenal glands to release the neurotransmitter nauroepineprine thus inhibits the production of ketokolamin hormone that is epinephrine and neuroepinepherin so the condition of the smooth muscles becomes relax and the condition of the body becomes quiet. Hypotalamus Hypofise adrenal is decreasing in the activity thus the cortisol is not formed. Decreased cortisol level lead to the unavailability of energy, fat and glucose in the cells, thus decreasing anxiety while lowering blood glucose level (Corwin, 2009; Lorentz, 2006; Sherwood, 2011).

The tapping stage explains that the movement beats at a certain point of the nerve can transmit kinetic energy to energy system. The increased energy system is capable of opening 12 meridian points of the body that activates the metabolic and the endocrine systems (Corwin, 2009; Sherwood, 2011). The above opinion is supported by Zainudin (2009), Mustafa (2011) and Saputra (2012) who state that tapping, prayer

and a positive attitude can increase the positive energy flow and is able to organize resistance against negative energy so it can achieve the body balance.

## CONCLUSION

The effective SEFT method effects significantly on blood glucose level and anxiety in pregnancy with diabetes mellitus

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# THE IMPACTS OF POST-PARTUM WOMEN'S EDUCATION ON THE LEVEL OF ANXIETY AND READINESS TO TAKE CARE FOR LOW BIRTH WEIGHT INFANTS AT HOME

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## ABSTRACT

Low Birth Weight (LBW) Infant is one of the risk factors that contribute to infant mortality, especially in the perinatal period, thus it requires special attention and care. Anxiety and difficulty in caring for LBW infants at home related to the lack of involvement of the mother during hospitalization. The purpose of this study is to observe the effect of education on postpartum women on the level of anxiety and readiness to care for Low Birth Weight infants at home.

This study was a quasi-experimental study with Nonequivalent Control Group Design with Pre-Post Test Design. The study populations were all postpartum women with LBW infants who were being cared for in General District Hospital Semarang and Tugurejo General District Hospital Semarang. The samples in each group were 19 postpartum women, the data were taken by consecutive sampling. Measurement tool for anxiety variable used Zung Self-Rating Anxiety Scale (ZSAS), and tool for mother readiness variable used a questionnaire. For data collection of the experimental group, mothers were educated with booklet in 2 meetings while the control group of mothers with LBW infants was given verbal explanation according to the Hospital standard. Data Analysis used Mann Whitney and Wilcoxon tests.

The study results showed that there were changes on the level of anxiety after the education by using booklet from 94.7% of mild anxiety became 84.2% of no anxiety or normal, there was an increase in the readiness of the mothers in caring for LBW infants after the education with booklet from 52.6% to 68.9%. There was a difference on the level of anxiety and readiness of the postpartum mothers in caring for LBW babies among the experimental group with education and the control group. (P value = 0.0001 and 0.004).

To improve the readiness of mothers in caring for LBW infants at home, then the usage of booklet should be added in the standard operating procedure of LBW Baby Care when the health workers provide health education for postpartum women with LBW infants.

**Keywords:** LBW babies, Anxiety and Readiness of Postpartum Women

## Introduction

About a third of LBW babies died before stabilization or within the first 12 hours of life (Blackwell, 2010). Based on the data of Basic Health Research in 2013, the prevalence of low birth weight was 10.2%, and it is still a concern for the majority of low birth weight <2000 g died in the neonatal period. Given the very complex problems of low birth weight infant, it needs a lot of concern on the delivery of services that facilitate the interaction between baby and family. Medical records in General District Hospital Semarang and Tugurejo General District Hospital Semarang showed that 6% -8% LBW infants died in 2015 of the total number of low birth weight births.

Low birth weight is one of the risk factors that contribute to infant mortality, especially in the perinatal period, thus it requires special attention and care. The close relationship between the baby and parents is very helpful to improve the infant growth. LBW is generally cared in a

separate room from the mother's room. This separation can cause maternal anxiety since the mother always worries about the baby's condition (Proverawati, 2010). Mother anxiety will bring up a negative coping mechanism that can affect lactation, unpreparedness in the care of LBW infant and the emergence of fear to hold the baby.

Isolation and separation from parents will reduce the chance of interaction between mother and baby, and can influence and hinder the development of the baby (Ohgi, et al, 2012). One of the factors that influence the readiness of mother in caring for the baby is ineffective provision of information due to stress, anxiety and depression experienced by the mother after delivery. A survey conducted by Mc.Kim in Canada to 56 premature infants showed that 48% of mothers had difficulty in caring for their infants after discharge from the hospital. Effective health education will increase the confidence and readiness of the mother to care for her baby at home. The purpose of this study

is to observe the effect of education on postpartum women on the level of anxiety and readiness to care for Low Birth Weight infants at home.

## RESEARCH METHODS

This study was a quasi experimental study with Nonequivalent Control Group Design with Pre-Post Test Design. The study populations were all postpartum women with LBW infants who were being cared for in General District Hospital Semarang and Tugurejo General District Hospital Semarang. The samples in each group were 19 postpartum women. The data were taken by consecutive sampling. Measurement tool for anxiety variable used Zung Self-Rating Anxiety Scale (ZSAS), with 20 statements and the value range of each statement was 1-4. The tool for mother readiness variable used a questionnaire. The data collection of Group I (the experimental group) and Group II (the control group) was conducted by providing a questionnaire on anxiety for the women in the second day of postpartum. The anxiety score of at least 45 means mild anxiety. Then postpartum women continued to fill in a questionnaire about the readiness of caring for the baby. And then mothers in group I received education with booklet in 2 meetings. On the fourth day postpartum or when the mother will go home, the researchers conducted a measurement of anxiety and readiness of mothers in caring for LBW infants. Meanwhile, mothers in group II received verbal explanation on LBW baby care according to the Hospital standard when they would go home. Data Analysis used Mann Whitney and Wilcoxon tests.

## RESULTS AND DISCUSSION

### The Level of Anxiety of Mothers

Table 1: The Level of Anxiety of Mothers Before and After Treatment in the Experimental and Control Groups

Before	Level of Anxiety	N	%	After	Level of Anxiety	n	%
Experimental Group	Mild Anxiety	18	94.7	Experimental Group	No Anxiety	16	84.2
	Moderate Anxiety	1	5.3		Mild Anxiety	3	15.8
Control Group	Mild Anxiety	19	100	Control Group	No Anxiety	4	21.1
	Moderate Anxiety	0	0		Mild Anxiety	15	78.9

t test before-after of the experimental group: *p value*= 0.0001  
 Wilcoxon test before-after of the control group: *p value* = 0.0001

Anxiety on postpartum women before the treatment of health education by using booklet showed a state of mild anxiety and moderate anxiety. Anxiety is a state or mood characterized by physical tension and the concerns on certain things. The state of anxiety will interfere with an individual's ability to achieve the desired objectives. Anxiety deserves to get attention so it may not exist too long and cause discomfort for the person and the surroundings (Barlow, 2006).

Postpartum women in a state of anxiety would interfere with the baby care process. Anxiety can interfere with someone's physiological and psychological functions. Physiologically a mother will show an increase in the pulse rate and blood pressure and can not have focus in thinking. The existence of the birth always makes a mother to imagine a lot of fun when the baby is born, for example holding and clutching her baby. However, conditions will change if after birth the baby must be separated from the mother. Calmness in caring LBW infants is the foundation of self confidence for a mother to reflect an ability to care for the baby, so it will bring positive emotions. Qualitative research conducted by Eny R (2010) stated that the problems of the baby's condition and the separation of mother and baby were considered as the causes of anxiety and stressors in women whose babies were cared for in NICU.

### Readiness of the Postpartum Women

Table 2: Level of Readiness of the Postpartum Women Before and After Treatment

Before	Readiness	N	%	After	Readiness	n	%
Experimental	Ready	10	52.6	Experimental	Ready	13	68.4
	Not Ready	9	47.4		Not Ready	6	31.6
Control	Ready	11	57.9	Control	Ready	13	68.4
	Not Ready	8	42.1		Not Ready	6	31.6

Wilcoxon test before-after of the experimental group: *p value*= 0.005  
 Wilcoxon test before-after of the control group: *p value* = 0.0001



The study results showed that the readiness of mother in caring for low birth weight infant was very important. Mothers who received a booklet during hospitalization were more ready compared with those who did not receive the booklet. It was shown from the increase in the level of readiness of mothers in the treatment group from 52.6% to 68.4%. Booklet is one sample of media to deliver health messages in the form of books, drawings and written explanation. As self-learning package media, the provision of booklet will be able to provide a series of learning experiences that have been planned and systematically designed (Sardiman, 2009).

Previous study conducted by Erma (2011) showed that the provision of Health Education package "Mother's Responses, Interactions and Embrace" gave the results of increased knowledge of 92%, increased positive attitudes of 80% and increased skills in caring for LBW infant of 100%. The results show that health education is important to be conducted and should be provided with specific media such as booklet for postpartum women. According to Notoatmodjo, some things that may influence the success in the provision of health education (2012) is preparation, mastery of the material, the convincing appearance for the targets, the language used should be easy to understand, clear voice and audible sound, delivery of interesting and not monotonous contents. Likewise in the media selection, booklets should contain arranged descriptions, images should use easily understood language, so that mothers can learn independently after the provision of health education.

The negative impacts that may happen to the baby if the mother is not ready to take care are that the child will grow to be a sensitive child, lot of crying, fussy, and easy to be sick because the lack of maternal care. This is related to the results of the study conducted by Qorina (2011) which stated that postpartum woman desperately needed the support of people around her, people who gave motivation, encouraged her and people who were always with her and helped her to face the changes related to childbirth. Primiparous mothers should get great support from the family in caring their infants. This support can be demonstrated in various ways, such as give guidance, give peace and comfort, and provide concrete assistance. The role of health workers especially midwives is very important to prepare postpartum women in caring for the baby after discharge from the hospital. One example is by providing the booklet, so that if there is something being forgotten, the mother can read it again.

### Differences of the Level of Anxiety in Both Groups

Table 3: Differences of the Level of Anxiety of Mother with LBW infants in Booklet and Control Groups

Group	N	Mean Range	Significance Value
Level of Anxiety: Experimental	19	27.18	0.0001
Level of Anxiety: Control	19	11.82	

Table 3 showed that there were differences in the level of anxiety between the experimental group and the control group, with p value = 0.0001 < 0.05. Postpartum women who received education by using the booklet were more effective in reducing anxiety, although the control group also showed decreased anxiety, but the decrease in the level of anxiety was higher in the experimental group. Postpartum women who got extra booklet during hospitalization had a better understanding of how to care for LBW infant because during the waiting period, the mother could take more time to read again about LBW baby care, so the mothers became more relaxed and calm in responding the condition of the baby.

Mother in a state of anxiety will face changes in her physiology and psychology. A woman who is anxious or stressed will create a signal goes through the HPA (hypothalamo-pituitary-adrenal) axis which can cause the release of stress hormones such as cortisol, catecholamines,  $\beta$ -Endorphin. The excretion of the stress hormones may result in systemic vasoconstriction, including lactiferous duct constriction, and results in reduced and even stopped milk production (Guyton & Hill, 2007).

A study conducted by Putri (2012) on the correlation between therapeutic communication and anxiety in postpartum women, stated that prior to the treatment, 50% had moderate anxiety, and after treatment 65% had mild anxiety. The provision of good communication in providing baby care will have a positive impact on the mother. Other study conducted by Helle and Barkmann (2016) stated that the risk of anxiety disorders was higher in parents with low birth weight infants. Postpartum mothers who were not familiar in LBW baby care would be worry about the condition of the baby. Providing health education by using booklet was effective in lowering mothers, anxiety. Another study conducted by Sudarti (2006) showed that anxiety scores significantly influenced the time for

colostrum production. Higher anxiety level of women with LBW infants would cause longer time for colostrum production.

#### Differences of the Readiness in Both Groups

Table 4: Differences of Readiness of Mother with LBW infants in Booklet and Control Groups

Group	N	Mean Range	Significance Value
Readiness: Experimental	19	24.61	0.004
Readiness: Control	19	14.39	

Table 4 showed that there were differences in the readiness of mothers in caring for LBW infants between the experimental group and the control group, with p value of  $0.004 < 0.05$ . Thus,  $H_0$  was rejected and  $H_a$  was accepted. Postpartum women who received education by using booklets were better prepared to care for LBW infant compared to the control group. Readiness is the overall condition of the person or people which make them ready to respond or answer in a certain way to a situation and the conditions encountered (Slameto, 2010). In this case, the readiness of postpartum women in caring for low birth weight babies is very necessary and it is important to be prepared since hospitalization period, so that when the mother has arrived home she can carry out baby care with confidence and according to the procedures taught in the hospital.

Postpartum women who received a booklet media were more ready than mother in the control group who did not use the media. This booklet contains knowledge, attitudes and skills of mothers about the care of low birth weight baby, as a preparation after discharge from the hospital. Material presented in a booklet includes several sub subjects on how to keep the baby warm by using Kangaroo Mother Care (KMC), infection prevention, immunization, how to express the breast milk. Mothers will get more experiences during repeatedly reading. The achievement of behavioral changes of individuals, families, communities in building and maintaining healthy behaviors and environments as well as play an active role may result in the achievement of optimal health status.

A study conducted by Suyami & Yeni (2014) on the influence of education on the level of maternal anxiety and efficacy in caring for LBW infant showed that after the education, 86.4% of the experienced a decrease in anxiety and 18.2% of the respondents experienced an increase in self-efficacy. Education on bathing and kangaroo

mother care method was effective to reduce anxiety and increase self-efficacy. Those results support the results of this study, that a good education and the use of interesting media would increase the readiness of mothers in caring for their babies after discharge from the hospital. Another study conducted by Isna and Imron (2015) stated that there were differences in the ability of mothers in kangaroo care method before and after counseling. The changes in mothers were caused by the mother's ability to understand the individual education since it could explore their potential to care for the baby. Another study conducted by Ahmed (2008) in Egypt explained that effective health education program might improve knowledge and skills on breastfeeding of mothers with premature babies.

In accordance with the HL Bloom taxonomy, the human ability to learn is 10% of what he read, 20% of what he hear, 30% of what he see, 50% of what he see and hear, 70% of what he say and 90% of what he do. So the acquisition of learning outcomes is a combination of the senses of sight and hearing (Notoatmodjo, 2012). A mother is the closest and most responsible person in caring for the baby. Therefore the readiness in terms of knowledge, attitudes and skills in the implementation of LBW care will improve the baby's health.

## CONCLUSION

### Conclusion

1. After treatment with education by using booklet, there was a change in the level of anxiety from 94.7% of mild anxiety became 84.2% of no anxiety or normal, and there was an increase in the readiness of mothers in caring for LBW infants after the education with booklet from 52.6% to 68.9% .
2. There was a difference in the level of anxiety and readiness of mothers before and after treatment by booklet (p value = 0.0001)
3. There was a difference in the level of anxiety and readiness of postpartum women in LBW baby care among the booklet group and control group. (P value = 0.0001 and 0.004). Providing education with booklet was effective in lowering the level of anxiety in postpartum women, and improving the readiness of mothers to care for their babies after discharge from hospital.

### Recommendation

1. To improve the readiness of mothers on LBW baby care at home, it is necessary to add the usage of booklet in the standard operating procedure of LBW Baby Care when the

- health workers provide health education for postpartum women with LBW infants.
2. Postpartum women need to prepare knowledge, attitudes and skills in caring for LBW infant as early as possible, so when the baby is allowed to be cared for at home, the mother will have been prepared in baby care practices.
  3. Support of the family for postpartum women is highly required to assist mothers in caring for LBW infants at home so that they become more calm and relaxed and to maintain the health and welfare of the baby. Thus baby can grow and develop in accordance with the stages of age.

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# ANALYSIS OF FACTORS RELATED TO THE IMPLEMENTATION OF EARLY INITIATION OF BREASTFEEDING AT DR. KARIADI GENERAL CENTRAL HOSPITAL SEMARANG

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## ABSTRACT

Early Initiation of Breastfeeding (EIB) has been shown to increase the success of exclusive breastfeeding. Several benefits of EIB are mothers and babies become calmer, it creates better affection between mother and baby, helps the uterus contraction, reduces bleeding risk, and accelerates the delivery of the placenta. At Dr. Kariadi General Central Hospital Semarang, early initiation of breastfeeding coverage in 2012 was 41.43%. It is far from the target of MDGs achievement acceleration in which Dr. Kariadi General Central Hospital determined EIB implementation increase with a target of 80%. The purpose of this study is to analyze the factors related to the implementation of EIB with the intervening variables of parity, mode of delivery, the level of knowledge, and health worker support at Dr. Kariadi General Central Hospital Semarang.

This study was a correlative analytic study with cross sectional approach. The population in this study were all women who gave birth at the Hospital Dr. Kariadi Semarang. The samples were all women who gave birth at Dr. Kariadi Hospital Semarang and met the inclusion criteria as many as 58 respondents by using purposive sampling technique. This study was conducted over three months, April, May, and June of 2016. The analysis test used here was Chi Square test.

The results of statistical tests showed that there was no correlation between parity and mode of delivery with the implementation of EIB with a p-value of  $0.848 > \alpha$  (0.05) for parity and a p-value of  $0.411 > \alpha$  (0.05) for the mode of delivery. There was a significant correlation between the level of knowledge and health worker support with the implementation of EIB with a p-value of  $0.024 < \alpha$  (0.05) for the level of knowledge and a p-value of  $0.001 < \alpha$  (0.05) for health worker support.

EIB needs to be performed intensively on all types of delivery methods for primi, multi, or grandemultiparous women. Further study on other variables is needed to determine the risk factors related to EIB.

**Keywords: analysis of factors, early initiation of breastfeeding**

## INTRODUCTION

Early initiation of breastfeeding (EIB) is putting a newborn baby lying face down on the mother's chest after the baby's body is dried with a clean cloth (except the baby's hands), skin to skin contact (Edmond, et al. 2006). Moreover, the baby's back is covered with a blanket, the baby's head may be given the cap (to prevent hypothermia), and the baby will look for his mother's breast within one hour after birth (Sri Astuti, et al, 2015; p.126).

Early breastfeeding has several advantages, both for the mother and baby. The benefits for the mother are it may accelerate the delivery of the placenta, Breast milk excretion, and involution of the uterus to the original state before pregnancy and cause uterine contractions, thereby reducing

postpartum hemorrhage. While the benefits of EIB for the baby are to prevent hypothermia, accelerate the process of breast milk production, the baby gets colostrum, prevent hypoglycemia, more successful exclusive breastfeeding and the will be breastfed longer, mothers and babies become calmer, and create better affection between mother and baby (Roesli, 2008)

Various studies have also reported that EIB was proven to increase the success of exclusive breastfeeding. Salariya et al found that babies breastfed within 30 minutes after birth were likely to breastfeed in long term. In addition, the study results by Fikawati and Syafiq (2003) found that mothers who gave immediate breastfeeding were 2 to 8 times more likely to breastfeed exclusively until 4 months compared to the mothers who did



nit perform immediate breastfeeding (Sari, Eka Puspita & Rimandini, Kurnia Dwi; 2014).

Mothers who do not breastfeed will cause adverse effects. Breast milk will be excreted in longer time because of the absence of stimulation on the breast and nipple which can stimulate the oxytocin hormone, they may suffer engorgement and breast infection (mastitis) because breast milk is not excreted properly. They will often face difficulties in breastfeeding and are more likely to stop breastfeeding the baby early (Roesli, 2008).

In Central Java, the coverage of EIB and exclusive breastfeeding was still lower compared to DIY Province which was equal to 37.5% for EIB and 67.95% for exclusive breastfeeding. While in Yogyakarta Province (DIY), the percentage of early initiation of breastfeeding was 39.3% and exclusive breastfeeding was 70.83% (MoH RI, 2014; pp. 94-95).

Meanwhile, in Semarang, based on the reports from public health centers in 2013, exclusive breastfeeding in infants aged 0-6 months was as many as 7.986 infants or 61.2% of 13.050 infants. It may be compared to exclusive breastfeeding in 2012 of 9.547 (64.0%) of 14. 915 infants aged 0-6 months, then the coverage in 2013 was decreased (Semarang Health Profile 2014, p. 82-83).

Meanwhile at Dr. Kariadi General Central Hospital Semarang, early initiation of breastfeeding coverage in 2012 was amounted to 41.43%. Whereas in order to accelerate the achievement of MDGs. Kariadi General Central Hospital Semarang determined the EIB implementation increase as one of the goals with a target of 80% in 2012. This shows the gap between the target and the realization of EIB at Dr. Kariadi General Central Hospital Semarang.

Based on the above background, the authors are interested to conduct a study to further find out the factors related to the implementation of early initiation of breastfeeding at Dr. Kariadi General Central Hospital Semarang.

## RESEARCH METHODS

This study was an analytic bivariate correlative study with cross sectional approach. The independent variables studied were parity status, mode of delivery, level of knowledge, and health worker support. The dependent variable was EIB behavior. Sampling method used in this study was

non probability sampling by purposive sampling that was tailored to the inclusion and exclusion criteria. The samples were 58 mothers. Data was analyzed by univariate with frequency distribution and bivariate by using Chi Square statistic as the data scale of each study variable was categorical (ordinal) (Notoatmodjo, 2010, Nursalam, 2012) .

## RESULTS AND DISCUSSION

Total number of the respondents who had multiparous parity were as many as 40 people (69%). While 18 people (31%) were primiparous women. Most of the respondents had mode of delivery of spontaneous delivery and vacuum extraction as many as 34 people (58.6%). 34 people (58.6%) had knowledge in the moderate category. The question item with low value was on how to implement EIB.

Most of the health workers were included into the good category as many as 30 people (51.7%). It was known that 84.5% of health workers were busy doing other things while the respondents were implementing early initiation of breastfeeding, 44.83% of health workers did not allow the respondents to be accompanied by the husband during labor and 36.21% of health workers did not to let the baby to crawl over the chest to find the nipple himself.

Most of the respondents were included in the good EIB category as many as 36 people (62.1%)

**Table .1**  
**Distribution of the respondents based on the Characteristics**

Variable	Frequency	(%)	
<b>Parity</b>			
Primiparous	18	31,0	
Multiparous	40	69,0	
<b>Mode of delivery</b>			
Spontaneous, and vacuum extraction	34	24	58.6 41.4
Caesarean Section			
<b>Level of knowledge</b>			
Good	14	24.1	
Moderate	34	58.6	
Poor	10	17.2	
<b>Health worker support</b>			
Good	30	51.7	
Poor	28	48.3	
<b>EIB Behaviour</b>			



Good	36	62.1
Poor	22	37.9
Total	58	100.0

**Table 2.**  
**Correlation between parity and EIB**

Parity	EIB				X <sup>2</sup>	P-value
	Good		Poor			
	f	%	f	%		
Primi para	12	66.7	6	33.3	0.234	0.848
Multi para	24	60	16	40		

In total of 18 respondents with parity of primiparous, as many as 12 respondents (66.7%) were included into the Good EIB category, while 40 respondents with parity of multiparous as many as 24 respondents (60%) were included into the Good EIB category.

Based on the statistical test by using Continuity Correction we obtained X<sup>2</sup> value of 0.234, with a p value of 0.848 > α (0.05). It showed that there was no correlation between parity and EIB at Dr. Kariadi General Central Hospital Semarang.

**Table 3.**  
**Correlation between mode of delivery and EIB**

Mode of delivery	EIB				X <sup>2</sup>	P-value
	Good		Poor			
	f	%	f	%		
Spontaneous, and vacuum extraction	23	67.6	11	32.4	1.086	0.411
Caesarean Section	13	54.2	11	45.8		

Based on the above table, of 34 respondents with spontaneous and vacuum extraction delivery as many as 23 respondents (67.6%) were included into the Good EIB category and of 24 respondents with cesarean section delivery as many as 13 respondents (54.2%) were included into the Good EIB category.

Based on the statistical test by using Continuity Correction we obtained X<sup>2</sup> value of 1.086, with a p value of 0.411 > α (0.05). It showed that there was no correlation between mode of delivery and EIB at Dr. Kariadi General Central Hospital Semarang.

**Table 4.**  
**Correlation between level of knowledge and EIB**

Level of knowledge	EIB				X <sup>2</sup>	P-value
	Good		Poor			
	f	%	f	%		
Good	13	92.9	1	7.1	7.4	0.024
Moderate	18	52.9	16	47.1		
Poor	5	50.0	5	50.0	59	

Based on the table above, from 33 respondents with good knowledge as many as 27 respondents (81.8%) were included into the Good EIB category and of 25 respondents with poor knowledge, as many as 16 respondents (64%) were included into the Poor EIB category.

Based on the statistical test by using Continuity Correction we obtained X<sup>2</sup> value of 7.459, with a p value of 0.024 < α (0.05). It showed that there was a correlation between level of knowledge and EIB in Dr. Kariadi General Central Hospital Semarang.

**Table 5.**  
**Correlation between health worker support and EIB**

Health worker support	EIB				X <sup>2</sup>	P-value
	Good		Poor			
	f	%	f	%		
Good	2	90	3	10	20.5	0.001
	7			92		
Poor	9	32.1	19	67.9	9	

Based on the above table, 30 respondents with health workers support in good category of both as many as 27 respondents (90%) were included into the good EIB category, and of the 28 respondents with health workers support in poor category as many as 19 respondents (67.9%) were included into the poor EIB category.

The statistical test results by using the Continuity Correction obtained X<sup>2</sup> value of 20.592, with a p value of 0.001 < α (0.05). It shows that there was a correlation between health worker support and EIB implementation at Dr. Kariadi General Central Hospital Semarang.

According to House in the Department of Health (2002), which was quoted by Kurniawati, Ninuk Dian & Nursalam (2007; p.29) there were four types of support or social dimension namely emotional support, esteem support, instrumental support, and informative support. In this study

support the esteem and informative supports were good, while the emotional and instrumental supports were still poor and were needed to be improved.

Based on further analysis on the mode of delivery it can be seen that the question item in with low value was on EIB in spontaneous or vacuum extraction delivery mode, whereas EIB in Caesarean Section delivery, the question item with low values was the question about how to implement EIB.

Observation results in Dr. Kariadi General Central Hospital Semarang showed that generally health workers performed EIB, but not all of the stages in the EIB were performed. The stage of letting the baby to have skin contact with the mother's skin at least one hour was most often missed because this stage was performed only for a moment, not for one hour.

The higher the mother's level of knowledge, the better EIB implementation. Meanwhile, if we observed from the mother's employment status, the higher the status of the job, the better EIB implementation, especially on the respondents with the profession of civil servants in health sector, such as nurses and doctors.

The study results are in line with the statement of Maulana (2009) which stated that a person's level of knowledge, in this case the level of knowledge about EIB was comparable with the level of education of the person.

The correlation between parity and EIB was presumably caused that someone's parity does not determine the EIB. The most important factor that influenced the success of EIB at Dr. Kariadi General Central Hospital Semarang was health worker. The observation results from Dr. Kariadi General Central Hospital Semarang showed that although a woman had parity of multiparous, if health workers did not perform EIB, the EIB was not implemented. So the role of health workers to determine the success of EIB is very important. This study result is supported by the research conducted by Khoniasari (2015), which showed there was no effect of parity on the implementation of early initiation of breastfeeding in General District Hospital Salatiga.

Correlation between the mode of delivery and EIB showed that in patients with post Caesarean Section it was difficult to implement early initiation of breastfeeding to infants due to several factors. According to Rios, et al. (2008) there were some things that influenced EIB in

postpartum women with Caesarean Section such as no rooming in, the stress of the mother, a sense of postoperative pain, and the condition of the incision on abdomen that caused the mothers to choose to rest and restore their limp condition due to the influence of anesthesia. From a study conducted by Hasiana et al, the result showed that Caesarean affect had an influence of 56.1% against the failure of EIB. In addition, the results of the study conducted by Virarisca et al. (2010) showed that the proportion of EIB in women who gave birth by vaginal delivery method was greater than in women who gave birth with Caesarean Section. Observation in Dr. Kariadi General Central Hospital Semarang showed that EIB is generally performed by health workers, but in Caesarean Section delivery, EIB percentage in the Good or well performed category (54.2%) was lower than in spontaneous or vacuum extraction delivery (67.6%).

Correlation between the level of knowledge and EIB and observation in the delivery room showed that mothers who had good knowledge about EIB always ask the health workers to perform EIB on their babies compared to the women with poor level of knowledge. From the results of the study conducted by Hidayat (2012), the level of knowledge had a significant correlation with the implementation of EIB with the significance at P value at 0.029 and RR of 1,615, which mean that the rate of EIB implementation in the group with high knowledge level was 1.6 times higher than the groups with low knowledge level. It showed that the EIB implementation in women with high level of knowledge was greater than women with low level of knowledge on EIB. The study results is supported by a study conducted by Anjasmara et al. (2015) at the Maternity ward of Wawa Husada Hospital which indicated that based on the cross-tabulation between knowledge on EIB and participation in performing EIB, the better knowledge on EIB, the higher participation in performing EIB, the poorer knowledge on EIB (Sudharmono, et.al. 2012,), the lower participation in performing EIB. The study results also showed that there was a correlation between mother's level of knowledge on early initiation of breastfeeding (EIB) and the participation of the mothers in performing EIB and (Isyaputri et.al, 2011).

The results of the correlation between health worker support and EIB is in line with the results of the study conducted by Khoniasari (2015) that

the role of health workers, especially midwives had a positive impact and the correlation between midwife's role and EIB implementation was statistically significant. Likewise, research by Tarigan (2012) indicated that the support health worker who accompanied the delivery process was a reinforcing factor for exclusive breastfeeding to infants.

Since the importance of the EIB benefits, it is important for mothers who giving birth to implement EIB to raise awareness of the mother in it, then the thing to do is providing health education during pregnancy, mothers need to actively come to the midwife or doctor for consultation and to check their pregnancy. Increased knowledge on EIB is indispensable, especially in understanding EIB and its procedures. The involvement of the family is important, especially the husband to be allowed to accompany the mother during childbirth. Health workers, especially midwives are expected to not implementing EIB in rush, do not help to enter the mother's nipple into the baby's mouth, and let the baby crawl on the mother's chest to find the nipple himself so that the stage by stage of EIB may be passed well.

According to Yusnita et al. (2012) and Yunica, JA et al. (2015), EIB should be done immediately performed at birth without being delayed by the events of weighing or measuring the baby if the mother and baby were in a stable condition and the support of health workers, especially midwives was needed for smooth EIB implementation process. During EIB implementation in spontaneous or vacuum extraction delivery the health workers are requested to further improve the implementation procedures of EIB mainly about letting the baby to have skin to skin contact with the mother, for at least one hour, and separate the baby for weighing, measurement, getting label and give vitamin K injection. After the the mother's skin and the baby's skin are attached to at least one hour or the baby has finished the early breastfeeding. Furthermore, for EIB procedure in Caesarean Section delivery, health workers are requested to improve the procedures to put a hat on the baby's head, let the baby to have skin contact with the mother's skin for at least one hour. When within an hour the baby has not been able to find the mother's nipple, they should provide additional time for the attachment on the mother's chest for further 30 minutes or an hour.

## CONCLUSION

Most of the respondents had secondary education, and multiparous women were more than half compared to the primiparous women. Spontaneous and vacuum extraction deliveries were more than Caesarean Section. Most of the respondents had good knowledge. The average of health worker support was in the moderate category. EIB in good category was more than in the poor category.

There was no correlation between parity, mode of delivery with EIB. There was a correlation between the level of knowledge, health worker support with EIB behaviour.

## RECOMMENDATION

It is a need to increase knowledge on EIB for the families and the involvement of the husband during EIB process. Midwives need to pay attention on EIB according to the mode or method of delivery, if necessary. Standard procedure for EIB for each mode of delivery should be made. Further researches are highly explored, especially on other variables that may affect the implementation of EIB.

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## ANALYSIS OF FACTORS AFFECTING SEXUAL BEHAVIOR OF YOUTH

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### ABSTRACT

Adolescence is the most important time in the development stages of life caused this period is a period of transition from childhood to adulthood that began marked a change in the physical, emotional unstable so vulnerable to social instability, social adjustment to become an adult. At this time, teenagers have the desire to become adults, including about sexuality, curiosity is very high so want to try / do everything that has never been done. The situation is aggravated by changes in lifestyle, media, change the social fabric of society from traditional societies to modernization may change norms, values and lifestyle of young people in Indonesia are open resulting in susceptibility to various diseases, especially related to sexual and reproductive health. This study aimed to analyze the factors - factors that influence adolescent sexual behavior. This research was conducted in the village of Tanjung Gusta Deli Serdang caused in this village many marriages at a young age. This research is an analytic with cross sectional approach. To determine the variables that have more influence on Sexual Behavior, can be seen from the standardized beta coefficient calculation results of multiple regression analysis. On the results of research on beaked find more factor in teen sexual behavior is self-esteem has standardized beta coefficient of 0.261, where the coefficients are standardized beta coefficient was the biggest

**Key Words: Sexual Behaviour, Youth**

### INTRODUCTION

Adolescence is the most important time in the development stages of life is mentioned as the most important time because in this period is a period of transition from childhood to adulthood that began marked a change in the physical, emotional, social adjustment to become mature (Sarwono, 2011). Number of adolescents (aged 10-24 years) in Indonesia, according to data BKKBN 2013 reached approximately 64 million, or 27.6 percent of the total population of Indonesia.

At this time, teenagers have the desire to become an adult, curiosity is very high so want to try / do everything that has never been done. A sense of curiosity and a desire to be an adult caused it wants to try what is often dilakuakn adults, including about sexuality (Anwar, 2000).

Teenagers have unstable emotions thus more vulnerable to social unrest. The situation is aggravated by changes in lifestyle and factors which open media revolution resulting in susceptibility to various diseases, especially related to sexual and reproductive health (Dinas Kesehatan Jawa Tengah, 2005).

Another factor that can influence teen sexual behavior is a change in the social order in the community from traditional societies to modernization may change norms, values and

lifestyle of adolescents in Indonesia (Suryoputro, et al, 2006).

Some of the problems that can arise from the behavior of adolescent sexual and reproductive health as the increasing cases of sexually transmitted diseases, especially HIV / AIDS, the death of a young mother who is still very high, widespread practice of abortion for an unwanted pregnancy and the tendency of today's youth to engage in premarital sex ( DeLamater, 2007).

It is also influenced by the shift of more permissive stance on sexual relationships. Based on data from the adolescent consultation results Centra-IPPA Youth Equator West Kalimantan in December 2007 showed that 15.95% of clients premarital sex (intercourse) and were pregnant before marriage amounted to 8.5%. In addition, based on BKKBN stated that among adolescents who have sex outside of marriage are free 80% of teenagers do in the house itself. Thus where both parents of teenagers and how monitoring and communication of adolescents (Sarwono, 1997). Research in Lampung showed 41% of respondents teenagers stating the reasons for having sex out of love (consensual) and a biological necessity, while 54% said that sexual activity occurred because of a lack of parental or breakdown of communication between parents and children, especially adolescents .



Center for Information and Youth Services (PIER) IPPA Central Java in research in June-July 2006, found that of the 500 student respondents in Semarang, 31 people (6.2%) said that they had intercourse, 111 (22%) had done petting (DG P2PL MoH RI, 2011). Based on the results of Indonesia Demographic Health Survey 2012 components Adolescent Reproductive Health (ARH IDHS 2012), that nationally increased number of teenagers who had sexual intercourse before marriage compared with data Adolescent Reproductive Health Survey Indonesia (IYARHS) 2007. Survey results show IDHS 2012 KRR that about 9.3% or about 3.7 million teens claimed to have had sexual intercourse before marriage, while the results IYARHS 2007, only about 7%, or about 3 million teenagers. Thus during the period of 2007 to 2012 increased cases of teenagers who had sexual intercourse before marriage as much as 2.3%.

BKKBN survey results of 2010 showed the incidence of premarital sex in Medan is Indonesia's second-highest rating. The survey shows the incidence of premarital sex in Surabaya 54%, 52% Medan, Bandung JABOTABEK 51% and 47%. Based DG & PL MoH RI, cumulative HIV / AIDS 1 April 1987 until 30 September 2014 the number of HIV as much as 150 296 lives and as many as 55 799 lives of AIDS patients where 9796 inhabitants of which were deaths. The proportion of AIDS cases reported in 1987-2014 the highest in the age group 20-29 years as many as 18 352 people. This shows that a majority of menderitapenyakit begins during adolescence because of AIDS takes a few years to cause symptoms, while the number of AIDS cases in the 15-19 age amounted to 1,717 people. Data North Sumatra Provincial Health Office, from 1994 to May 2014 the cumulative number of HIV / AIDS reached 6,151 people. From that data, the big cities are known to be the place most people living with HIV / AIDS, such as Medan City topped the table with 3,457 numbers of patients and Deli Serdang with the number of 1,031 patients and 559 patients Siantar-Simalungun.

Based on the above high sexual behavior in adolescence is influenced by several factors, it is very important to know the factors that influence adolescent sexual behavior and what factors most influence the occurrence of cases of sexual behavior in adolescents. From the above description researchers interested in conducting research analyzes the factors that influence adolescent sexual behavior in the village of Tanjung Gusta Deli Serdang 2016.

## RESEARCH METHODS

This research is an analytic cross sectional study design. This research has been conducted in the village of Tanjung Gusta Deli Serdang in January s / d in July 2016. Data collection method of this study is to use the primary data by distributing questionnaires to teenagers in the village of Tanjung Gusta Medan Helvetia District of Deli Serdang regency. Researchers first had to explain to respondents about the technicalities of filling, after which respondents provide a check-list in column format that has been provided in accordance with a history or experience of the respondents. Collected the completed questionnaires returned by investigators. As for the independent variable is the dependent variable, while sexual behavior is a way of life, social activities, self-control, self-confidence, self-esteem, social support, knowledge about reproductive health, reproductive health service attitude, knowledge about sexually transmitted diseases.

The questionnaire for each dependent variable, containing 15 questions, the data obtained last in scoring by a long formula class with ordinal measuring scale. The data has been collected, then analyzed using univariate analysis is used to obtain the frequency distribution and percentage of each dependent and independent variables to be studied. Analysis multivariat used for influence between independent and dependent variables.

## RESULTS AND DISCUSSION

### Classical Assumption Test Results

#### Normality Test

The regression model can be said to meet the assumptions of normality if the residual caused by the regression model with normal distribution. To test this assumption, it can be used Kolmogorov-Smirnov method.

**Table 1. Assumptions Normality Test**

Statistical Test	Value	Information
Kolmogorov-Smirnov Z	0,055	Menyebar
<i>P-value</i>	0.200	Normal

Based on the Kolmogorov-Smirnov test above, Kolmogorov-Smirnov obtained coefficient of 0.055 with a p-value of 0.200, which is greater than the value of  $\alpha = 0.05$ . Because the p-value is greater than  $\alpha = 0.05$ , it can be concluded that the residual normality assumptions are met.

#### Multikolinearity Test

To detect the presence or absence of multicollinearity can be seen from the Variance

Inflation Factor (VIF). If the value of  $VIF > 10$  then indicate multicollinearity. And if the opposite  $VIF < 10$  then there is no multikolinieritas

**Tabel 2. Assumptions Multikolinieritas Test**

Independent	VIF	Information
Lifestyle(X1)	1.071	Non Multikolinier
Social activity (X2)	1.043	Non Multikolinier
Self-control(X3)	1.222	Non Multikolinier
Confidence(X4)	1.061	Non Multikolinier
Self-Esteem (X5)	1.183	Non Multikolinier
Social Support (X6)	1.047	Non Multikolinier
Knowledge of Reproductive Health (X7)	1.064	Non Multikolinier
The attitude of Reproductive Health Services (X8)	1.089	Non Multikolinier
Knowledge of PMS (X9)	1.041	Non Multikolinier

From the results of the calculations in Table 4.2 each independent variable showed VIF is not more than 10, then assuming no multikolinieritas been met.

#### Test Heteroskedastisitas

Heteroskedastisitas test aims to test whether the regression model occurred inequality residual variance from one observation to another observation. If the variance of the residuals of the observations to other observations remain, it is called homoskedastisitas and if different homoskedastisitas called heteroskedastisitas. A good regression model is a model homoskedastisitas or non-occurrence of heteroskedastisitas. One method used to test for the presence or absence of heteroskedastisitas is to test Glejser. Glejser test conducted by regressing between the independent variables used in the study with the absolute value of residuals. The regression model is said does not happen heteroskedastisitas if the respective independent variables do not form a significant influence with absolute residuals. The following test results heteroskedastisitas using Glejser test:

**Tabel 3 Uji Asumsi Heteroskedastisitas**

Variabel Bebas	t-hitung	p-value
Lifestyle (X1)	0.615	0.540
Social activity (X2)	0.926	0.357
Self-control(X3)	0.615	0.540
Confidence(X4)	0.926	0.357
Self-control(X3)	-0.956	0.342

Confidence(X4)	-0.520	0.604
Self-Esteem (X5)	0.139	0.890
Social Support (X6)	1.158	0.250
Knowledge of Reproductive Health (X7)	-0.176	0.860
The attitude of Reproductive Health Services (X8)	-1.669	0.099
Knowledge of PMS (X9)	-0.391	0.697

Based on Table 3 heteroskedastisitas testing by using test Glejser above, can be explained that each independent variable has no significant correlation to the absolute residuals. Thus, from this test it can be concluded that the regression model is formed not have heteroskedastisitas properties.

#### Results of Multiple Regression Analysis

The process of data analysis using multiple linear regression analysis, carried out several steps for influence between independent and dependent variables. The independent variables in this study is a Lifestyle (X1), Social Activities (X2), Self-Control (X3), Confidence (X4), Self-Esteem (X5), Social Support (X6), Knowledge tentan Reproductive Health (X7), The attitude of Reproductive Health Services (X8), and knowledge about STDs (X9). The dependent variable / dependent variable in this study is Sexual Behavior (Y). Based on the results of data processing using SPSS computer program obtained the summary in Table 4.berikut:

**Table 4 Summary of Results of Regression Analysis**

Variabel	Koefisien $\beta$	Standar dized Koefisien $\beta$	t <sub>hitung</sub>	P-value
Constant	5.281		3.240	0.002
Lifestyle (X1)	0.023	0.032	0.308	0.759
Social activity (X2)	-0.194	-0.211	-2.084	0.040
Self-control(X3)	-0.027	-0.035	-0.320	0.749
Confidence (X4)	0.040	0.052	0.503	0.616
Self-control(X3)	0.213	0.261	2.413	0.018
Confidence (X4)	0.008	0.009	0.091	0.928
Self-Esteem (X5)	-0.038	-0.070	-0.683	0.496
The attitude of	0.003	0.002	0.020	0.984

Reproductive Health Services (X8)				
Knowledge of PMS (X9)	-0.064	-0.085	-0.835	0.406
A	= 0,05			
Koefisien Determinasi ( $R^2_{adj}$ )	= 0,033			
F-count	= 1,373			
P-value	= 0,212			

#### Determination Koefisien

Based on Table 6, the regression model has a coefficient of determination ( $R^2_{adj}$ ) amounted to 0,033. This means that the regression model obtained able to explain the influence of variable Lifestyle (X1), Social Activities (X2), Self-Control (X3), Confidence (X4), Self-Esteem (X5), Social Support (X6), Knowledge tentang Reproductive Health (X7), Attitudes Reproductive Health Services (X8), and knowledge about STDs (X9) on Sexual Behavior (Y) is only 3.3% and the remaining 96.7% is explained by other variables not detected. The low value of R-Square occurred because many of the nine variables tested, only two variables that showed a significant effect on sexual behavior variable (Y).

#### Testing Results Coefficient Regression Model

##### Testing Simultaneous Testing Results

Simultaneous testing done to show whether all the independent variables used in the regression model have a significant effect on the dependent variable. All the coefficients of the independent variables were tested simultaneously using the F test or ANOVA. The following test results simultaneously regression model by using F:

**Table 5: Hypothesis Testing Simultaneous Regression Model**

F-count	P-value	Information
1,373	0,212	Signifikan

Based on Table 5, shown hypothesis testing regression models simultaneously or simultaneously using F test are also shown in Table 4.5 p-value of 0.212. If the p-value compared with  $\alpha = 0.05$ , p-value is greater than  $\alpha = 0.05$ . From this comparison H0 decision can be taken at the level of  $\alpha = 0.05$ . It can be concluded that there is no influence simultaneously between variable Lifestyle (X1), Social Activities (X2), Self-Control (X3), Confidence (X4), Self-Esteem (X5), Social Support (X6), Knowledge tentang Health reproduction (X7), Attitudes reproductive

Health Services (X8), and knowledge about STDs (X9) on Sexual Behavior variable (Y).

#### Partial Test Results

Partial regression model testing is used to determine whether each independent variable regression models forming individually have a significant effect on sexual behavior (Y) or not. To test the relationship, the t test was used. Forming independent variable regression model is said to have a significant effect p-value less than  $\alpha = 0.05$ . Partial regression model testing is as follows:

**Table 6. Hypothesis Testing In Partial Regression Model**

Variabel	Koefisien $\beta$	T <sub>count</sub>	P-value
Lifestyle (X1)	0.023	0.308	0.759
Social activity (X2)	-0.194	-2.084	0.040
Self-control(X3)	-0.027	-0.320	0.749
Confidence(X4)	0.040	0.503	0.616
Self-control(X3)	0.213	2.413	0.018
Confidence(X4)	0.008	0.091	0.928
Self-Esteem (X5)	-0.038	-0.683	0.496
The attitude of Reproductive Health Services (X8)	0.003	0.020	0.984
Knowledge of PMS (X9)	-0.064	-0.835	0.406

Based on the results of hypothesis testing partial regression models in Table 4.6, indicated that not all independent variables had a p-value less than 0.05. The independent variables that have a p-value less than 0.05 was X2 and X5. This implies that the variable Social Activities (X2) and Dignity (X5) have a significant influence on sexual behavior.

#### Determining Variables Influencing Most Dominant

To determine the most dominant variables that influence the sexual behavior, it can be seen from the standardized beta coefficient calculation results of multiple regression analysis. The variable that has the most dominant influence is the variable that has standardized beta coefficient was the biggest. Based on the results of testing with multiple regression analysis standardized beta coefficients obtained as follows:

**Tabel 7. Koefisien Standardized Beta Model Regresi**

Variabel	Standardized Koefisien $\beta$
Lifestyle (X1)	0.032
Social activity (X2)	-0.211
Self-control(X3)	-0.035
Confidence(X4)	0.052
Self-control(X3)	0.261
Confidence(X4)	0.009
Self-Esteem (X5)	-0.070
The attitude of Reproductive Health Services (X8)	0.002
Knowledge of PMS (X9)	-0.085

Based on Table 7 above, can be explained that the variable Self-Esteem (X5) has standardized beta coefficient of 0.261, where the coefficients are standardized beta coefficient was the biggest. Thus, from this test it can be concluded that the variables of Self-Esteem (X5) is a variable that has the most dominant influence on sexual behavior.

In this study, the results of influential factor is the price of adolescent sexual behavior of teenagers. Adolescent personality such as self-esteem is one of the factors that influence adolescent sexual behavior. Great esteem appear to be concerned with the problem of virginity or virginity a teenager. And it seems self-esteem are distinct roles for each gender. If women have a higher self-esteem, they seldom are having sex in their teens. But otherwise, a boy who has high self-esteem usually is not a virgin anymore (Santrock, 2007).

According to Coopersmith self-esteem of individuals consists of three aspects comprising sense of worth is a feeling that the individual is feeling himself worthy for the respect of others, feeling capable of the individual when the individual feels able to achieve an expected thing, and feeling accepted owned individual when the individual is accepted as himself by a group (Sriati & Hemawaty, 2007).

According Sriati & Hemawaty (2007) that precious feeling is a feeling that the individual is feeling himself worthy for the respect of others. They are more likely to be proud of his ability when others can menghargai each what it does. Decreased self-esteem of a child due to the innate nature of a closed, causing a lack of social interaction sehingga child. According to Hurlock (1993 in Astuti, 2009), social interaction takes appropriate as a self-evaluation so that people feel appreciated and accepted by others. It could be argued that the lack of social interaction can lead

to lack a sense of welcome and the respect of others thus inhibiting self-esteem.

According to Coopersmith (1998) in Sutjijoso & Zarfiel (2009) found a significant relationship antara dignity and intelligence and self-esteem and academic achievement. A persistent interaction between self-esteem and learning achievement, where the self-esteem affects learning achievement and learning achievement affect self-esteem.

In this study, 80% of teens feel self-esteem if they already have a boyfriend, and feel more proud if you have close hug, a kiss, handrails with dibandingkab with his girlfriend who had never done it.

This study agrees with the results of research conducted by the research Dewi haqi (2012), about the introductory training against increased self-esteem that the introductory training oneself respondents said that turned out ta everyone has their merits including himself, only they do not know and the need to dig deeper.

According Astuti (2009) the impact of low self esteem is a lack of confidence refers to the competence of the individual. Individuals with low self-esteem felt he was not competent so that the individual has less confidence that the individual can not cope with her problems.

According to the assumption of the author, the exchange value of self-esteem of teenagers today is already slightly different from the definition of self-esteem first Zama. Adolescent self-esteem in the present is more oriented to a girlfriend or romance in dating, this is caused because the entertainment system which is currently more to broadcast tersebutm, resulting in teens who are outwardly possess the desire to be an adult caused it wants to try what is often dilakuakn people adults including about sexuality compared with academic achievement.

This is something that should be considered by parents, the school and the health department to always lead and supervise the teen years.

## CONCLUSION

Adolescent behavior are many factors that can affect it, in this study of nine factors, there are two factors that influence adolescent sexual behavior that is social activity and self-esteem is the most dominant factor of self-esteem.

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# SYZYGIIUM CUMINI REDUCES VCAM-1 EXPRESSION IN ENDOTHELIAL CELLS FROM PREECLAMPTIC PATIENTS

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## ABSTRACT

The present study sought to investigate a role for *Syzygium cumini* on VCAM-1 expression in endothelial cells from preeclamptic patients. Endothelial cells were obtained from human umbilical vascular endothelial cells. At confluency, endothelial cells were divided into five groups, which included control (untreated), endothelial cells from preeclamptic patients (PP), endothelial cells exposed to PP in the presence of ethanolic extract of *Syzygium cumini* (PP + SC) at the following three doses: 100; 200; and 400 ppm. Analysis of VCAM-1 level were done by immunohistochemistry technically. This increase in VCAM-1 was significantly ( $P < 0.05$ ) attenuated by both the 200 and 400 ppm treatments of *Syzygium cumini* extract. In conclusion, *Syzygium cumini* extract prohibits the increase in VCAM-1 in endothelial cells induced by plasma from preeclamptic patients. Therefore this may provide a natural therapy for attenuating the adhesion molecule induced by endothelial dysfunction found in this pregnancy complication.

**Key Words :** *Syzygium cumini*, HUVECs Preeklampsia, VCAM-1

## INTRODUCTION

Preeklampsia-eklamsia is one of the three causes of maternal mortality in addition to bleeding and infection. According to the results of the survey of health household (SKRT), maternal mortality (AKI) in 2012 of 224/100,000 live births (KH). The high maternal mortality (AKI) caused by bleeding (24,8%), infections (14.9%), preeklampsia-eklamsia (12.9%), old partus (6.9%), the direct cause of maternal mortality (7.9%), and causes not directly (19.8%) (Stalker, 2008). Preeklampsia is a specific pregnancy disorder characterized by hypertension and protein urine that occurs after the 20th week of pregnancy. Invasion of trofoblas artery spiralisuterus (Sankaralinga, et al., 2006) and the clinical symptoms of hypertension, proteinuria and edema, which is derived from pathological changes in the maternal endothelium Vascularity or result in Endothelial dysfunction in the placenta (Roberts & Cooper, 2001)

Endothelial dysfunction is endothelial failure in doing an adaptation against adekuat the stimulation-induced Inflammatory Cytokines and increased exposure to the expression of VCAM-1 oxidative stress so (Wulandari, et al., 2001). Endothelial dysfunction is endothelial failure in doing an adaptation against adekuat the stimulation-induced Inflammatory Cytokines and increased exposure to the expression of VCAM-1 oxidative stress so. Oxidative stress on preeklampsia can be controlled by administering

antioxidant. Antioxidants in fruits. Fruit Juwet (*Syzygium cumini*) contains anthocyanin, phenols and polyphenols, compounds that act as antioxidants and a bitter taste (Lindy, 2008). The amount of anthocyanin in Juwet higher than Strawberry and red wine (Lindy, 2008), and Juwet many found dipedesaan so easy to come by (Safitri, 2008). Ethanol extract Juwet has a higher concentration of anthocyanin extract compared with isopropanol (Sari, et al., 2005). The use of ethanol due to compound on a Juwet soluble in water. In addition, ethanol has dissolve almost any substance which is either polar, nonpolar or semipolar (Helmi, et al., 2006).

In this study, the influence of the research will be made granting extract Juwet (*Syzygium cumini*) on Model HUVECs preeklampsia cell adhesion molecule expression against vascular 1 (VCAM-1) 5). The use of ethanol due to compound on a Juwet soluble in water. In addition, ethanol has dissolve almost any substance which is either polar, nonpolar or semipolar (Helmi, et al., 2006).

## RESEARCH METHODS

The research was conducted in experimental work at the laboratory in vitro with two control groups, namely the control of negative, positive control and three groups of treatment (dose 100ppm, 200ppm and 400ppm, 16 hour incubation). Examination of VCAM-1 expression using immunohistochemical analysis. Statistics analysis using One Way Anova test. Ethanol extract Juwet granting with a dose of 100 ppm 200 ppm 400 ppm and can decrease the expression of VCAM-1 on condition of preeklampsia.

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## RESULTS AND DISCUSSION

Based on the results of the Anova test on treatment with incubation time of 16 hours between the positive control group (awarding preeklampsi plasma treatment), the Group's treatment by administering juwet 100 ppm, the Group's treatment by administering juwet 200 ppm, and group treatment by administering juwet 400 ppm retrieved no meaningful difference in average VCAM-1 ( $p = 0.070 > \alpha$ ).

**Table 1 comparison of VCAM-1 between the control group and treatment**

Kelompok pengamatan	VCAM-1	
	Rerata $\pm$ stan.dev	p-value
Kontrol	85.76 $\pm$ 11.71 <sup>a</sup>	0.070
Kontrol + juwet 100 ppm	86.66 $\pm$ 9.71 <sup>a</sup>	
Kontrol + juwet 200 ppm	67.76 $\pm$ 5.96 <sup>ab</sup>	
Kontrol + juwet 400 ppm	63.08 $\pm$ 15.59 <sup>b</sup>	

Description: On the mean  $\pm$  sd if it contains the letter a different means exist. meaningful difference ( $p$ -value  $< 0.05$ ) and if it contains the same letter means no meaningful difference ( $p$ -value  $> 0.05$ ).

Based on the test results of multiple proportions with test LSD look at table 1 columns VCAM-1 the mean  $\pm$  sd shows that there is no meaningful difference between the mean  $\pm$  sd control group (118.50  $\pm$  11.71%) with a control + juwet 100 ppm (86.66  $\pm$  a 9.71%), also with control group + juwet 200 ppm (81.48 5.96  $\pm$  ab%), but there are meaningful differences with the control group plasma + 400 ppm juwet (63.08  $\pm$  15 b%). It appears there is a decrease in the mean  $\pm$  sd VCAM-1 from the positive control group to group treatment with juwet 100 ppm and 200 ppm, although this decrease was not statistically meaningful. While among the control group with a control group juwet + 400 ppm there is a decrease in the mean  $\pm$  sd VCAM-1 meaning and meaningful statistically. This means that the grant of 400 ppm juwet treatment can lower the VCAM-1 on preeklampsi with a time of 16 hours of incubation or otherwise in a condition preeklampsi if given the juwet 400 ppm then can lower the VCAM-1.

In this research, cell culture preeklampsi can release free radicals thereby increasing the activity of the cell surface activity of cell surface. will trigger the expression of VCAM-1. VCAM-1 antibodies are administered will react with molecules VCAM-1 that appeared on the surface of cells. Molecules VCAM-1 is the early symptoms that can appear to the cell surface in the event of disruption of the cell membrane.

It is supported by riest Endemann & Schiffrin (2004) in Rodrigo (2007) stating the functions of endothelial can be interrupted due to the stress of haemodynamic, exposure with oxidative stress and inflammatory cytokines with marked an increase in various molecular adhesion. In addition it is also the source of endothelial cells cytokines. Cytokine is a mediator of dissolved polipeptida that keep communications with lekosit and networks. Endothelial activating cytokines through the formation of thrombus and inflammatory. Cytokines in endothelial cells increases the transcription of genes (e.g., in response to Tumor Necrosis Factor-alpha (TNF- $\alpha$ )).

From the results of research and discussion, it can be concluded that:

1. VCAM-1 expression are present in HUVECs preeklampsi
2. Granting of extracts of Juwet with dosis 100 ppm, 200 ppm 400 ppm and can decrease ekspresi VCAM-1 in HUVECs preeklampsi.

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## FACTORS RELATED TO K4 DROP OUT

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### ABSTRACT

Antenatal Care (ANC) is an examination of pregnancy to determine the general health of mother, to uphold the disease of pregnancy early, pregnancy complications, and to establish the risk of pregnancy. ANC is also an effort to reduce maternal mortality. K4 is fourth contact pregnant women with health professionals. Based on national data and Situbondo district data, K4 coverage have been good. But, during 2012-2014, K4 in Situbondo Community Health Center was still in low category. So that increased K4 Drop Out. The objective of this research was determine factors (predisposing (knowledge, beliefs and attitudes), enabling (amenities and affordabilities), and reinforcing (family supports, attitude and behavior of officers)) related to K4 Drop Out in Situbondo Community Health Center. The study design used associative analytic with cross sectional approach. Population in this study were all pregnant women in 2014. Samples taken 87 pregnant women using slovin formula. The sampling technique used proportional random sampling. The instruments used questionnaires. The results showed knowledge (Pvalue 0.000), beliefs (Pvalue 0.026), Attitudes (Pvalue 0.194), amenities (Pvalue 0.551), affordabilities (Pvalue 0.103), family supports (Pvalue 0.437) and attitude and behavior of officers (Pvalue 0.267). So that the conclusions of this research, predisposing factors, i.e. knowledge and beliefs related to K4 Drop Out.

*Keywords: Antenatal Care (ANC), Pregnant Women, K4 Drop Out*

### INTRODUCTION

Antenatal Care (ANC) is an examination of pregnancy to determine the general health of mother, to uphold the disease of pregnancy early, pregnancy complications, and to establish the risk of pregnancy. ANC also prepare delivery towards well born baby and well health mother, prepare infant and lactation, and recover mother health optimally at the end parturition (Manuaba, 2009).

Maternal health service is realized by providing of antenatal care at least four times during pregnancy, with distribution minimal time once in the first trimester (0-12 weeks gestation), at least once in the second trimester (12-24 weeks gestation), and at least twice in the third trimester (24 weeks gestation until birth). Service time standard is recommended to ensure the protection of pregnant women or fetus, i.e. early detection of risk factors, prevention and early treatment of pregnancy complication (MoH RI, 2014).

Early and comprehensive antenatal care are the spearhead efforts to improve maternal and perinatal health. Complication of pregnancy undetected can be death. Women who got little or no antenatal care tend to be three times more risk having a low birth weight babies when compared to women who receive early antenatal care (Luanaigh, 2008).

Maternal mortality is still a priority in Indonesia, according to Indonesian Demographic Health Survey (IDHS) 2007, Maternal Mortality Rate (MMR) 228 per 100,000 live births and by 2012 i.e. 359 per 100,000. MMR in Situbondo during 2013 to 2015 decreased but it was still high and has not reached the MDGs targets were 193.25, 185.04 and 137.78 per 100,000 live births. It was still far from MDGs targets in 2015 i.e. 102 per 100,000 live births.

In an effort to decrease maternal mortality can be done by optimizing of ANC, one of which is K4 coverage (the fourth times contacts of pregnant women with health professionals). Nationally, K4 coverage increased significantly of 80.26% in 2007 to 86.04% in 2008, but after that decreased to 84.54% in 2009. Then, after continued to increase, K4 coverage decreased in 2013, to 86.85% from 90.18% in 2012. In 2013 also have not been able to reach the Strategic Plan targets (strategic planning) of the Ministry of Health, which amounted to 93%. (MoH RI, 2014).

Similarly, based on Situbondo Health Profile since 2012-2014 K4 coverage always increase. But, K4 coverage in Situbondo Community Health Center K4 decreased during 2012-2014. K4 coverage in Situbondo Community Health Center year 2012-2014 i.e. 95,5%, 95,8%, 90%. So that increased K4 Drop Out i.e. to 4.46%, 6.97, 10.1%. The increasing incidence of this K4

Drop Out showed problem that must be solved soon.

Many factors affect the K4 Drop Out. According to Notoatmodjo (2011), there was three factors that affect health behavior are predisposing factor (knowledge, attitudes, beliefs), enabling factors (amenities, affordabilities) and reinforcing factors (family supports, attitude and behavior of officers). According to research by Andri (2008), there was influence of knowledge, attitudes and actions with low K4 coverage. So are according to Rauf et al (2013) showed that there was related affordabilities, family supports, and attitude officers to ANC utilization.

Objectives of this research was to determine factors (predisposing (knowledge, beliefs and attitudes), enabling (amenities and affordabilities), and reinforcing (family supports, attitude and behavior officers)) related to K4 Drop Out in Situbondo Community Health Center.

## RESEARCH METHOD

The research design used associative analytic with cross sectional approach. This research was done from June to August 2015 in working area of Situbondo Community Health Center.

The population in this research were all pregnant women in working area of Situbondo Community Health Center 2014. The sample in this research was all pregnant women 2014 by using the Slovin formula. The sample used in this research were 87 pregnant women year 2014 who fulfill the inclusion criteria. Inclusion criteria in this research are:

- 1) Pregnant women who lived in working area of Situbondo Community Health Center year 2014
- 2) Pregnant women who had complete identity
- 3) Pregnant women who were willing to become respondents

The determination samples in this research used sampling random proportional technique. The variable in this research was divided into dependent and independent variables. Dependent variable is K4 Drop Out. The independent variables are predisposing factors (knowledge, beliefs and attitudes), enabling factors (amenities and affordabilities), and reinforcing factors (family supports, attitude and behavior of officers).

Instruments in this research was enclosed questionnaire sheet to determine what factors were related with K4 Drop Out in Situbondo Community Health Center. The instruments have

been taken the validity and reliability. The instrument was valid and reliable.

The data analysis was done by univariate and bivariate. Bivariate analysis used chi square test with  $\alpha$  0.05.

## RESULT AND DISCUSSION

The results and discussion in this research were divided into univariate and bivariate analysis results. Univariate analysis is the frequency distribution for each variable. While the bivariate analysis is the analysis result of the relationship between independent and dependent variables.

### *Antenatal Care (ANC) Visit*

ANC visit is a visit of patients in an effort of antenatal check up to see and examine the mother condition and fetus done regularly followed by a correction that attempt to deviations found during pregnancy (Yuswanto, 2012). ANC visit at least done over four times during pregnancy. Once in the first trimester, once in the second trimester and twice in the third trimester (MoH RI, 2014). In this research, K4 Drop Out was categorized into yes and no. K4 Drop Out in this research was referred to pregnant women who make ANC visit not suitable with the minimum standards that have been determined.

**Table 1**  
**K4 Drop Out Frequency Distribution**

No	K4 Drop Out	n	%
1	Yes	50	57
2	No	37	43
<b>Total</b>		<b>87</b>	<b>100</b>

Based on Table 1 showed that most of respondent were 50 respondents (57%) K4 Drop Out.

### **Respondents Knowledge about Antenatal Care Visits**

Knowledge is the result out and it happens after people do sensing on a specific object. The Sensing occurs through human senses, i.e. the sense of sight, hearing, smell, taste and touch. Most of human knowledge is obtained through the eyes and ears. Knowledge or cognitive is a domain that very important for forming of a person's actions. Knowledge of a person about an object has an intensity or varying levels (Notoatmodjo, 2011).

**Table 2**  
**Frequency Distribution of Respondents Knowledge about ANC Visits**



No	Knowledge	n	%
1	Good	28	32
2	Less	59	68
<b>Total</b>		<b>87</b>	<b>100</b>

Based on Table 2 showed that most of respondents 59 respondents (68%) have less knowledge about the ANC visits.

#### Respondents beliefs about ANC Visits

Beliefs meant in this research is a culture or a tradition followed by someone related to ANC visits.

Table 3 Distribution beliefs of Respondents about ANC visits

No	Beliefs	N	%
1	Exist	4	5
2	None	83	95
<b>Total</b>		<b>87</b>	<b>100</b>

Based on Table 3 showed that most of respondents 83 respondents (95%) there is no belief in ANC visits.

#### Respondents Attitude about ANC Visits

The attitude of the respondent is a person covered response to the stimulus or object, which already involves pertinent opinions factors and emotions (happy-unhappy, agree-disagree, good-bad, and so on) (Notoatmodjo, 2010). The function of attitude is not an action (open reaction) or activity, but behavior predisposes (actions) or a closed reaction.

**Table 4**  
**Distribution of Respondents Attitudes about ANC Visits**

No	Attitudes	n	%
1	Good	39	45
2	Poor attitude	48	55
<b>Total</b>		<b>87</b>	<b>100</b>

Based on Table 4 showed that most of respondent 48 respondents (55%) had a poor attitude about the ANC visits.

#### Amenities of ANC Visits

Amenities are availability of tool to expedite and facilitate the implementation of the functions. Facility is an individual component of the deals easily grown or reduced without changing the quality and service models. The research results of the service amenity for ANC visit in working

area of Situbondo Community Helath Center can be viewed in Table 5.

Table 5 Distribution of Amenities for ANC visit

No	Amenities	n	%
1	Exist	82	94
2	None	4	6
<b>Total</b>		<b>87</b>	<b>100</b>

Based on Table 5 showed that most of respondent 82 respondents (94%) said the facilities were available.

#### Respondents Affordabilities within doing ANC visits

Respondents affordability were the factors related to the place that facilitate or inhibit the utilization of the service, related to the affordability measured with mileage, travel time and travel expenses of the mother place to the health service center (MOH, 2013). The research results of the respondents affordability in doing ANC visit in working area of Situbondo Community Health Center can be viewed in Table 6.

**Table 6**  
**Distribution of respondents Affordabilities of doing ANC visits**

No	Affordabilities	N	%
1	Affordable	78	90
2	Not Affordable	9	10
<b>Total</b>		<b>87</b>	<b>100</b>

Based on Table 6 showed that most of respondent 78 respondents (90%) were affordable within doing ANC visit.

#### Respondents Family Supports about ANC Visits

The family support is the existence of support provided by the family of pregnant women within doing ANC visit.

**Table 7** **Distribution of Respondents Family Supports about ANC visits**

No	Family Supports	N	%
1	Good	78	90
2	Less	9	10
<b>Total</b>		<b>87</b>	<b>100</b>

Based on Table 7 showed that most of respondents 78 respondents (90%) have good family supports about ANC visits.

#### Attitudes and Behaviour Officers within ANC Visits

The attitude and behavior of officers is a response consisting of a motor response, physiological responses, cognitive responses, and affective responses done by health personnel about the service during ANC visits.

**Table 8 Distribution of Officer Attitudes and Behaviour within ANC visits**

No	Attitude and Behaviour Officers	n	%
1	Good	79	91
2	Less	8	9
<b>Total</b>		<b>87</b>	<b>100</b>

Based on Table 8 showed that most of respondents 79 respondents (91%) said that the officers had good attitudes and behavior.

#### Knowledge with K4 Drop Out

The research results of predisposing factors i.e. knowledge with K4 Drop Out can be viewed in Table 9

**Table 9 Relations Knowledge with K4 Drop Out**

Know ledge	K4 Drop Out				Amount		OR	P value
	No		Yes		n	%		
	n	%	n	%				
Good	20	71	8	29	28	100	6.719 (2.470- 18.279)	0.000
Deficient	16	27	43	73	59	100		
Total	36		51		87	100		

Table 9 showed that based on the results of chi square test got Pvalue  $0.000 \leq 0.05$ , so it can be concluded there was relation between knowledge with K4 Drop Out . Obtained the OR value = 6.719 means that respondents who have deficient knowledge have the opportunity to Drop Out 6.719 times compared to respondents who are knowledgeable good.

As according Notoatmodjo (2011) that health behavior is determined by factors predisposing, one of them is knowledge. The higher the person's knowledge, the higher their health behavior. Similarly, in K4 Drop Out , the higher

the person's knowledge, K4 Drop Out will be low because pregnant women have knowledge about the importance of ANC so that will make ANC visit according to the standard.

It is also as Muniarti research (2007) that the majority of pregnant women who ANC visit were having good knowledge, amounting to 71.1% (59 people). Similarly, Andri's research (2008), Ningrum and Septiningyas (2013), Rauf et al (2013) showed that there was influence knowledge factors with low K4 coverage. This research in line with results of Sembiring research (2013) which showed the influent knowledge to ANC compliance.

#### Beliefs with K4 Drop Out

The research results of predisposing factors i.e. beliefs with K4 Drop Out can be viewed in Table 10.

Table 10 Relations Beliefs with K4 Drop Out

Belief	K4 Drop Out		Amount	OR	P value
	No	Yes			
Exist	4	0	4	100	2.594
None	32	51	83	100	(1.977- 0.026)
Total	36	51	87	100	3403)

Table 10 showed that based on the chi square test got Pvalue  $0.026 \leq 0.05$ , so it can be concluded there was relation between beliefs factor with K4 Drop Out. Obtained the OR value = 2.594 respondents means that there was beliefs have the opportunity to Drop Out 2,594 times compared to respondents that there was no beliefs.

As according Notoatmodjo (2011) that health behavior is determined by predisposing factors, one of them is beliefs. Belief in the local community can facilitate (positive) or complicate (negative) the behavior of a person or society. Beliefs in Situbondo that adopted i.e. prohibition to examine their pregnancy during in the first 4 months. In addition, pregnant women should not be out of house. So that this beliefs in itself will inhibit the behavior of ANC visits.

Similarly, the results of Dini's research (2012) that there was relation among level of education, attitudes, beliefs, economic status, family supports, and access to health services with ANC service utilization by pregnant women.

### Respondents Attitude with K4 Drop Out

The research results of predisposing factor is attitude of respondents with K4 Drop Out can be viewed in Table 11.

**Table 11 Relations Respondents Attitude with K4 Drop Out**

Attitude	K4 Drop Out				Amount		OR	P value
	No		Yes		n	%		
	n	%	n	%				
Good	13	33	26	67	39	100	0.543	0.194
Less	23	48	25	52	48	100	(0.227-	
<b>Total</b>	36	41	51	59	87	100	1.302)	

Table 11 showed that based on the chi square test got Pvalue  $0.194 \leq 0.05$ , so it can be concluded there was no relation between attitude with K4 Drop Out. Obtained also means that the OR value = 0.543 respondents had deficient attitudes have the opportunity to Drop Out 0.543 times compared to respondents who had deficient attitudes.

According to Notoatmodjo (2011), health behavior is determined by predisposing factors, one of them is attitude. Attitude is a reaction or response which was still closed from a person to a stimulus or object. It can be concluded that the manifestation of an attitude that can not be seen directly, but can only be interpreted first. Attitude is not an action or activity, but predispose action behavior.

The results of this research not according to research conducted by Rauf et al (2013) that no relation between attitude of respondents with ANC service utilization. This discrepancy was possible because of other factors that are more dominant respondents in ANC visit so happens K4 Drop Out.

### Amenities with K4 Drop Out

Research results of enabling factor i.e. amenities with K4 Drop Out can be viewed in Table 12.

**Table 12 Relation Amenities with K4 Drop Out**

Amenities	K4 Drop Out				Amount		OR	P value
	No		Yes		n	%		
	n	%	n	%				
Exist	34	41	49	59	83	100	0.694	0.551
None	2	50	2	50	4	100	(0.093-	
<b>Total</b>	36	41	51	59	87	100	5.169)	

Table 12 showed that based on the chi square test got Pvalue  $0.551 \leq 0.05$ , so it can be concluded there was no relation between amenities with K4 Drop Out. Obtained the OR value = 0.694 means that respondents had not amenities have the opportunity to Drop Out 0.694 times compared to respondents who had amenities.

Notoatmodjo (2011) said that health behaviors are determined by the enabling factors, one of them is amenities. The amenities are means to expedite and facilitate the implementation of the function, in this case the implementation of ANC. The availability of their health facilities so that can support mothers to regular examine antenatal (Novita, 2011).

There was no relation between amenities with K4 Drop Out was possible because the ANC amenities in Situbondo Community Health Center majority has been provided amount 94%. So there were other factors that influence the height of K4 Drop Out in Situbondo Community Health Center.

### Affordabilities with K4 Drop Out

Research results of enabling factor i.e. affordabilities with K4 Drop Out can be viewed in Table 13.

**Table 13 Relation Affordabilities with K4 Drop Out**

Affordabilities	K4 Drop Out				N	OR	P value
	No		Yes				
	n	%	n	%			
Affordable	30	38	48	62	78	0.312 (0.073- 1.344)	0.103
Not Affordable	6	67	3	33	9		
<b>Total</b>	36	41	51	59	87		

Table 13 showed that based on the chi square test got Pvalue  $0.103 \leq 0.05$ , so it can be concluded there was no relation between affordabilities with K4 Drop Out. Obtained the OR value = 0.312 respondents affordable means to have the opportunity to Drop Out 0.312 times compared to respondents who were not affordable.

According to Notoatmodjo (2011), health behaviors are determined by the enabling factors one of them is affordability. Affordability is a factor associated with the place that facilitate or inhibit the use of the service, with regard to the affordability of a measured with the distance,

travel time and travel expenses from mother's house to health service (MOH, 2013).

The results of this research were not in accordance with Muniarti (2007), that the affordability of a known relations with ANC utilization ( $p = 0.000 < 0.05$ ). The result showed that the mother hardly accessible services where prenatal care was 89.2%, and an easy reach to the antenatal care there were 13 people (10.8%).

Non-compliance result this study with previous research because Situbondo Community Health Care located in urban areas so that health services were easy to reach. This is evident from the results of respondents answers in the questionnaire showed that most affordable in the ANC visit.

#### Family Supports with K4 Drop Out

Research results of reinforcing factor i.e. family supports with K4 Drop Out can be viewed in Table 14.

Table 14 Relation Family Supports with K4 Drop Out

Family Support	K4 Drop Out				N	OR	P value
	No		Yes				
	n	%	n	%			
Good	32	41	47	59	78	0.681	
Less	4	50	4	50	9	(0.159-	0.437
<b>Total</b>	<b>36</b>	<b>41</b>	<b>51</b>	<b>59</b>	<b>87</b>	<b>2.923)</b>	

Table 14 showed that based on the results obtained chi square test Pvalue  $0.437 \leq 0.05$ , so it can be concluded there was no relation between family supports with K4 Drop Out. Obtained the value of OR = 0.681 means that respondents who had a good support to have the opportunity to Drop Out 0.681 times compared to respondents who did not support their family well.

According to Notoatmodjo (2011), health behavior is determined by reinforcing factors, one of them is the family supports. According Friedman (1998) family supports is a process that occurs throughout the life span. The nature and type of social support vary in different stages of the life cycle. However, in all stages of the life cycle. Family supports make families are able to function with a wide range of intelligence and reason as a result. This improves the health and family adaptation.

The results of this research were not in accordance with the research by Rauf et al (2013) that there was relations between family supports with ANC service utilization. Incompatibility in this research because family supports in Situbondo Community Health Center on K4 visit majority have been good. So, there were other factors that influence the K4 Drop Out.

#### Attitude and Behaviour Officer with K4 Drop Out

Research results of reinforcing factor i.e. attitude and behavior officers with K4 Drop Out can be viewed in Table 15.

Table 15 Relation Attitude and Behaviour Officers with K4 Drop Out

Attitude and Beha vio-ur	K4 Drop Out				N	OR	P value
	No		Yes				
	n	%	n	%			
Good	34	43	45	57	79	0.267	
Less	2	25	6	75	8	(0.430-	0.267
<b>Total</b>	<b>36</b>	<b>41</b>	<b>51</b>	<b>59</b>	<b>87</b>	<b>11.934)</b>	

Table 15 showed that based on the chi square test obtained Pvalue  $0.267 \leq 0.05$ , so it can be concluded there was no relations between attitude and behavior of officers with K4 Drop Out. Obtained the value of OR = 0.267 means that respondents who say the attitude and behavior of both officers have the opportunity to Drop Out 0.267 times compared to respondents who said that the attitude and behavior of officers was not good.

According Notoatmodjo (2011), health behavior is determined by reinforcing factors, one of them is the attitude and behavior of officers. The midwife's role in change and psychological adaptation is with the members support or moral support clients, ensures that the client may face pregnancy and perceived changes go round something normal. Midwives must work together and build a good relations with clients in order to create an open relationship between midwives and clients. This openness will facilitate midwives provide solutions to the problems faced by clients (Kusmiyati et al, 2008).

This is not in accordance with the results of Andri research (2008) and Rauf et al (2013) showed that there was relations between attitude

and behavior with the ANC service utilization. Non-compliance with this research was possible attitude and behavior of most of the officers in both categories. So, there were other factors associated with K4 Drop Out incident. However, this research according to the results of research by Erlina, Larasati and Kurniawan (2013) showed that the attitude officer not related to ANC visits.

## CONCLUSION

The conclusion of this research that was done in working area of Situbondo Community Health Center, factors related to K4 Drop Out are predisposing factors such as knowledge and beliefs. Factors not related to K4 Drop Out are predisposing factors (attitudes), enabling factors (amenities and affordabilities), and reinforcing (family supports, attitude and behavior of officers).

So that it will be recommended for Community Health Center to provide counseling for pregnant women and to do sweeping for all pregnant women who did not examine in order to motivate pregnant women to make ANC visits so it will minimize the occurrence of K4 Drop Out.

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## MIDWIVES' SUPPORTS FOR THE PREVENTION OF MOTHER-TO-CHILD HIV TRANSMISSION (PMTCT) PROGRAMME : A QUALITATIVE STUDY

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### ABSTRACT

Prevention of mother-to-child HIV transmission (PMTCT) is a program to prevent the transmission of HIV from mother to child. Pregnant woman's compliance with the program can reduce the risk of HIV transmission from mother to child to 1-2%. **Objective:** This study aimed to determine the midwives' support for the implementation of (PMTCT) program. **Methods:** The study was descriptive qualitative with an explanatory research approach. Purposive sampling followed by snowball sampling were used in this study. Data were obtained by in-depth interviews, passive observation, and documentation with 8 key informants taking part in the program of PMTCT in Yogyakarta and 8 supporting midwives working at *Puskesmas* (public health centers) in Yogyakarta providing *Layanan Komprehensif Berkelanjutan* (LKB) or A Sustainable Comprehensive Health Center Services. Data analysis used content Analysis. **Results:** This study identified the support of midwives including early detection at the time of pregnancy in health centers, referral to hospitals serving PMTCT, finding fellow HIV-infected patients by working closely with NGOs, reminding HIV infected subjects to take ARV every day, reminding to give birth in hospitals serving PMTCT, reminding to give ARV prophylaxis everyday to infants born, reminding to give a safe food for babies, reminding to perform a viral load testing or Voluntary HIV counseling and testing (VCT) to prevent a mother from passing HIV to her child, educate the public not to discriminate people living with HIV/AIDS (PLWHA). **Conclusion:** midwives' supports are very important in the implementation of PMTCT program.

**Keywords:** midwives' support, HIV transmission, PMTCT, mother to child

### INTRODUCTION

Human immunodeficiency virus (HIV) is a class of RNA virus that specifically attacks the immune system/ human immunity causing acquired immune deficiency syndrome (AIDS). HIV positive subjects are people infected with the HIV virus and their body has formed antibodies (antibodies) against the virus. They are potentially a source of infection for others. AIDS (*acquired immunodeficiency syndrome*) is a collection of clinical symptoms due to decreased immune system resulting from HIV infection. AIDS often manifests with the emergence of various diseases opportunistic infections, malignancies, and other metabolic disorders. HIV is the leading cause of death among women of reproductive age worldwide and is the leading cause of infant mortality. Thus, the Prevention of mother-to-child HIV transmission (PMTCT) program is an important for to HIV prevention, treatment, and care and family support services for the whole family (Brou *et al.*, 2007).

According to Betancourt *et al* (2010) two thirds of HIV infected pregnant women in the developing countries do not have access to treatment to prevent transmission of HIV from mother to child. These problems resulted in 370.000 new HIV cases among children each year. Annually, among 1.5 million HIV-infected pregnant women in developing countries, only about one-third received the provision of antiretroviral (ARV) therapy during pregnancy, safe delivery assistance in hospitals, safe feeding for babies. Most of the effort was not appropriate for non-compliance pregnant women living with HIV so that it did not prevent HIV transmission from mother to infant (Agadjanian and Hayford, 2009).

The risk of HIV transmission is not limited to sub-populations of high risk behavior, but also include their spouse, even their children. Without special efforts, it is predicted that by the end of 2016 there will be an accumulative HIV transmission in more than 26,997 children born to HIV-infected mothers. The mothers are mostly infected from their husband (MoH RI, 2013).

Based on the preliminary studies, Yogyakarta is a province with a high HIV / AIDS rate. It ranked fifth (at 21.0) in the city with the most HIV infection cases in Indonesia in December 2013 (NAC, 2014). It has the highest number of HIV/AIDS cases based on the city origin of patients with 802 out of the total 2,933 patients (KPA DIY, 2014).

Midwives' support in the program of PMTCT according to *Permenkes* (health ministry regulation) number 1464 / *Menkes* / Per / X / 2010 Article 13 paragraph (1) Point g and paragraph (2) are conduct and early detections, referrals, and counseling for sexually transmitted diseases (STDs) and other infectious diseases, including HIV / AIDS (MoH RI, 2010).

Based on the aforementioned background, midwives' supports for PMTCT program needs an evaluation. Therefore, the authors are interested in doing research entitled "Midwives' Support for the Implementation of Prevention of Mother to Child HIV Transmission Programme".

## RESEARCH METHOD

This was a descriptive qualitative study with a narrative (exploratory) design conducted in Yogyakarta. Once all aspects of the phenomenon had been successfully explored, the researchers wanted to describe the characteristics of the phenomenon completely and thoroughly with explanations and narrative sentences (Poerwandari, 2009).

In this study, triangulation methods: in-depth interviews, observation of behavior during the interview, and documentation were conducted among mothers who had followed the PMTCT program in Yogyakarta. Structured interviews were conducted using interview guide. In-depth interviews researchers also performed behavioral observations passively informant during the interview using behavioral observation guidelines that will be translated in the form of field notes. The researcher as an instrument in data collection, before doing some research, had to seek approval to participate in the study informants form statement of willingness to participate in the study (informed consent) signed by informants and researchers. Data were obtained by face to face in-depth interviews and one by one according to the guidelines. The interview process was recorded using the voice recorder of *Samsung Galaxy mini Ace3*.

Sampling method used was purposive sampling technique of taking, a data collecting technique with previously determined criteria (Poerwandari, 2009). After doing purposive sampling followed by Snowball sampling in which snowball sampling is a sampling technique that is performed to reach a population that does not want to be found so that the required one vote of members of the population to reach out to the community so that the other informant believe in the researchers (Poerwandari, 2009). After performing the sampling technique, eight key informants and 8 supporting informants, midwives, were identified.

Data analysis is the process of organizing and sorting data into patterns, categories, and the basic outline of the unit to determine the themes and working hypotheses as suggested by the data. Analysis of the data in this study using content analysis in which the analysis is based on the contents of the interview categorized into themes described (Moleong, 2009).

## RESULTS AND DISCUSSION

### Characteristics of Main Informants

Eight key informants who were all mothers with an experience of following PMTCT program coded R1-R8 had the following characteristics: the youngest was 21 years old and the oldest was 45 years. Most of them were housewives, married for a second time, having the highest number of children of 3, having the longest duration after HIV detection was 6 years. The lowest and the highest education were Elementary education and high school respectively. Most of them were infected from their husband / spouse. Informant R1 described that her first child was infected with HIV because she had not know the PMTCT program, and the second child was not infected with HIV because she followed the PMTCT program .

### Informant Characteristics Support

From supporting informants consisting of 8 midwives who knew informants in accordance with the code for key informants namely P1-P8 meaning that P1 is the supporting informant for R1 and so on, the characteristic are as follow: all of the key supporting informants were women and D3 midwifery program graduate.

The content analysis showed that midwives provided supports for the implementation of PMTCT program and the interview excerpts are as follow:

### Early Detection in Puskesmas (Public Health Center)

.... "I knew that I was HIV positive during my pregnancy check of second child. The midwife

told me to take the a certain type of test, I did it for the sake of my health. It turned out that I was HIV positive...." (R4)

.... "Every *Puskesmas* (Public health center) providing LKB must serve an HIV test or PITC due to advice from healthcare workers such as tattoo found on the body of their husband, high-risk jobs .." (P8)

#### **Referring to the Hospital serving PMTCT program**

.... "I took a pregnant women with HIV to a hospital that serving CST. It turned out that they reject my patients; they recommended that I go to Sardjito (Yogyakarta General Hospital ...)" (P3)  
... "I gave birth in Sardjito (general hospital of Yogyakarta) because I have been told from the beginning to give birth at the hospital , I did not want to have my child infected, I planned to have an operation but because..I don't know know what you call it.. due to undetectable levels of the virus and meeting the requirement of normal delivery, the doctor recommended that I give birth naturally " (R1)

#### **Finding Fellow PLWHA by choosing certain NGOs**

... "looking for friend from NGOs, if the member of the NGOs infected with HIV I trust her more and am motivated" (R8)  
... "We chose the member of NGO cd Bethesda because they have a concern with it. Working with NGOs makes our task easier because they help us in supervising. (P8)

#### **Reminding the HIV infected subjects to take ARV**

... "the midwives texted me "do not forget to take the medication .." (R4)  
... "We remind them to take ARVs, because they have to take it every day, for a lifetime, if they stop taking it, the mother and baby's life would be at risk .." (P2)

#### **Reminding to give birth in hospital serving PMTCT of HIV**

... "I know someone who gave birth at Puskesmas (the health center) because of our ignorance, she never checked her health at the health center, although they had been told from the beginning that if you are detected early with HIV you should give birth at Sardjito, because before giving birth , you should have your viral load should checked .." (P8)  
... "The midwife told me to give birth at Sardjito (general hospital) .." (R8)  
Reminding provide ARV prophylaxis to infants born

.... " midwives visit the patients after childbirth to make sure whether the mother give prophylaxis (R4)

.... "Usually someone texted BBM or come to the house to make sure that the prophylaxis is given to the babies .." (P2)

#### **Reminding to take HIV test to make sure that the baby is not infected**

... "the midwife asked me whether I had taken VCT test when my baby was 18 months"  
... "when the baby is 3 months old, we order viral load test first, to make sure whether the levels of virus can be detected ,, later to confirm the infants will be retested with VCT at the age of 18 months .." (P7)

#### **Providing education to the public not to discriminate people with HIV**

.... "In my place, no education about *Puskesmas* serving LKB to reduce the misconception about HIV transmission ... to educate that shaking hands or having conversation with HIV infected subject will not make then infected.." (R3)  
... "many *Puskesmas* (public health center) in Yogyakarta serve LKB, so now we must find ways to you involve the community to understand and be aware of how to prevent this (HIV transmission), and prevent PMTCT of HIV." (P2)

Various supports described by the key informants (R) and supporting informant (P) were consistent with the study by Kumar et al. (2015) showing that the support of HIV counselors especially health care workers are very important because one of the key success of counseling HIV is a communication skill capable of encouraging client to participate in the program to reach the goal to prevent mother-to-child transmission of HIV.

Another study that support this present study's finding shows that supports from health workers especially midwives to confirm their HIV status earlier is needed for the success of the program. This is consistent with research by Mirkuzie et al. (2010) which showing that access to the support of health workers is needed for mothers with HIV / AIDS in order to prevent them to feel alone and discriminated so as to comply with the program.

Lyons (2010) says that social support from non discriminating family, friends, and health workers plays a role in the psychological well-being of people living with HIV.

Glanz et al (2010) explains that one of the factors in the Health Belief Models is Cues to Action meaning that it is the encouragement to act that can be obtained from within or from outside the individual .Encouragement from outside the individual can be the support of

health professionals for example midwives in order to urge pregnant women to take part in the so that their children will not infected with HIV.

Ritzer, et al (2010) explained that the theory of rational choice is influenced by the resource and social institutions, and also the collective behavior and norms. The resources come from the individual. If the individuals have a good understanding on the importance of the program, and are supported by social institutions and also the smallest social institution (family) they will be encouraged to adhere to the programs. One of the identified midwives' supports in the implementation of the PMTCT program was by educating more people in order to reduce the negative stigma toward people living with HIV by developing *Puskesmas Layanan Komprehensif Berkelanjutan* (A Sustainable Comprehensive Health Center Services).

This supports the finding of a research by O'Gorman et al (2010) stating that it require not only mothers involvement in PMTCT program but also communities supports. With the support of the community, pregnant women with HIV will be free to take part in the program without a fear of disclosure of their HIV status and being discriminated.

## CONCLUSIONS

Midwives' supports are needed in the implementation of the program PPIA. Negative stigma toward people living with HIV must be reduced by developing LKB health centers throughout the city of Yogyakarta.

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## THE BRIDEGROOM CANDIDATES' PERCEPTION ON REPRODUCTIVE RIGHTS: A STUDY WITH GROUNDED THEORY IN SURABAYA

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### ABSTRACT

The Indonesian government considers early marriage is a national issue and should be given a solution. Early marriage in Indonesia reached 50% of the age group under 19 years of the total 2.5 million marriages every year. For that, the government has taken steps to anticipate this problem by, among others, requiring bridegroom candidates to attend courses as a requirement to sign up at Religious Affair Office (KUA). Another measure was the publication of booklet of reproductive health preparation for prospective bridegroom by the government through the BKKBN which provides reproductive health rights. The problem with it was about their perceptions before and or after recognizing reproductive rights, either through KURCATIN (the courses for bridegroom candidates) or read the manual on reproductive health rights. Research samples were bridegroom candidates who registered at Religious Office in the the sub-district of Rungkut, Tambaksari, and Simokerto in Surabaya. Sampling used purposive sampling. Methods of data collection used in-depth interviews, observation, and documentation. Analysis of data used techniques themes. This study provided information that reproductive health rights were less socialized, not only to the bridegroom candidate, but also to the KUA and PLKB officers. After knowledge was given, reproductive health rights were considered very important and needed to be implemented. KUA and PLKB officers still need to improve the capability and quality in order to carry out their duties to disseminate reproductive health rights.

**Keywords:** perception, reproductive health rights, Grounded theory

### INTRODUCTION

The high early marriage followed by a high divorce rate and the maternal mortality rate (MMR) is a separate issue that needs to be addressed. If an immediate solution is not looked for, it can stall the march of human development of Indonesia as mandated in Pancasila and the 1945 Constitution. At this time, early marriage in Indonesia ranks number 37 in the world and ranks second after Cambodia in ASEAN (UNICEF, 2011). Based on information from the BKKBN, early marriage in Indonesia is almost 50% of the age group under 19 years of the total 2.5 million marriages per year. The divorce rate in Indonesia in 2013, according to the Ministry of Religion, is 324,527 events per year compared with the number of marriages in the same year amounted to 2.21813 million. Divorce in Indonesia is counted as 40 divorces per hour (Kompasiana, 2015). MMR in Indonesia also rises very high, from 228 per 100 thousand births in 2012 to 359 per 100 thousand live births in 2015 (Metro News, 2015). This shows that the maternal mortality rate does still not

meet the criteria of the MDGs in 2015, ie, 102 deaths per 100,000.

Based on this reality, the Government of Indonesia follows through policies which are preventive programs like the provision of supplies to the bride and groom with program courses for bridegroom candidate (KURCATIN). In addition, the Government through the BKKBN publishes Booklet on reproductive health preparation for the couple candidate as a guidebook to help candidates of couples in making decisions and realizing reproductive health rights (HKR) responsibly and makes household "*sejahtera mawadah wa Rohmah*" or in welfare and prosperity.

The program issued by the government is pretty good, but what becomes the problem is the implementation in the field. Based on the initial survey conducted by the authors, there are indications that the guidebook has not been socialized properly and evenly. By taking a sample of sub-districts in the territory of the municipality of Surabaya, the fact found was that the guide books were not known by the officers of KURCATIN, including KUA

(Religious Affair Office) and PLKB (Family Planning Outreach Officer) officers. It is interesting that the interim findings, both PLKB and KUA officers, especially the bride and groom to be do not both know HKR.

The fact of such interim findings prompted the authors to examine it further, not just the extent of knowledge of HKR, but also on the perception of the bride and groom to be about HKR. The exploration on their perception could help arrange field officers to socialize HKR strategy. The exploration of the perception of the officers (KUA and PLKB) was also necessary for the synchronization of the result of the perception of the bride candidate so that it was expected to obtain the possibility of findings that showed a new perspective. It was based on the assumption that successful socialization of HKR was not just the acceptability of the bride and groom to be to HKR, but also the knowledge and perceptions of the officers to the HKR.

In order to obtain profound results, an assessment of the perception of the bride and groom candidates was based on grounded theory approach, ie, digging the bride candidate's perception of HKR based on natural setting. Based on this, the problem can be formulated: "How does couple candidate perceive to the reproductive health right based on the grounded theory analysis?"

## RESEARCH METHODS

This was a qualitative study using grounded theory approach. The object of research was the perception of the bride and groom candidates before and after gaining knowledge of HKR. The study area included the sub-districts in the municipality of Surabaya. Research samples were couple candidates who registered at KUA of sub-district of Rungkut, Tambaksari and Simokerto. Sampling used purposive sampling. Criteria for selection of sample areas were based on highest level of early marriage rate in the municipality of Surabaya. In addition to these samples, this study used a secondary / complementary sample, ie, KUA and field officers who served in three sub-districts.

Data collection methods were interviews, observation, documentation, and Focus Group Discussion (FGD). Methods of data analysis used thematic with mind mapping technique (Mind Map Technique).

## RESULTS AND DISCUSSION

The results of a preliminary survey of the couple candidates indicated that they did not know or hear the term "reproduction" and "reproductive health rights (HKR)." The interesting thing was the field officer (KUA and PLKB officers) as the organizer of KURCATIN did not know HKR. Nonetheless, they were familiar with the term "reproduction" likely to be understood as 'genitals'. They also did not accept or even read the HKR guidebook.

After a preliminary survey, the next step was to provide knowledge to them about HKR, and then conducted in-depth interviews. The results are as illustrated in Table below.

Table: Findings on Couple candidate's perception on HKR

No	Tujuan	Tema	Item	Subtema	Item	Sub-sub Tema	Persepsi				
							Catin Tra		Catin Tri		
							P	N	P	N	
1	Persepsi HKR yang berorientasi fisik	HKR yang berorientasi fisik	1.1	Hak mendapatkan pelayanan dan perlindungan KR	1.1.a	Pelayanan pranika, hamil, kespro, bersalin	√		√		
						1.1.b	Perlindungan KR: pencegahan infeksi, deteksi dini, konseling, KIE	√		√	
			1.2	Hak untuk menentukan jumlah anak dan jarak kelahiran	1.2.a	Pelayanan KB, koinseling	√	√	√	√	
						1.3	pelayanan kehamilan deteksi dini, promosi kesehatan	√		√	
								1.4	sosialisasi gender dan hukum kesehatan	√	
		1.5	Hak mendapatkan manfaat dari keramjua ilmu pengetahuan yang terkait dengan kesehatan reproduksi	1.5.a	bayi tabung	√				√	
					2	Persepsi HKR yang berorientasi psikis	HKR yang berorientasi psikis	2.1	Hak untuk kebebasan berpikir tentang KR	2.1.a	menentukan jumlah anak, kapan hamil, jarak anak, jumlah anak, kapan nikah
2.2	Hak atas kebebasan dan kesamaan berkaitan dengan kehidupan reproduksi	2.2.a	salang setia, menjaga pasangan	√							

No	Tujuan	Tema	Item	Subtema	Item	Sub-sub Tema	Persepsi			
							Catrin Tra		Catrin Tri	
							P	N	P	N
3	Persepsi HKR yang berorientasi sosial	HKR yang berorientasi sosial	3.1	Hak mendapatkan informasi dan pendidikan KR	3.1.a	promosi kesehatan. KIE	√		√	
			3.2	Hak atas kerahasiaan pribadi dengan kehidupan reproduksinya.	3.2.a	saling menjaga privasi, saling menghargai, saling toleransi	√		√	
			3.3	Hak membangun dan merencanakan keluarga	3.3.a	KB jumlah anak, keluarga kecil berkualitas.	√	√	√	
			3.4	Hak atas kebebasan berkumpul dan berpartisipasi dalam politik yang berkaitan dengan kesehatan reproduksi.	3.4.a	mengikuti kegiatan PKK, pekumpulan wanita	√	√	√	
			3.5	Hak untuk bebas dari segala bentuk diskriminasi dalam kehidupan berkeluarga dan kehidupan reproduksi.	3.5.a	bebas dan KDRT, gender	√	√	√	

There were three themes of perception, the perception of physical-oriented HKR, psychological-oriented HKR, and social-oriented HKR. Psychological-oriented HKR had two kinds of positive and negative perceptions. The positive perception was represented through their desire to obtain reproductive health services and protection (point 1.1) as well as the right to life (point 1.3) such as premarital care, pregnancy, reproductive health, birth, and postpartum. According to them, this right was a major requirement. Freedom from violence (point 1.4) was equally positive response. They also expected the benefit and advancement of science and technology (point 1.5), but there was doubt that it was realized because they still considered such rights requiring high funds. The negative perception (some respondents) was just at the right to determine the number and spacing of children (point 1.2) in which the determination

was still dominated by men while women tended to be passive and handed everything to men.

Psychological-oriented HKR was shown that part of respondents perceived negatively especially the right to freedom of thought (point 2.1), such as freedom of determining the number of children, spacing, types of contraceptives, etc. Groom to be did not give absolute freedom to bride to be, such as the determination of contraceptives. The men tended to participate in determining under consideration it did not interfere with their reproductive needs. About freedom and equality with regard to reproductive life (point 2.2), both men and women had positive perception as faithful to each other and maintain family harmony.

About social-oriented HKR, the negative perception (some respondents) was precisely in the points 3.3, 3.4, and 3.5. The right to build and plan the family was still domination of men while women tended to be passive. Men seemed to mind women being involved in the organization which entailed leaving home longer and they thought that women place was at home raising children. On gender equality issue, most respondents Still perceived negatively. Perceptions of the right to get information and education and the right to privacy even got a positive response.

Other than that, the results of interviews with KUA and PLKB officers indicated that they found HKR needed to be socialized with the involvement of two of bureaucracy, namely the Ministry of Religion and BKKBN. They also asked for training to improve their knowledge of HKR. Thus, they could be more active in disseminating to couple candidates through KURCATIN. There was little record from the KUA officials about gender. Household leaders were still a husband and wife's activities outside the home must gain permission from their husbands.

This study basically consisted of five stages and, of five stages, there was a process beginning

from ignorance, knowing activities, activities of perceiving known things, giving each other feedback on the results of knowing, maturation of perception results. The results against knowing was in the form of reproductive health rights (HKR).

Processes commencing with ignorance showed the need for socialization of HKR. Ignorance of HKR was not only on the bride and groom to be supposed to gain from the dissemination, ie, KUA and PLKB officers. Similarly, the officers were also not aware of the presence of HKR and if anyone knew, he knew a little about HKR.

It is certainly very worrying and also becomes attention and important notes that government programs in the field of quality family welfare has not been done well. To run such a program would require cooperation across departments having equal interest with the program, in this case involving two ministries: the Ministry of Religious Affairs and the Ministry of Health.

## CONCLUSION

Based on the description above, it can be concluded that the couple to be did not know if they had the right to reproductive health. After reading reproductive rights, they perceived positive even though there were some things that were still given a note by the groom to be as gender issues, decision-making, reproductive planning, and involvement in organization that all tended to be based on the superiority of the men. Couple candidates assumed that KURCATIN was important to be followed by basing on knowledge about HKR. The officers of KURCATIN like KUA and PLKB officers need to improve the quality of knowledge of HKR.

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# CORRELATION BETWEEN EDUCATION AND EMPLOYMENT PREPARATION OF PREGNANT WOMEN WITH LABOR IN THE COASTAL MARINE DISTRICT NORTH INDRAMAYU YEAR 2016

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## ABSTRACT

Approximately 15% of pregnant women suffer heavy complication that threatens the lives of more than million pregnant women every year. This problem is related to some factors such as finance, poverty and the education level of the people. The limitedness of women to access health service which is caused by some factors such as poverty, the low level of economic and social and the condition of geographical structure. The aim of the study is to find out the factors which are related with the preparation for labor and the emergency of pregnant women in the areas of northern coast of west java in Indramayu regency. The research method occupied is analytical survey with cross sectiona approach. the sample of this research is the pregnant women in the areas of northern coast of west java in Indramayu regency as many as 59 women. The sample was taken by simple random sampling. Data analysis was conducted through two phases namely univariat to see the frequency of distribution and bivariat to see the correlation (using chi square test). The result of research showed that there are still plenty of pregnant women who have not consumed tablet fe (40,68%), have not taken TT immunization (16,95%), are still having health problem (18,64%), are still consuming herbal medicine (57,635), have not known the labor estimation (13,56%), have not read KIA book (14,29%), have not prepared the transportation for labor (32,20%), have not prepared the cost for labor (14,29), and have not prepared any blood donors (72,88%). The result of statistical test showed that the education of the pregnant women is related with the tablet fe which has not been consumed and the finance for labor which has not been prepared, and also the pregnant women's profession with the decision makers (p value < 0,05).

**Keywords : education, employment, pregnant women, preparation for labor**

## INTRODUCTION

Health development is an integral part of national development, aimed at creating optimal health status. Every year about 160 million women worldwide are pregnant and most pregnancies take place safety. However, approximately 15% suffer from serious complications in which the third is a life-threatening complication of the mother and caused the death of more than half a million mothers every year. (Prawirohardo, 2012)

Currently the maternal and child health is still a crucial issue in Indonesia and is one indicator of the health of these problems associated with various factors such as geographical location, quality of services, financing, ketersebaran health facilities and the residents themselves including levels of education and poverty / employment. (Ikatan Bidan Indonesia, 2016)

The maternal mortality rate according to the Indonesian Demographic Health Survey

(IDHS) in 2007 that is 228 per 100,000 live births, and increased to 359 per 100,000 live births in 2012. (Pusdiklatnakes, 2014). Maternal deaths are due to complications of pregnancy, childbirth and postpartum. Maternal death is a negative impact on the welfare of the family and society. Facts show the limitations of women in accessing health services due to various factors such as poverty, low socioeconomic and geographical structure condition.(Ikatan Bidan Indonesia, 2016)

Every health care workers who work in the community need to understand the communities it serves, good state, culture, and local traditions will determine the approach that must be taken. The midwife is a dynamic profession that is required to be competent in knowledge and skills. Working as a midwife in the community means serving the community by providing health care services they need, including providing information about the preparation for labor to



be done by pregnant women. (Syafrudin, Hamidah, 2009)

Childbirth preparation of which is an estimate of labor, the need for nutrition, immunization preparation, labor costs (savings, JKN membership or other programs), decision makers, transportation and blood donors.

Pregnant women, postpartum mothers, nursing mothers, infants and toddlers in the family are part of society. In addition to requiring a balanced nutritious diet is more than usual and other physical needs, it also requires attention and affection of his family to stay healthy. However, these needs are often not met in part because of poverty, poor education, or beliefs that are detrimental to health. (Syafrudin, Hamidah, 2009)

The purpose of this study to determine the relationship between education and work Pregnant Women with childbirth of pregnant women in the northern coastal regency of Indramayu in 2016

## RESEARCH METHODS

The design of this study using cross sectional study using quantitative data by conducting interviews using the instrument in the form of a questionnaire or a questionnaire. Data presented in the form of frequency distribution (F), the percentage (%) and chi-square. As the population of this study were pregnant women in the northern coastal regency of Indramayu recorded in June 2015 with a sample of 59 pregnant women.

## RESULTS AND DISCUSSION

**Table 1.1 Characteristics of Pregnant Women**

Characteristics	(f)	(%)
Employment		
- Unemployed	45	76,3
- Fishermen	4	6,8
- Traders	1	1,7
- Civil servants	2	3,4
- Etc.	7	11,9
Education		
- Uneducated	16	27,1
- Elementary school	22	37,3
- Junior High School	10	16,9
- Senior High School	7	11,9
- College	4	6,8

**Table 1.2 The Frequency of pregnant woment based on the present pregnancy record (n=59)**

The present pregnancy record	(f)	(%)
Number pf pregnancy		
- 1 time	17	28,81
- 2 – 4 times	39	66,10
- ≥ 5 time	3	5,09
KIA book possession		
- Yes	53	89,83
- No	6	14,29
KIA book has been read		
- Yes	50	84,75
- No	9	15,25
P4K sticker		
- Yes	16	27,12
- No	43	72,88
Plan of labor helper		
- Medical helper	59	100
- Non Medical helper	0	0
Plan of the place for labor		
- Has been planned	55	93,22
- Has not been planned	4	6,78
Are still in pregnancy		
- Present	11	18,64
- Absent	48	81,36

**Tabel 1.3 The Frequency of pregnant women based on the labor preparation (n=59)**

Emergency preparation	(f)	(%)
Taking Tablet Fe		
- Yes	35	59,32
- No	24	40,68
TT immunization		
- Already	49	83,05
- Not yet	10	16,95
Labor estimation		
- Already known	51	86,44
- Not Know	8	13,56
Transportation preparation		
- Already prepared	40	67,80
- Has not been prepared	19	32,20
Labor cost preparation		
- Has been prepared	53	89,83
- Has not been prepared	6	14,29
Blood donor preparation		
- Has been prepared	16	27,12
- Has not been prepared	43	72,88
Decision maker		
- By the pregnant women themselves	17	28,81
- Somebody else	42	71,19

**Tabel 1.4: The frequency of pregnant women habit (n=59)**

Pregnant women habit	(f)	(%)
Herbal medicine consumption		
- Yes	34	57,63
- No	25	42,37
Food Prohibition		
- Yes	28	47,46
- No	31	52,54
Smoking		
- Yes	0	0
- No	59	100
Medicine consumption without doctors' prescription		
- Yes	8	13,56
- No	51	86,44
Alcohol consumption		
- Yes	0	0
- No	59	100

**Tabel 1.5: The correlation of profession and education to the labor preparation.**

Characteristic	Labor preparation				N	p-value
	Poor		Fair			
	N	%	n	%		
<b>Education</b>						0,017
Uneducated						
Elementary school	9	56,3	7	43,8	16	
Junior High School	2	11,1	16	88,9	18	
Senior High School	2	15,4	11	84,6	13	
College	2	25,0	6	75,0	8	
Number	0	0	4	100	4	
<b>Profession</b>						0,392
Unemployed	12	30,8	27	69,2	16	
Fishermen	0	0	6	100	18	
Traders	0	0	2	100	13	
Civil servants	0	0	2	100	8	
Etc.	3	30,0	7	70,0	4	
Number	15	25,4	44	74,6	59	

**Table 1.6 the correlation of the pregnant women to the labor preparation**

Variable		Profession										P value
		Unemployed		Fishermen		Traders		Civil Servant		Etc.		
		F	%	f	%	f	%	f	%	f	%	
labor estimation	Already known	38	74.5	4	7.8	1	2.0	2	3.9	6	11.8	0,869
	Have not known	7	87.5	0	.0	0	.0	0	.0	1	12.5	
taking Fe	Yes	23	65,7	3	8,6	1	2,9	2	5,7	6	17,1	0,219
	No	22	91,7	1	4,2	0	0	0	0	1	4,2	
TT Immunization	Yes	37	75,5	4	8,2	1	2	2	4,1	5	10,5	0,713
	No	8	80	0	0	0	0	0	0	2	20	
Transportation Preparation	Yes	28	70	4	10	1	2,5	2	5	5	12,5	0,405
	NO	17	89.5	0	0	0	0	0	0	2	10,5	
Labor cost	Yes	31	70	4	10	1	2,5	2	5	4	12,5	0,460
	No	14	82.4	0	0	0	0	0	0	3	17,6	
Blood donor preparation	Yes	9	56,3	2	12,5	0	0	1	6,3	4	25	0,171
	No	36	83,7	2	4,7	1	2,3	1	2,3	3	7,0	
Decision maker	Themselves	7	41.2	2	11.8	1	5.9	2	11.8	5	29,4	0,001
	Somebody else	38	90.5	2	4,8	0	0	0	0	2	4,8	

**Table 1.7 the correlation of the pregnant women to the labor preparation**

Variable		Pendidikan Terakhir										P value
		undeducated		Elementary school		Juniorhigh school		Senior high school		college		
		f	%	f	%	f	%	f	%	f	%	
Labor preparation	Already known	12	23.5	21	41.2	9	17.6	6	11.8	3	5.9	0,424
	Have not known	4	50	1	12,5	1	12,5	1	12,5	1	12,5	
Taking Fe	Yes	4	11,4	15	42,9	6	17,1	7	20	3	8,6	0,008
	NO	12	50	7	29,2	4	16,7	0	0	1	4,2	
TT Immunization	Yes	11	23	20	41	9	18	6	12	3	6	0,426
	No	5	50	2	20	1	10	1	10	1	10	
Transportation Preparation	Yes	10	25	19	47,5	5	12,5	4	10	2	5	0,194
	No	16	31,6	3	15,8	5	26,3	3	15,8	2	10,5	
Labor cost	Yes	10	23,8	21	50	5	11,9	3	7,1	3	7,1	0,018
	NO	6	35,3	1	5,9	5	29,4	4	23,5	1	5,9	
Blood donor	Yes	2	12,5	9	56,3	1	6,3	2	12,5	2	12,5	0,171
	No	14	32,6	13	30,2	9	20,9	5	11,6	2	4,7	
Decision maker	Themselves	2	11,8	9	52,9	2	11,8	3	17,6	1	5,9	0,317
	Somebody else	14	33,3	13	31,0	8	19,0	4	9,5	3	7,1	

Midwives are recognized as a responsible and accountable professional who works in partnership with women, to provide support, care, advice during pregnancy can include preventive measures and detection of complications or other assistance. The existence of Midwives is an effort for social welfare and public health. The history of many countries, Midwives is the designation for women who work and serve women (women centered) in a community.

Midwifery care is a natural holistic care, based on the understanding of the social, emotional, cultural, spiritual, psychological and physical women. Care centered on women and policies and the scope of care provided focusing on the interaction between the midwife and mother. Based on Table 1.3 shows that 71.19% are decision makers of others does not mean the woman. This is not in line with expectations that the mother and daughters is a key decision-makers in the care, have a right to information that could improve their ability in decision-making. (Irianti B, et al. 2014)

In this study demonstrated an association between maternal work with health policy-makers ( $p < 0.05$ ). At the time of the interview, pregnant women said that the decision maker is your husband or parents because they are more focused on the process of pregnancy and childbirth to be faced so that decisions are delegated to others.

Services in pregnancy is the health care provided to the mother during her pregnancy with the standard of care in pregnancy. (Syafudin, Hamidah, 2009). Pregnancy check regularly to ensure the health status in good condition, so that they can live a healthy pregnancy, safe delivery and a healthy baby because it would affect the first 1,000 days of life for children. Every service provided must be recorded in the book Mother and Child Health (MCH Handbook) which is a medium of communication, information and education.

The duties and roles of midwives one must implement government programs such as charging KIA book, a class of pregnant women and birth planning program and

prevention of complications (P4K) to enhance the active role of husbands, families and communities in planning for safe delivery and preparation for childbirth complications. Program planning and preparation for childbirth complications with stickers to be one of Alert Village. P4K has already dipastikan goal of keeping birth attendants, blood donors, the implementation of quick decisions and precise in case of complications during pregnancy, childbirth and postpartum. (Pusdiklatnakes, 2014)

Inspection and supervision of pregnancy is necessary to prepare physically and psychologically pregnant mothers so that mother and baby can be ascertained in a healthy state, as well as early detection of complications or disorder and can be treated as early as possible. (Pusdiklatnakes, 2014)

Health services in pregnant women can not be separated from service delivery, postpartum and newborn. In doing prenatal care, midwives should provide quality services and standards compliant (10T) ie Weigh weight and height, measuring blood pressure, the value of nutritional status, measuring tinggu fundus, specify the presentation of the fetus and the fetal heart rate, skrinning immunization status Tetanus Toksoi (TT), give iron tablet, check labs, case management, and colloquium. (Ikatan Bidan Indonesia, 2016)

Based on table 1.2 shows that 40.68% of pregnant women do not drink tablets and 16.95% Fe yet Tetanus immunization toxoid (TT). It shows they have not met the standard of midwifery services in pregnancy care. In this study, there is a significant relationship between the education of pregnant women with iron tablet consumption and preparation cost of labor ( $p < 0.05$ ). According to research by Dewi Eka (2014) in Indramayu Indonesia found that education, income, distance pregnancy, iron tablet intake, nutritional status, knowledge is no relationship with the incidence of anemia. Where pregnant women in the northern coastal areas Indramayu still a lot just to elementary school (37.3%) do not even school (27.1%). Therefore Indramayu traversed by the main line north coast, the area became a haven Indramayu and overseas

from the area east of the island of Java that allow many immigrants coming into Indramayu through the port or the northern coast of Indramayu. Although this study did not put forward the origin area of Maternal respondents.

At the case management or colloquium, need to be prepared several things including labor cost savings that could be maternal (Tabulin) or social funds maternity (dasolin) that can be used to help finance the start of pregnancy, childbirth and emergencies. Results of interviews to pregnant women, obtained information that generally is the husband's work as a fisherman who once went to sea for fishing could reach more than 1 month. So that the delivery and emergency planning should be discussed with the family as decision makers.

Based on Table 1.5 shows the correlation between the education of pregnant women with childbirth ( $p < 0.05$ ). Preparation and transportation costs are very important in case of emergency to deliver and receive health services in health facilities were adequate. Transport equipment could come from the public in accordance with the collective agreement. (Ikatan Bidan Indonesia, 2016)

## CONCLUSION

Midwifery services in pregnancy care are still experiencing problems in implementation. Among them are iron tablet that is not taken by pregnant women, yet skinning TT immunization, the number of pregnancies of more than or equal to 5, there are still pregnant women who regularly consume herbal medicine, abstain from certain foods, lack of preparation for childbirth include costs, transportation, blood donors and decision makers who are not themselves.

This study found that factors related to the consumption of iron tablet and preparation cost of labor is the last education diikuti by pregnant women in the area of the northern coast of Indramayu in 2016 only up to primary school level (SD) did not even school. While factors related to health policy-makers is the work of pregnant women. So they need to optimize health care programs in

cooperation with various sectors to achieve the goal of health development.

It is expected from the research results can be material information and assessment of the program planning and prevention of complications of childbirth, so that it can determine the subsequent health approach in order to achieve national health goals, especially for Indramayu district and surrounding area.

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# INFLUENCE OF WARM COMPRESS ON FLATUS TIME IN SC POSTOPERATIVE PATIENTS WITH SPINAL ANESTHESIA AT ARJAWINANGUN HOSPITAL

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## ABSTRACT

Cesarean Section (CS) is the operative procedure performed under anesthesia so that the result of conception was born through an incision in the abdominal wall. Discomfort in the stomach begins to be felt after the anesthetic effect is disappeared. Giving a warm compress is one independent nursing action to accelerate flatus time. This study aims to determine the effect of a warm compress on flatus time in CS postoperative patients with spinal anesthesia in Arjawinangun hospital.

This is a quasi experimental with posttest only with control group design. Data collection techniques used primary data by observation and intervention to determine the effect of a warm compress on flatus time in patients given and not given a warm compress. The sampling technique was accidental sampling method with a total sample of 20 respondents. The data were analyzed using univariate and bivariate. Before the bivariate test, Shapiro Wilk normality test was done. The significant value from these two groups is normal  $\alpha \geq 0.05$  and then using the t test.

The results show that the average time of flatus in CS postoperative patients given a warm compress is 626.50 faster than the average time of flatus in patients not given a warm compress by 1608.00. After normality test, the result is normal that is greater than 0.05. Based on t test, p value is 0.000. Result is less than 0.05.

Conclusion: there is the influence of a warm compress on flatus time in CS postoperative patients with spinal anesthesia. It is expected midwife should be able to provide counseling, information and education with non-pharmacological approach to acceleration time of flatus and be able to apply a warm compress method.

Keywords: warm compresses, flatus time, and CS..

## INTRODUCTION

Cesarean Section (CS) is an operative procedure performed under anesthesia so the fetus, placenta and amniotic are born through an incision in the abdominal wall and uterus (Fraser, 2009).

In CS, discomfort is usually felt post-birth. Sedation usually disappears approximately 2 hours after the delivery process is complete. Having anesthetic effect disappears, a sense of discomfort in the abdomen begins to be felt. This postoperative inconvenience will cause physical and psychological reactions in postpartum patients like distracted mobilization, being lazy to move, and gastrointestinal and nervous disorders (Potter Perry, 2010).

Nonpharmacologic management is a major capital towards convenience (Chess, 2005). In terms of costs and benefits, the use of non-pharmacological management is more economical and there are no side effects when compared to the use of pharmacological management. In addition, it is decreasing

dependence of patients on drugs (Potter & Perry, 2010).

One of the non-pharmacological treatment is to do warm compresses; a warm compress may cause vasodilation of blood vessels and improve circulation of oxygen to hypoxic area so that it can reduce pain intensity (Potter & Perry, 2010).

In 2014 Arjawinangun hospital show operating figures of CS by 2268 cases of 663 childbirths (29, 2%). Although relatively safe, CS action still has effects, especially for patients as a result of spinal anesthesia. Reactions of spinal anesthesia can be in form of the patient that complains of stomach fullness, nausea and vomiting. This condition is in accordance with the opinion of Bobak, et al (2005) which state post abdominal surgery patients with spinal anesthesia will experience paralysis of the extremities, perineum and lower abdomen. Frequent constipation happens when there is no peristaltic movement of the intestinal contents, gas accumulation and abdominal distension; one of the signs of returning intestinal peristalsis

is the emergence of flatus (Potter & Perry, 2010).

Once this condition is not responded with any action, it will be bad for patients and babies. Patients nutritional intake will interfere with the nausea and vomiting that would interfere with the process of parenting. Oral intake must be met to accelerate recovery of the body and the surgical wound. Besides, nutrition for postpartum patients is very important to improve the quality of breast milk, which will be given to infants (Purwandari, 2009).

Actions taken to stimulate the intestinal peristalsis are early ambulation and warm compresses with a hot jar according to research conducted by Rohmawati (2005) about the influence of a warm compress over flatus time in CS postoperative patients whose results is that giving a warm compress is effective against flatus time in the post CS mother.

Results of a preliminary study conducted by researchers, according to one of the anesthesia team members of Arjawinangun Hospital, all CS surgery patients were performed with spinal anesthesia. The interviews in 5 CS postoperative patients stated that when the anesthetic effect was disappeared, the patients began to feel pain in the stomach and nausea. Based on interviews with one midwife in Postpartum Room, not all nurses/midwives knew that warm compresses could speed flatus. There were several midwives / nurses intervening warm compresses; however, patients cited their fear of the stitches. Hence, warm compresses had never been intervened again. All CS postoperative patients are not given the pharmacological drug for flatus stimulant. The fact happening right now in Arjawinangun hospital is that nurses/midwives have not effectively carried out nursing interventions with warm compresses in the treatment of CS postoperative discomfort, so it is not known whether it is true there is the influence of a warm compress over time flatus in CS postoperative patients with spinal anesthesia in accordance with references and theory.

## RESEARCH METHODS

This was an quasy experimental study posttest only with control group design. The sampling method was accidental sampling and the data collection techniques used observation. The analysis of data was with the independent t test calculation. This study was conducted at the Arjawinangun Regional General Hospital, held on 24 November 2014-17 January 2015. The population in this study was CS postoperative patients with spinal anesthesia in Postpartum room of Arjawinangun Hospital of Cirebon District. The samples in this research were taken from 11 to 22 January, 2015. The inclusion criteria were CS postoperative patients willing to become respondents and CS postoperative patients who received pharmacological therapy for flatus stimulant while the exclusion criterion was CS postoperative patients who experienced complications.

Data collection techniques in this study used the method of observation. In the observation implementation, the researchers were assisted by two midwifery students as the assistants. Warm compresses was done 1 time for 20 minutes continuously with a hot jar, performed after 4 hours CS postoperative with spinal anesthesia. Flatus information was obtained from the patient information. Methods of data analysis in this study were univariate and bivariate.

## RESULTS AND DISCUSSION

Frequency Distribution of Flatus Time in The Group Given Warm Compress

**Table 1. Frequency Distribution of Mean Flatus Time in The Group Given Warm compresses**

Variable	Mean	Standard Deviation	Min - Max	95% CI
with warm compress	626.50	240.567	470 - 1115	454.41 - 798.59

Based on table 1, an average time of flatus in the group that was given a warm compress was 626.50 minutes with a standard deviation of 240,567 minutes. From the interval estimation, it can be concluded that 95% believed the average flatus time on the group given a warm compress was from 454.41 minutes to 798.59 minutes.

Frequency Distribution Flatus Time On Group Not Given Warm Compress

**Table 2 Frequency Distribution of Average Flatus Time On The Group Given Warm Compress**

Variable	Mean	Standard Deviation	Min - Max	95% CI
no warm compress	1608.00	324.262	1180 - 2160	1376.04 - 1839.96

Based on Table 2, an average time of flatus on the group who were not given a warm compress was 1608.00 minutes with a standard deviation of 324,262 minutes. From the estimation interval, it can be concluded that 95% believed the average time of flatus in the group not given a warm compress was from 1376.04 up to 1839.96 minutes.

**Table 3. Influence of Warm compresses on Flatus Time In CS Postoperative Patients With Spinal anesthesia in Arjawinangun hospital**

Category	Mean	Standard Deviation	Standard Error	P value	N
with warm compress	626.50	240.567	76.074	.000	10
without warm compress	1608.00	324.262	102.541	.000	10

Based on Table 3, the average time of flatus on patients who were given a warm compress was 626.50 with a standard deviation of 240,567%, and patients who were not given a warm compress had the average flatus time 324,262 with a standard deviation of 1608.00%. Statistical test results showed

the value of  $p = 0.000$ , meaning there was an influence of a warm compress over flatus time in CS postoperative patients with spinal anesthesia.

The results of the study included univariate and bivariate analysis. Univariate analysis describes the characteristics (distribution, frequency) respectively either the dependent variable (time flatus) and independent (warm compresses). Univariate analysis in this study included the two variables: flatus time of CS postoperative patients with spinal anesthesia given a warm compress and not given a warm compress. From the results of univariate, the average flatus time of the respondents given a warm compress was 626.50 minutes with the longest time 1115 minutes and the fastest time 255 minutes, while the average time of flatus of the respondents not given a warm compress was 1608.00 minutes with the longest time 2160 minute and the fastest time 1180 minutes. Bivariate analysis is an analysis that connects two dependent variables and independent variables. This study analyzed the relationship between independent variables (warm compresses) and dependent (flatus time). Before performing the bivariate normality test, the researcher used Shapiro Wilk normality test because the sample size was less than 50 (Dahlan, 2011). The significant value based on Shapiro Wilk test showed that the group of respondents given a warm compress was 0.908 whereas in the group of respondents not given a warm compress was 0.550. After seeing the significant value of these two groups, it can be seen that the value of the significance of the two groups was greater than the value of  $\alpha$  (0.05) so that the both group data was said to be normal. Thus, bivariate statistical test to be used was an independent t test parametric statistical test.

From statistical independent t test, it obtained value  $p = 0.000$  (Asymp. Sig. 2-tailed) while the value of  $\alpha$  used was 0.05 or in other words the value of  $p \leq \alpha$ , so decision of  $H_0$  was rejected, which means there was the influence of a warm compress on flatus time in CS postoperative patients with spinal anesthesia in Arjawinangun hospital Cirebon. The results showed the effect of a warm compress on flatus time in patients with CS postoperative

with spinal anesthesia; this was evidenced by an average time of flatus in patients with CS postoperative given a warm compress that was faster (626.50 min) compared with the average flatus time of the patient not given a warm compress (1608.00 min). Results of statistical analysis using independent t test parametric test obtained  $p < 0.000$  ( $< 0.05$ ). It showed no effect of warm compresses on flatus time in post CS patients with spinal anesthesia.

In patients with CS postoperative will experience accumulation of gas in the intestinal space because peristalsis decreases as a result of spinal anesthesia. Heat reaching the intestinal organs will trigger the expansion of gas in the intestinal organ resulting in increased pressure. Gas always moves from higher pressure toward the lower pressure space. The gas in the intestinal area will move to the lower part of the pressure that is around the anus; it comes to pass flatus. This is why patients given a warm compress will experience flatus faster than patients not given a warm compress (Sherwood, 2011).

These results are consistent with the theory, namely, warm compresses may improve the tone of the gastrointestinal tract, abdominal wall and stimulate peristalsis (Potter & Perry, 2010), besides, a warm compress physiologically stimulates the body's organs to function back to normal more quickly as the bladder and gastrointestinal system, especially peristalsis so that the patient can pass gas. The working principle of a warm compress by using hot jar covered with small towels (good morning) is in conduction where heat transfer occurs from the hot jar into the stomach will enhance blood circulation and reduce muscle tension so it will decrease the discomfort in CS post surgery patients, because when the anesthetic effect begins to disappear, then working organ in the body will return to normal as well as working on the peristaltic gastrointestinal system. This peristaltic movement will encourage gas in the intestine to come out, so patients can reduce the impact of distention due to anesthesia (Kasdu, 2005). According to Simkin (2005), a warm compress is helpful to improve the local skin temperature, blood circulation, stimulate the blood vessels, eliminate the sensation of

pain, stimulate intestinal peristalsis, and provide tranquility and comfort.

Similarly, research conducted by Soni Wahyudi (2008) shows an effect of warm compresses on flatus time in post CS patients. But in this study, the researchers found little irregularities, especially on the respondent number 18 in the experimental group, who experienced the longest time flatus 1115 minutes. The researchers assumed compress effect given to the respondent number 18 was less than the maximum, because based on the observation that the respondent was the most obese and the fat layer under the skin of the abdomen was the thickest. This was the possibility why the respondent had the latest flatus time, despite a warm compress at the same time. For that we need to do more research on duration differences of warm compress against flatus time, or the effect of weight to the effects of warm compresses.

## CONCLUSION

1. Average flatus time of CS postoperative patient given a warm compress was 626.50 minutes, the highest time in 1115 and the lowest time in 470 minutes.
2. Average flatus time of CS postoperative patients not given a warm compress was 1608.00 minutes, the highest time in 2160 minutes and the lowest in 1180 minutes.
3. There was the influence of a warm compress on flatus time in CS postoperative patients with spinal anesthesia with  $p$  value of 0.000.

The researchers propose suggestions with regard to the influence between the variables studied:

1. For the profession of nursing / midwifery, CS postoperative patients with spinal anesthesia will experience decreased gastrointestinal system, so that the implementation of a warm compress to the patient as non pharmacological attempts is helpful to speed up the restoration of the gastrointestinal system.
2. For hospital, the most common problems experienced by CS postoperative patients is abdominal pain due to accumulation of gas in the intestinal area. To overcome this problem, the hospital is expected to give a warm compress in the Standard Operational

Services (SOP) of CS postoperative patients with spinal anesthesia.

3. For other researchers, this study can be used as a basis for developing further research on warm compresses.

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# INFLUENCE OF OYOG-BASED MODIFIED LEOPOLD PALPATION ON PREGNANT WOMEN'S ANXIETY LEVEL AND INCREASED COVERAGE OF CHILDBIRTH ASSISTED BY HEALTH PROFESSIONAL

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## ABSTRACT

Kalibuntu Health Center is one of the health centers with the lowest target of the achievement the childbirth assisted by health workers at 86.5%. The existence of traditional birth attendants or TBAs as unskilled birth attendance in the area is suspected as one of the causes of the low coverage. TBAs accompany women during pregnancy, childbirth and the postpartum period by involving one of Oyog traditions during pregnancy. Oyog traditions are not unlike the Leopold maneuvers carried out by health personnel. The closeness that exists between TBAs and pregnant women become an important topic that can be adopted by midwives. This study analyzed the effects of Leopold examination in modifications with Oyog traditions to reduce the anxiety of the expectant mother.

This was an experimental study with a non-randomized pre-test and post-test with control group design. The data analysis used independent t-test. In-depth interviews were also conducted to know the opinion and the perceived benefits of the mother against the actions of Leopold palpation in modifications with Oyog traditions. Forty pregnant women in the treatment group received Leopold examination in modification with Oyog. Forty pregnant women in control group.

The results showed that there was a significantly different score of patient anxiety with a pre intervention, intervention phase I, P value, intervention phase 2, and intervention stage 3 of 0.499, 0.499, 0.259, and 0.040, respectively. Childbirth assistance in the village of Kalibuntu by health personnel increased to 98%, and the women admitted to be more convenient and close to midwives so that they wanted the midwives to assist their childbirths. There were the effects of Leopold examination in modifications with Oyog on the decline in maternal anxiety levels. This innovation is expected to be a medium for delivering health education to women.

**Key words: Oyog Palpasi, Leopold, Pregnant Woma.**

## INTRODUCTION

The survey shows that 84.2% of villages in West Java still use the services of Traditional Birth Attendants (TBAs). In Cirebon District there are 448 TBAs. Especially in the working area of Kalibuntu health center, there are 13 TBAs.

Kalibuntu Health Center is one of the health centers in the region of Cirebon regency, with the lowest target achievement of birth assisted by health professional at 76% and the figure had increased in 2014 to 86.5%. However, the figure is still lower than the achievements in West Java. The existence of TBAs is still

highly acclaimed in the neighborhood to be one of the causes of low coverage of birth assisted by health professional. There are 10 TBAs known by the public but the 2 (two) of them have not been recorded in the clinic as a traditional midwife. The TBAs accompany pregnant women, childbirth and the postpartum period, one of them is doing oyog.

In actual observations, oyog movement is not unlike the motion of Leopold or Leopold maneuvers conducted by health staff (midwife and obstetrician). The difference quite visible from the two procedures is their gentle massage, giving positive affirmations, communication with the fetus and

interpersonal communication, provision of positive affirmation and more intensive communication with the fetus. Oyog implementation enables the establishment of warm communication. Communication in the oyog implementation will make the relationship between pregnant women and TBAs be closer. One indicator of this proximity is the communication of 2 (two) directions. This communication will provide high success against the success of the process of care. The closeness that exists between TBAs and pregnant women becomes an important topic that can be adopted by the midwife so that closeness is increasingly intertwined to pregnant women.

In 2014 the implementation of the ethnography research on Leopold palpation modification based on oyog culture had been tested and declared safe because there is no difference in the results of DJJ and NST.

## RESEARCH METHOD

This was a quasi experimental-analytical research with non-randomized pre test and post-test with control group design. Research was conducted at the Kalibuntu health center of Cirebon in June-October 2015. The study population was all midwives and pregnant women in Cirebon region while the sample was 20-40 years old midwives and pregnant women divided into two groups. In the group of pregnant women, as the experimental group was normal pregnant women without complications with gestational age of 28-30 weeks from May to July 2015 in Kalibuntu Health Center while the control group was pregnant women at Astanalanggar health center. The sample in this study was taken using purposive sampling method.

The study began with training to midwives about Leopold inspection with modifications oyog. The midwife checked to advanced / competent. Pregnant women would fill out a questionnaire pre and post about the scale of

distress / anxiety experienced by the mother. This filling out questionnaire was done for 3 times and the average scale of distres/anxiety was calculated.

## RESULTS AND DISCUSSION

**Table 1: Pregnant women Respondent Characteristics**

Variable	Category	Total	%
Age	<20 years	4	5
	20-35 years	74	92,5
	>35 years	2	2,5
<b>Total</b>		<b>80</b>	<b>100</b>
Gravida	Primigravida	31	39
	Multigravida	49	61
<b>Total</b>		<b>80</b>	<b>100</b>
Employment	Yes	3	3,75
	No	77	96,25
<b>Total</b>		<b>80</b>	<b>100</b>

Based on Table 1, the majority of mothers was at the age of 20-35 years (92.25%), multi gravida (61%) and unemployed (77%). The unemployment status was 96.25%.

**Table 2: Pregnant women anxiety scores**

Variable	Range	Mean	SD
Pre Intervention	0 – 65	21,89	±14,61
Intervention I	0-59	21,89	±14,61
Intervention II	0-59	23,08	±12,33
Intervention III	0 – 64	26,13	±14,89

Based on Table 2, patient anxiety in the stage of pre intervention, first intervention and second intervention had scores quite low at 21.89 in the stage of pre-intervention, 23.08 in the intervention phase 1 and 26.13 in the intervention phase 2.

**Table 3: The influence of of Leopold Inspection with Oyog Modifications Against Patient Anxiety**

<b>Pre Intervention</b>					
Leopold inspection with oyog modification	N	Mean	SD	SE	<i>P value</i>
Yes	40	23	±14,153	3,278	0,4999
No	40	20,78	±15,151		
<b>Intervention I</b>					
Yes	40	23	±14,153	3,278	0,499
No	40	20,78	±15,151		
<b>Intervention II</b>					
Yes	39	21,54	±10,169	2,867	0,259
No	35	24,80	±14,334		
<b>Intervention III</b>					
Yes	39	22,69	±17,517	3,560	0,047
No	35	29,91	±10,204		

Based on Table 3 the inspection of Leopold with oyog modifications show the differences between the intervention group and the control group in the intervention Phase 3 with a P value of 0.047 and had not appeared differences in the intervention phase 1 (P value 0.259) and stage 2 (P value 0.499) ,

During the research, deliveries in the village of Kalibuntu by health personnel increased to 98%, the mother admitted to be more convenient and close to midwives so that they wanted birth to be assisted by a midwife.

This study shows the influence of Leopold inspection with oyog modifications in the intervention phase III. This is possible because many factors affect maternal anxiety, so in an effort to reduce anxiety, it needs the support of health workers in the form of communication and relaxation.

Communication in the implementation of Leopold with modifications makes the relationship between pregnant women as patients and a midwife be close, even in the context of interpersonal relationships, having reached the stage of familiarity. In

relationships that have reached the stage of intimacy, there is mutual attachment or dependence. At this stage, it has forged a sense of friendship and trust that begins to emerge. At the time of its implementation, two-way communication between midwives and pregnant women is conducted by the smooth volume or tone of voice and smooth touch of the hand in accordance with the speed of a midwife.

Oyog massage relaxation through touch and giving positive affirmations is one of mindfulness-based intervention techniques that can reduce maternal anxiety in the face of pregnancy and going through pregnancy and prepare mothers mentally for overcoming labor. so that the pregnant women are able to go through pregnancy and birth in the natural, smooth, and comfortable way.

Oyog massage performed by a midwife can be a medium to improve interpersonal communication between midwives and pregnant women so as to form a bond of trust between them. In the aftermath of the bond of trust established, it will be easy for midwives to advocate for mothers to give birth assisted by health professionals and also allow midwives to educate patients in the preparation and provision of exclusive breastfeeding, newborn care, contraception program and others.

## CONCLUSION

1. The majority of mothers was at the age of 20-35 years (92.25%), multi gravida (61%) and unemployed (77%). The unemployment status was 96.25%.
2. patient anxiety in the stage of pre intervention, first intervention and second intervention had scores quite low at 21.89 in the stage of pre-intervention, 23.08 in the intervention phase 1 and 26.13 in the intervention phase 2.
3. he inspection of Leopold with oyog modifications show the differences between the intervention group and the

control group in the intervention Phase 3 with a P value of 0.047 and had not appeared differences in the intervention phase 1 (P value 0.259) and stage 2 (P value 0.499) ,

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# RELATIONSHIP OF ANTENATAL VISITS BY GESTATIONAL HYPERTENSION MOTHERS TO LOW BIRTH WEIGHT IN KUPANG CITY IN 2015

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## ABSTRACT

Gestational hypertension is among the top three causes of maternal mortality. One benefit of the early detection of hypertension in pregnancy is to improve the quality of antenatal care. Hypertension can harm both mothers and fetus that can lead to prematurity, low birth weight (LBW) and even death. This study aimed to determine the relationship of pregnant women with hypertension to birth weight infants in SK Lerik Hospital of Kupang City. This study was a cross sectional study conducted in women with hypertension. The population was all pregnant women with sample those having hypertension at the study site. Sampling used accidental sampling technique. The tool in this research was a structured questionnaire. The findings are as follows: most mothers having hypertension had regular ANC visits, mothers experiencing severe preeclampsia were 76.5%, most babies born to mothers with hypertension had low birth weight, and the prevalence of babies born with low weight was 64.7% and born to mothers with regular ANC visits. Therefore, birth weight is not related to the regularity of the ANC done by the pregnant women though with hypertension

**Keywords:** Antenatal visit, gestational Hypertensi.

## INTRODUCTION

Pregnancy is something that is highly coveted by every couple. Pregnancy is also becoming an important period in determining the quality of human resources of a nation. However, a normal pregnancy can turn into a life-threatening to both mother and fetus. One of frequent complication in pregnancy is hypertension.

Hypertension is blood pressure above normal limits and it is included in a global problem. According to data from the WHO in 2012, the number of cases of hypertension was 839 million cases. The case is expected to be higher in 2025. Globally, 80% of maternal deaths are classified as direct causes consisting of bleeding by 25%, hypertension in pregnant women by 12%, obstructed labor by 8%, and other causes. Hypertension is more common in pregnant women. Gestational hypertension can occur due to an

increase in diastolic blood pressure of 90-110 mmHg with 2 measurements within 4 hours at above 20 weeks gestation, with or without proteinuria. (Saifuddin, 2006). Hypertension in pregnancy becomes one of the major causes of morbidity and mortality in mothers and infants (Bobak, 2005). Hypertension in pregnancy is about 5-15% and is among the three causes of maternal mortality and morbidity in addition to infection and bleeding (Yudasmara, 2010). Meanwhile, according to Sirait (2012), the prevalence of hypertension in pregnancy in Indonesia is quite high at 12.7%.

Some of the complications that can be caused by hypertension in pregnancy include lack of plasma fluid due to vascular disorders, kidney disorders, cardiovascular disorders, liver disorders, respiratory disorders, impaired fetal growth, premature and infant mortality (Rustam, 2006). Besides, hypertension in pregnancy also may progress to preeclampsia and eclampsia which can cause death to both mother and fetus (Yudamara, 2010)

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One of the indicators assessing the quality of neonatal health is birth weight. Normal birth weight (gestational age 37-42 weeks) is 2500-4000 grams. Low or excess birth weight will have a greater risk for having problems. Hypertension in pregnancy can also affect the baby's birth weight. Birth weight is the weight of babies within 1 hour after birth. There are several classifications for newborns including classification according to birth weight and gestational age or classification according to gestational age. Women with hypertension in pregnancy are at risk for having a baby with low birth weight. Low birth weight babies are born weighing <2500 g regardless of gestational age. This is caused by the decreased uteroplacental perfusion, vasopasme, and damage to vascular endothelial cells of the placenta. In the mothers with normal blood pressure, those abnormalities are not found so that nutrients and oxygen perfusion are adequate for fetal growth.

Globally, hypertension in pregnancy is one of the three top causes of mortality and morbidity. Mortality and morbidity from hypertension in pregnancy is still quite high in Indonesia. It certainly can contribute greatly to the maternal mortality rate and infant mortality rate. Based on demographic and health survey of Indonesia (IDHS), there was an increase of maternal deaths from 228 per 100,000 live births in 2007 to 359 per 100,000 live births in 2012. The maternal mortality rate in Indonesia is the highest among the poorest countries in Indonesia. One contributor to the high maternal mortality rate is hypertension in pregnancy. The infant mortality rate (IMR) in 2012 amounted to 32 per 1,000 live births. MMR and IMR are one indicator of quality of care in obstetrics and gynecology in a region (Andammori, 2013). In the city of Kupang, on 7 cases of maternal death, 4 cases were due to bleeding, 2 cases of were due to hypertension in pregnancy and 1 case was due to other causes.

Lidapraja (2012) explains hypertension is more common at term, is more frequent in those aged > 35 years and under <20 years and is the most common referral cases. To prevent complications in pregnant women with hypertension, it is necessary for early detection in quality antenatal care so that it can monitor the state of maternal and fetal growth well, so as to minimize mortality and morbidity in the mother and infant. This study aimed to determine the relationship of pregnant women with hypertension to birth weight infants in SK Lerik Hospital of Kupang City.

## RESEARCH METHODS

This study was cross sectional study conducted in pregnant women with hypertension. The population was all pregnant women in SK Lerik Hospital of Kupang City with the samples pregnant women with hypertension with a negative urine protein. Sampling used accidental sampling technique. The tool in this research was a structured questionnaire.

## RESULTS AND DISCUSSION

### 1. Characteristic of respondent

**Table 1: Distribution of maternal characteristic**

Characteristic	f	%
Age:		34
20 – 24 y	7	20,6
25 – 29 y	20	58,8
< 35 y	7	20,6
Education		34
Elem.	9	26,5
Second.	24	70,6
Higher	1	2,9
Parity		34
Primi	19	55,9
Multi	15	44,1

Form the data, mothers with healthy reproductive age had secondary level of education.

## 2. Descriptive analysis

Table 2: Distribution of ANC regularity

ANC	f	%
Regular	29	85,3
No regular	5	14,7
Total	34	100

From the table, most mothers having hypertension had regular ANC visits.

Table 3: Type of maternal hypertension

Type of hypertension	f	%
HDK	2	5,9
MPE	6	17,6
SPE	26	76,5
Total	34	100

From Table 3, mothers experiencing severe preeclampsia were 76.5%.

Table 4: Distribution of Birth weight

Birth weight	f	%
Normal	10	29,4
Low	24	70,6
Total	34	100

From Table 4, most babies born to mothers with hypertension had low birth weight

## 3. Relationship of regularity of ANC and birth weight

Table 5: Relationship of regularity of ANC nad birth weight

ANC Regularity	Birth weight			
	normal		low	
	f	%	f	%
Yes	7	20,6	22	64,7
No	3	8,8	2	5,9
Total	10	29,4	24	70,6

Table 5 shows that the prevalence of babies born with low weight was 64.7% and born to mothers with regular ANC visits.

In this study the characteristics of pregnant women with hypertension were at a healthy reproductive age or 20-35 years. This was in line Norwitz in Hidayat (2012) that the incidence of hypertension in pregnancy including pre-eclampsia for each country was different because of many factors, including age, parity, soial economic, lifestyle and others. In addition, it was in line with the research by Lidapraja (2012) that hypertension was more common at term, more frequent in those aged > 35 years and under <20 years and the most common referral cases. In these cases, hypertension occurs in women aged 25-29 years, which means increased age has an increased incidence of chronic hypertension (Cuninggham, 2005).

Based on parity in this study, mothers who had hypertension were mostly primiparas at 55.9%. This was in line with the opinion of Hidayati (2012) that hypertension in pregnancy is associated with parity in which the primiparous mother had the greater incidence of preeclampsia because of the hormonal changes and uterine changes in new mothers at first pregnancy and in line with Cunningham that explained that hypertension in pregnancy was influenced by parity, with regard to racial (ethnic) that was also predispose to the environment.

Antenatal visit can be an indicator of the quality of antenatal care. More regularly checkups result in sooner detection of abnormalities in pregnancy both maternal health and well-being of the fetus. In this study, pregnant women who had hypertension on a regular basis checked their pregnancy since being told that there was a problem in their pregnancy. One of the aims of antenatal care is to monitor the progress of the pregnancy to ensure the health of the mother

and fetal growth and identify early abnormalities or other complications that may occur during pregnancy, including disease in general, obstetrics, and surgery history.

Babies who had low birth weight in women who had hypertension were 70.6%. This was in line with the opinion of Sistriani in Andammori (2013) that a pregnant mother's high blood pressure ( $\geq 140/90$  mmHg) can lead to impaired fetal intrauterine growth, which would certainly have an impact on birth weight. This is caused by the decreased uteroplacental perfusion, vasospasme and damage to vascular endothelial cells of the placenta. In the mothers with normal blood pressure, abnormalities were not found so that nutrients and oxygen perfusion are adequate for fetal growth. Besides, Lidapraja (2012) describes that, of 350 babies born to mothers who had hypertension, 35.14% were born weighing  $<2500$  g.

In this research, pregnant women who visited antenatal regularly gave birth to babies with lower birth weight. Of 29 mothers having regular ANC visits, 22 babies were born with low birth weight. It shows the regularity of the ANC is not an indication of low birth weight in pregnant women with hypertension. However, hypertension in pregnancy itself predisposes to LBW. Regularity in the ANC is possible to reduce the risk of mortality and morbidity in the mother and baby caused by hypertension in pregnancy.

## CONCLUSION

Pregnant women with hypertension had regular antenatal monitoring in SK Lerik hospital of Kupang City. Pregnant mothers who had hypertension especially severe preeclampsia would likely have a baby with low birth weight. Birth weight was not associated with ANC regularity in women who had hypertension in pregnancy.

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# RELATIONSHIP OF CORD CUTTING TIME TO THE LENGTH OF CORD SEPARATION AT MATERNITY CLINIC IN EAST JAKARTA

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## ABSTRACT

Various studies recommend a delayed cord cutting because it has many benefits that allow the optimal transfer of blood and nutrition, increase vital oxygen through the umbilical cord, allow the baby to quickly cry immediately after birth and to accelerate the release of the cord when compared with the umbilical cord cut soon after birth. This study aims to determine the relationship of cord cutting time to the length of umbilical cord separation in the maternity clinic of East Jakarta. This research is a quantitative analytical research conducted using cross sectional design. The samples are women giving birth at the maternity clinic of East Jakarta as many as 130 respondents with purposive sampling technique. Results of research show that most respondents cut the cord in 2-3 minutes after birth (56.9%). The duration of the cord umbilical separation with cord cutting in 2-3 minutes after birth has a mean cord separation of 172,370 hours (7.1 days) and in 24 hours after childbirth is 137,393 hours (5.72 days).

Related parties are expected to provide input to policy makers related to service delivery to reduce the risk of infection in newborns.

**Keywords:** cord cutting time, length of cord separation, newborn

## INTRODUCTION

Indonesia's infant mortality rate (IMR) remains high at 34/1,000 live births (IDHS 2007), approximately 55.8% of deaths occurred in the very early period in the neonatal period and approximately 78.5% of them occur at the age of 0-6 days. According to data from the Ministry of Health, 75% of infant deaths occur in the perinatal period. The most dominant cause of neonatal deaths in the age group of 8-28 days is an infection by 57.1% (including tetanus, sepsis, pneumonia, diarrhea) and of the figure, the proportion of neonatal tetanus mortality is by 9.5% (MOH, 2008). The main problem of newborns in the perinatal period can cause death, pain and disability; one of them is the problem of infection in newborns. This is as the result of poor maternal health conditions, inadequate care during pregnancy, the improper and unclean management during delivery, as well as inadequate neonatal care.

Antenatal care and childbirth assistance according to the standard should be accompanied by adequate neonatal care.

The delayed cutting of the umbilical cord is one of the techniques that allow the cord to stay connected with the baby and placenta after birth, without clamping or cutting, so that there is no opportunity for germs to enter the body of the baby through the umbilical cord. Delayed cutting of the umbilical cord is believed to augment the immune in newborns. Infants are expected to get more blood containing oxygen, food and antibodies thus it is recommended to give time for the cord to separate from the baby naturally. In this way, the umbilical cord and placenta is treated as a unit until the time of separation naturally that usually occurs 3-10 days after birth.

A study by Oski, FA (1996), mentions that the average volume of blood in one-half hour after birth in infants with early clamping is 78 ml / kg compared to 98.6 ml / kg of weight in infants with postponed clamping.

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The World Health Organization (WHO) stressed the importance of unification or rooming-in approaches to the care of mothers and babies, and stated in the Normal Delivery Care (Geneva, Switzerland, 1997), “The delayed clamping (or not at all clamped) is the physiological way in umbilical cord care and early cord clamping is an intervention that still requires further verification.”

One study associated with the umbilical cord that has been done was research performed by Salah M. et al in 2010 to analyze the effect of clamping time at 45 seconds (advanced clamping) after the birth on the baby's hemoglobin and hematocrit levels compared to 15 seconds (early clamping) and the results showed mean hemoglobin and hematocrit concentration of the group at 45 seconds was higher (statistically significant) than the clamping group at 15 seconds.

Another study in Dr. Kariadi Hospital Semarang showed cord care using alcohol 70% or 10% povidone iodine and obtained a different length of time statistically significant, showing separation of  $6.61 \pm 1.48$  days by alcohol 70% and  $5.53 \pm 1.48$  days by 10% povidone iodine (Betadine), with  $p = 0.003$  (Wahyono.H, 1998).

In Indonesia, the delayed cord cutting is not commonly done, only a few birthing centers that apply this method. Currently, there are many pros and cons related to the technique. This is due not all understand the benefits of delay in cord cutting. Thus, the research associated with it is still limited. However, this technique has been widely carried out in communities in the world such as America, Tibet, and so on. In Indonesia, it has been done on the people of Bali conducted by an American midwife.

The location of this research is in the one maternity clinic located in East Jakarta, has made delivery assistance with a delay of cord cutting since mid 2012. The clinic modify

cord delay time, ie, 24 hours after the baby is born. Given the persistence of the pros and cons of the delay in cord cutting and the lack of research on the relationship of cord cutting time and the length of umbilical cord separation in newborns, the researchers are interested in doing this research.

## RESEARCH METHODS

This research was a quantitative analytical research with cross sectional design. The sample was 130 mothers who gave birth at the maternity clinic in East Jakarta in 2013. The data was collected using primary data of observation of cord cutting time and its separation time. It also used secondary data obtained from the medical records of the maternity clinic to determine the inclusion and exclusion criteria for the samples.

## RESULTS AND DISCUSSION

**Table 1: Distribution of respondents by delayed cord cutting time in Maternity Clinic in East Jakarta**

Cutting time	F	
	$\Sigma$	%
2-3 after birth	74	56,9
24 hours after birth	56	43,1

From Table 1 it is known that the majority of respondents (56.9%) carried a 2-3 minute cord cutting after birth. This was in accordance with the conditions in some facilities in Indonesia that most of the cord cutting time is done after 2-3 minutes after birth (Ministry of Health, 2013).

**Table 2: The mean cord separation by cord cutting time at Maternity Clinic East Jakarta**

Type of cord cutting	Mean cord separation
2-3 after birth	172,370 h (7.2 d)
Delay after 24 hours after birth	137,393 h ( 5.7 d)

Seen from Table 2, the mean time of cord separation to a cutting delay within 24 hours was 137,393 hours or 5.7 days, while the cord cutting after birth, ie, 2-3 minutes required 172,370 hours or 7.2 days. When viewed from an average time of the cord separation, it was proven faster with a delay of 24 hours after birth.

The results are consistent with research by Ratnasari et al, (2013) which state that there are significant differences in cord separation between delayed cutting and no delayed cutting. When 2-3 minutes after the baby is born the umbilical cord is cut immediately, blood flow from mother to baby has been cut down, the umbilical cord is often treated using antiseptic gauze and this give rise to a cord to dry long and hard to separate, while in a delay in cord cutting, the umbilical cord is not wrapped and compressed so that it is dry quickly and easily separated.

This is in line also with the results by Gultom (2003) of sub-section of neonatology RSCM Jakarta that umbilical cord separates in 5 days, 7 days or even two weeks. Research results by Juniati, et al (2009) state that the average cord separation with a dry treatment is 131 hours 27 minutes (5.5 days) and treatment with alcohol is 174 hours 43 minutes (7.3 days) and treatment using a povidone iodine 10% is 138 hours 25 minutes (5.8 days).

### CONCLUSION

The separation of the cord is faster with a delayed cord cutting of 24 hours after the

birth. The is a difference in the mean cord separation between 2-3 minutes after birth (172.370 hours = 7.2 days) and 24 hours after birth (137.393 hours = 5.7 days). There is a need for further study to deeply determine the policy of cord cutting time in newborns.

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# THE CORRELATION BETWEEN FAMILIES ASSISTING ON PRIMIPARA'S WOMEN TOWARDS ANXIETY LEVEL IN SOREANG GENERAL HOSPITAL OF BANDUNG REGENCY

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## Abstract

Childbirth is a valuable experience for a woman. Many factors influenced women experience childbirth. A primipara mothers usually have difficulty recognizing the changes that occur in the body that cause discomfort during childbirth. It is a psychological influence on the mother, because of a lack of knowledge of the pregnant women. Sufficient information on the family as a companion and attendant to give good effect. The assistance of families in childbirth is one part of the care of maternal affection which refers to the basic needs of maternal and aimed to reduce maternal anxiety levels, so it can be a non-pharmacological therapy. The aim of the research was to analyze the relationship between family assistance on primipara mother at Regional Soreang General Hospital. This research method used analytical research with cross sectional approach; data retrieval is done by observing the level of anxiety primiparous mothers in Soreang General Hospital with 25 samples encountered during the study. Data processed by statistical methods, namely SPS chi-square. Based on the results, primiparous mothers who accompanied the family that have light anxiety levels as many as 93.3% with a value of  $p < 0.000$ . The Conclusions of the research is the assistance on primipara mothers associated with severity levels of anxiety.

**Keywords: Primipara's women, Anxiety, Family Assistants**

## INTRODUCTION

Childbirth is a series of processes that ended with the expenditure of the conception by the mother. During childbirth, mother will experience a series of events beginning with uterine contractions, cervical dilation until laboring the baby and placenta and ended when a process of bonding between mother and baby begin. Research conducted by Green and Simkin found that the experience of women in childbirth process is essential and further define the social welfare of the women.

Research conducted by McLachlan and Waldenstrom (2005) which conducted towards 100 Australian women by interview between 24 hours after childbirth and out of the hospital. The study was conducted to find out how they feel during labor and birth, and only it is only 15% of them said that they did not experience anxiety. In addition, this study only included women who had a vaginal delivery directly without major medical

problems (such as preeclampsia or eclampsia, postpartum hemorrhage, severe psychiatric disorders or pulmonary embolism) and that has given birth to a healthy baby. This study showed a high prevalence of anxiety even in normal pregnancy and childbirth. The anxiety that occurs in pregnancy until childbirth can cause birth outcomes are not as profitable as prolonged labor, premature delivery, low birth weight and cesarean section. This shows that anxiety in pregnancy is a major predictor of the number of adverse birth outcomes.

Before childbirth, many things come to mind worrying mother. Fear of disability babies, surgery, duration of the childbirth, and so on. Especially if there is a friend or relative who recount their childbirth experience, added by horrific comments. The peak worries coincided with signs of going to childbirth. Increasing contractions will increase the burden of the mother, so the fears will grow. In this condition the feeling of worry, if not handled properly will lead the panicked to the mother.



The anxiety experienced to mothers who gave birth for the first time. Primipara is a woman who just gave birth for the first time. Primipara mother usually have difficulty recognizing the changes that occur in the body that causes discomfort during labor. This will affect the psychological, because of the lack of knowledge of the labor. Adequate information from the family and the officer gave a good effect. Loving Mother Care Program during labor that one important element in it is to provide emotional support. Emotional support can be done by presenting a companion in labor. With the labor companion, a laboring woman will feel confident and not afraid to face the process of childbirth. This refers to the basic needs during including the presence of a companion. Every laboring need emotional support to help them in the process of child birth. The presence of family in child birth process is expected, due to the support, so that the mother felt safe, comfortable and heartened that his birth would be running smoothly and normally. Based on the explanation, this study was to analyze the relationship between maternal family assistance towards the anxiety level.

## RESEARCH METHODS

This research used an analytical method with cross sectional approach were the type of research conducted on the variables studied by creating relationships between variables in order to determine the correlation of family assistance on primipara mother towards anxiety level. The location research performed in General Hospitals of Soreang in Bandung in July 2015. The populations in this study were women who child birth in Soreang General Hospital in 2015. The sampling method used is accidental sampling method. Accidental sampling is a sampling procedure is to select a sample based on the

person or unit that is most easily found or accessed. The numbers of samples in this study were 25 people who meet the inclusion criteria who is primipara mother and adequate month in the active phase of stage 2, planned spontaneous vaginal delivery, there are families who accompany, without complications or complications and willing to become respondents.

In this research, the measuring instrument to be used for data collection is closed questionnaire about maternal anxiety. The questionnaire used is a development questionnaire from Spielberger be "State Anxiety" with Likert scale with scores answer 4 = always, 3 = frequently, 2 = sometimes, 1 = never to items that indicate the presence of anxiety and answer score 4 = never, 3 = sometimes, 2 = often, 1 = always for those items that indicate a lack of anxiety. The questionnaire was drawn from research conducted by Firdayanti (2012) entitled "The relationship anxiety levels in the first stage of labor assistance by the husband or the mother with the length of the child birth in second. Questionnaires have been done to test the validity and reliability test so that the study was not necessary to test the validity and reliability testing.

## RESULT AND DISCUSSION

**Table 1: the frequency distribution of assisting on primiparas mother**

Variabel	N	%
Companied	15	60
Uncompanied	10	40
Jumlah	25	100

The table shows that as many as 15 primiparas (60%) were accompanied at child birth as many as 10 people (40%). The

presence of husband to provide support is very important for the wife during the process of childbirth. Many evidence shows that husbands who involve in pregnancy and childbirth have a positive impact useful for him, his wife, and the development of their children. Research by Keirse et al proved that support the positive impact is the support that is both physical and emotional. The support includes several aspects such as rubbing her back, holding her hand, maintain eye contact, accompanied by people who are friendly, the mother did not undergo childbirth alone.

**Table 2: Anxiety Level of Primiparas Mother Accompanied by Family at Child Birth Process**

Anxiety level	N	%
Light	14	93,3
Medium	1	6,7
Severe	0	0
Total	15	100

Based on the table above, the level of primipara mothers were accompanied by the family at the time of delivery, including light anxiety level as many as 14 people (93.3%). One of the factors that affect the physiology in labor is anxiety. Anxiety is a response to threats, whose origins are unknown and are conflicted. Maternal anxiety is a condition of the mothers who have hard feelings and the activation of the autonomic nervous system in response to obscurity, non-specific threats. Anxiety caused by not specifically the completion of self-concept on his health, values, fulfillment, achievement of goals, inter-personal relationships and a sense of security.

Pregnant women who are undergoing the process of childbirth, psychological barriers may be a greater influence than physical

barriers. If there is a physical disorder combined with a psychological disorder, there will be a mechanism uncoordinated uterine action. When the mother is very afraid of the birth, the brains automatically organize and prepare the body to feel pain as a result of pain during labor increasingly felt. Various physical and psychological barriers in the mother during child birth can add to the pain. Anxiety about the pain of child birth can be overcome if the mothers prepare the body and mind. With the support of her husband, the mother can overcome anxiety and feel excited in labor.

**Table 3: The Relationship of Family Assistance on Primiparas Mother with the Anxiety Level**

Variable	Anxiety level						pVal ue *
	Light		Medium		Severe		
	n	%	n	%	n	%	
Compa nied	14	93,3	1	6,7	0	0	
Uncom panied	1	10	6	60	3	30	.000

Ket: \*) *Chi Square test*

From the above table, it can be concluded that based on statistical calculations chi-square test, it appears there was a significant association ( $p < 0.05$ ) between mentoring families with anxiety levels ( $p = .000$ ). The delivery process is an experience that requires a lot of energy, emotional, and physical. Therefore, it would be very nice if birth mothers can share the experience with someone. The first option chosen was the husband because he involved with the process from the beginning of pregnancy.

The presence of the husband to provide support is very important for the wife during the process of childbirth. Many evidence shows that husbands who involve themselves in pregnancy and childbirth have a positive

impact useful for him, his wife, and the development of their children. The progress of labor can occur if a woman feels safe, respected, and treated by a medical officer in charge of security, and when the pain is treated adequately and safely. Couple caregiver labor plays an important role on these feelings. Feelings of shame or worthlessness, felt treated without respect; feeling neglected can trigger reactions that disrupt efficiency psychobiological progress of labor. Most women who are pregnant for the first time worrying about aches and pains they will face and how to overcome them. Reaction to the pain and the pain can be caused by mood and state of the maternal environment. Labor pain can be intensified if maternal surrounded by people he did not know.

The anxiety level to face the child birth on primigravida mother higher than in the multigravida mother. In primigravida, facing the child birth of a new experience that will be experienced without knowing what will happen later so as to make the woman feel depressed and can cause feelings worry and anxiety. For multigravida mother, child birth is an experience that has happened thus making pregnant woman was able to draw lessons from previous experiences. Support to the mother, especially from the husband would give rise to the peace and good feeling to the mother.

## CONCLUSION

The results of this study can be concluded that there is a significant relationship between mentoring families with primipara maternal anxiety levels. The suggestions can be submitted on this research, especially on midwives to provide counseling on labor companion of the mother when the examination of the ANC and remind her to

decide who will be the companion during childbirth later and give comfort to the mother when the delivery takes to reduce anxiety levels mother on during childbirth.

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# THE INFLUENCE OF EARLY BREASTFEEDING INITIATION ON THE STABILITY OF INFANTS' BODY TEMPERATURE IN JUMPANDANG BARU AND KASSI – KASSI PUBLIC HEALTH CENTERS OF MAKASSAR IN 2015

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## ABSTRACT

Lack of good handling of newborn infants that can lead to lifelong disability and death. The aim the research is to determine the influence of early breastfeeding initiation on the stability of infant's body temperature in Jumpandang and Kassi-kassi public health centers of Makassar in 2015. The research was a cohort prospective research. The population were all mothers who did early breastfeeding initiation in Jumpandang and Kassi-kassi public health centers conducted from June to July 2015. The sample was selected using accidental sampling technique consisting of 63 respondents. The data were analyzed using paired T-test. The result of the research indicate that of the research indicate that of the 63 total respondents, 34 (54%) of them do early breastfeeding initiation accurately and 29 (46%) of them do it inaccurately. The result of statistic test of paired T-Test indicates that the accurate early breastfeeding initiation group has a value of  $p > 0.29$  and the inaccurate early breastfeeding initiation group has a value of  $p > 0.19$ . This means that both accurate and inaccurate early breastfeeding initiation group have stable body temperature. The average stable breastfeeding initiation is  $37.05^{\circ}\text{C}$ , while the one for inaccurate early breastfeeding initiation is  $36.86^{\circ}\text{C}$ .

## BACKGROUND

The order of the causes of infant mortality rate (IMR), especially in the age Neonatal 0-6 days caused by respiratory disorders (35.9%), prematurity (32.4%), sepsis (12%), hypothermia (6.3%), jaundice (5.6%), posmatur (2.8%) and congenital anomalies (1.4%).

Hypothermia caused for the infant mortality rate of 6.3% one cause of hypothermia is less favorable treatment of hypothermia Newborns. One treatment that is right for newborns by performing the Early Initiation of Breastfeeding. In this case the mother's body used as thermoregulator which function is to regulate the temperature of the baby when the baby feels cold or heat (Dita, 2012).

Lack of good handling of newborn infants that can lead to lifelong disability and death. Hypothermia in newborns can lead to a cold stress which in turn can cause hypoxemia or hypoglycemia and cause brain damage

One of heat loss (hypothermia) is by giving early initiation of breastfeeding. Babies should not be

cleaned, except their hands. This process should be skin to skin between the baby and the mother. Let the baby in the mother's chest for an hour even able to nurse himself. Leather maternal function as an incubator, because it is warmer than the mother's skin that are not maternity. It can automatically affect the temperature of the newborn susceptible to heat loss. This means, with the IMD risk of heat loss (hypothermia) in newborns that will cause deaths could be reduced (Rury, 2012).

## RESEARCH METHODS

This research is a prospective cohort study. The population in this study were all women who undergo IMD in Jumpandang baru Health Center and Health Center-Kassi Kassi Makassar with a total sample of 63 respondents.

The research instrument used in this study is the observation sheet (check list) to record the length of time doing skin contact between mothers and babies at IMD and the baby's body temperature prior to IMD, after the IMD, every hour for 12 hours and 24 hours later.

## RESULTS AND DISCUSSION



From table 1 described the characteristics of the mother in this case the mother who does IMD either proper or improper as many as 63 people. In terms of age, there were 7 (11.1) of mothers aged > 35-40 years, 9 (14.3%) of respondents were aged <20 years and dominated 47 (74.6) of mothers aged 20-35 years old. By seeing of parity which is dominated by multiparas that 36 (57.1%), then primiparity 25 (39.7%) and 2 (3.2%) grandmultipara. The period of second stage relatively quickly because it is dominated by the old stage II 5-10 minutes as many as 34 (53.4%), then 11-15 minutes as many as 17 (27%) and as many as 12 (19%) of mothers long time II > 15-30 minutes. Characteristics of the baby as sample that contained 36 of the 63 infants (57%) infants-sex male and 27 (42.9%) infants were sex-female. By seeing of the baby's weight, dominated by babies weighing 2500 - 3000 grams of as many as 39 (61.9%) and 24 (38.1%) infants whose birth weight > 3000-4000 grams.

Table 2 showed that from 63 respondents who did early initiation of breastfeeding, there were 34 (54%) of respondents who did early initiation of breastfeeding properly and there were 29 (46%) who did the early initiation of breastfeeding improperly.

Based on Table 3 can be explained that the baby's body temperature before doing initiation of early breastfeeding (IMD) is 36,980C for respondents who did IMD properly. While the respondents who did IMD improperly, the baby's body temperature is 36,860C. Where 0.076 p value <0.05 so that it can be concluded that there was no difference in the baby's body temperature is significantly before giving IMD.

The differences of Baby's body temperature seen between groups that do IMD properly and improperly at the time immediately after the initiation of early breastfeeding (IMD), one hour after the IMD made until 6 hours Where IMD relatively was high from the group which did proper IMD compared with the group that did the improper IMD. Where the value of  $p < 0.05$  so that it can be concluded there was an effect on the baby's body temperature IMD conducting proper and improper IMD.

But the baby's body temperature relatively look same at 12 hours after the IMD and 24 hours after the initiation of early breastfeeding (IMD) where the value of  $p > 0.05$  so that we can conclude, there is no impact or difference between the baby's body temperature from the babies which did proper and improper IMD.

Table 4 shows that the statistical test for Paired T-Test showed that in the group of proper IMD p value of  $0.29 > 0.05$  and in the group that improper IMD p value of  $0.19 > 0.05$  it means group perform early initiation of breastfeeding (IMD) proper and improper equally experienced a stable body temperature. In the group of proper IMD, temperature is stable with an average of 37.05 ° C, while in infants who did the improper IMD, temperature is stable with an average temperature of 36.86 ° C.

In this study showed that the baby's body temperature before IMD relatively good cooperation between all infants who did proper and improper IMD. While at the time immediately after the IMD done, 1 hour to 8 hours after, the baby's body temperature who did proper IMD tend to be higher than infants who did improper IMD. While 9 hours until 12 hours after and 24 hours after the IMD. It is shown that there is no significant difference to the temperature in both groups.

In this study, the age factor does not become an obstacle to the implementation of early initiation of breastfeeding, for the mother to accept the information provided and very cooperative with the officer.

Based on parity term, maternal conduct proper and improper IMD dominated by multiparas 2-4 times give birth to as many as 36 people (57.1%), primiparous 25 people (39.7%) and the least grande multipara ie 2 people (3.2%). According to Notoatmodjo knowledge is the result of knowing, most of the knowledge gained through the eyes and ears, which is derived from education, experience, and social relationships resulting changes in knowledge and behavior. This is in line with the results of research conducted by

Utami (2008), shows that of the 900 mothers in Jabotabek fact obtained 70.4% of women were never informed about the benefits of exclusive breastfeeding, especially about IMD thus influencing mothers' knowledge, attitudes and behavior about breastfeeding.

Of all respondents who obtained no obstacle on the second stage so that it takes a relatively short time thus will not disturb the implementation of the IMD. The long period of IMD affect the implementation of the second stage, if second stage implementation takes long it will cause complications for both the mother and infants thus can cause IMD not be done.

The characteristics of babies who did proper and improper IMD. Male shows more with the number of 36 (57.1%) female infants is 24 (42.9%). In this study, a baby's sex does not affect the application of the implementation of the IMD.

Based on birth weight respondents terms, the average weight 2500-3000 grams of 39 (98%) of respondents, and 24 (38.1%) infants born weighing > 3000-4000 grams and born not IMD. In this case all respondents with normal birth weight.

One of the indicator by doing IMD is the condition of both mother and baby, birth weight infants show the standards of normal birth weight is 2500-4000 grams. The categories used are normal birth weight so it does not provide significant effect on the implementation of the IMD (Setyorini et al., 2011) ..

Below normal weight infants (<2500 g) cannot be done IMD because it requires special handling. Low birth weight infants is usually caused by growth retardation, asphyxia and other complications that require special handling when it is born and is not recommended to do IMD (Aprilia, 2009).

Results of research conducted at the health center Ujumpandang baru -Kassi Kassi Makassar, shows that early initiation of breastfeeding has been implemented on all deliveries without

complications for both mother and baby. But unfortunately the IMD implementation has not been done according to the standard that is at least 60 minutes on most birth attendance; some health care facilities that serve deliveries in the city of Makassar not apply to the maximum IMD. Negligence health personnel attending births also factored into the IMD is not implemented properly. Besides understanding of maternal and husbands or families about the importance of correct IMD is not well understood so IMD was missed during post partum.

Conditions seen so far in the health service, especially in the delivery room/maternity wards, the number of nurses or midwives are very limited, while they should help mother to deliver the baby and do the tasks that must be completed, so that the process or the stages of childbirth every pregnant woman should be completed as soon as possible including skip the IMD process. However, as the officer's room maternity has become an obligation to help labor in accordance with the standards (Utami, 2008).

This is in line with research Munzia and friends. Whereas in principle, the birth attendant must consider several things, namely the prevention of infection, appropriate aid delivery method standard, Refer cases that require a higher level of service and implement the Early Initiation of Breastfeeding (IMD).

Based on statistical test (Mann-Whitney) showed that in the initial measurement is the measurement of the baby's body temperature prior to IMD is not seen no difference in average temperature of the baby, according to the statistical result that the p value  $0.076 > 0.05$  so that it can be concluded that there is no difference significantly .

This study shows that there are significant IMD against the baby's body temperature before and after the IMD. Maintaining the baby's body temperature is caused by the baby's skin is attached to the mother's skin so as conduction occurs, the heat transfer directly from mother to infant (Hutagaol et al., 2014) .

Besides for their conduction, as well as when the

baby is placed on the mother's chest, he moves on all fours while looking for the mother's nipple. The existence of this movement can stimulate the production of heat that stimulates the central nervous system, the sympathetic nervous to use fat as a source of heat in infants

Newborns lose heat four times greater than in adults, resulting in a decrease in temperature. In the first 30 minutes the baby may experience a drop in temperature 3-4oC. In the room with the baby's skin temperature 20-25oC temperature dropped about 0,3oC per minute. This drop in temperature caused by heat loss by conduction, convection, evaporation and radiation. Baby rudimentary capability in producing heat, the baby is very susceptible to hypothermia (Kliegman, 2012).

Reduce heat loss is associated with an attempt to survive in the newborn. During the period of skin to skin contact, core temperature and abdominal skin temperature increased indicating gains in the prevention of heat loss. As long as the baby is in swaddling clothes and far from the mothers there is a decrease in body temperature and increase heat loss. Swaddling clothes are too tight and strong will make the baby cold because they could not defend the position of flexi (Waldron & Mackinnon, 2007).

Mom can serve as a mediator hot and bounding the attachment so that the baby feels more comfortable being in mother's hug. Various other factors that may affect the baby's body temperature changes such as the mother's weight and the ambient temperature are not reviewed in this study.

The results of this study reinforce the application of the IMD must justify in any medical institution that provides services delivery assistance. IMD does not only provide benefits in sustainable breastfeeding but also provide benefits to the stability of the newborn's body temperature.

Baby's body temperature before IMD relative good cooperation between all infants who did proper and improper IMD While at the time

immediately after the IMD done, 1 hour to 8 hours after the baby's body temperature IMD done doing early breastfeeding initiation (IMD) tend to be higher than infants who did not proper IMD. While 9 hours until 12 hours after and 24 hours after the IMD .IMD made no significant difference to the temperature in both groups. Group which do early initiation of breastfeeding (IMD) proper and improper equally experienced a stable body temperature. In the group of proper IMD temperature is stable with an average of 37.05 ° C, while in infants who did the improper IMD temperature is stable with an average temperature of 36.86 oC. Health education is needed to pregnant mother and her partner (husband) and his family associated with benefits IMD.

**Tabel 1: Characteristics of respondents mothers who do IMD in Jumpandang Baru And Kassi – Kassi Public Health Centers Of Makassar In 2015**

Characteristic	N	%
<b>Mothers age</b>		
< 20 years	9	14,3
20 – 35 years	47	74,6
>35 – 40 years	7	11,1
<b>parity</b>	25	39,7
Primipara	36	57,1
Multipara	2	3,2
Grandemultipara		
<b>Period of stage II</b>	34	54
5 – 10 minutes	17	27
11 – 15 minutes	12	19
>15 - 30 minutes		
<b>Gender</b>	36	57,1
Sex male	27	42,9
Sex female		
<b>Weigh</b>	39	61,9
2500 – 3000 gr	24	38,1
>3000 – 4000 gr		

**Tabel 2: The accuracy of Early Initiation of Breastfeeding (IMD) in Jumpandang Baru And Kassi – Kassi Public Health Centers Of Makassar In 2015**

The accuracy	N	%
proper	34	54
improper	29	46

**Tabel 3: Baby's body temperature before and immediately after the IMD, 1 to 12 hours and 24 hours after the IMD Jumpandang Baru And Kassi – Kassi Public Health Centers Of Makassar In 2015**

Variabel	The accuracy of IMD		P*
	proper	Improper	
Before IMD	36,98 °C	36,86 °C	0,076
Immediately after IMD	37,29 °C	36,81°C	0,000
1 hour after IMD	37,19 °C	36,83°C	0,000
6 hours after IMD	37,05 °C	36,88°C	0,006
12 hours after IMD	36,9 °C	36,9°C	0,310
24 hours after IMD	36,96 °C	36,89°C	0,446

Remarks: \*) is calculated based on the Mann-Whitney test

**Table 4: Stability of Temperature Difference Analysis baby taxable income do Early Initiation of Breastfeeding (IMD) properly or improperly in Jumpandang Baru And Kassi – Kassi Public Health Centers Of Makassar In 2015**

Variabel	Infan's body Temperature				P*
	Immedi ately after IMD	6 hours after IMD	12 hours after IMD	24 hours after IMD	
proper	37,29 °C	37,05 °C	36,9 °C	36,96 °C	0,29
improper	36,81 °C	36,88°C	36,90°C	36,89°C	0,19

Remarks: \*) was calculated by Paired T-Test

## CONCLUSION

Infans's body temperature before IMD relative good cooperation between all infants who did proper and improper IMD. While at the time

immediately after the IMD done, 1 hour to 8 hours after the baby's body temperature IMD done doing early breastfeeding initiation (IMD) tend to be higher than infants who did not proper IMD. While 9 hours until 12 hours after and 24 hours after the IMD IMD made no significant difference to the temperature in both groups.

The group that did the early initiation of breastfeeding (IMD) proper and improper equally experienced a stable body temperature. In the group of IMD right temperature is stable with an average of 37.05 ° C, while in infants who did the IMD improper temperature is stable with an average temperature of 36.86 ° C

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# RELATIONSHIP OF KNOWLEDGE AND POSTNATAL BREAST CARE TO BLOCKED DUCTS DURING BREASTFEEDING AT SUKADANA PHC OF LAMPUNG TIMUR IN 2015

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## ABSTRACT

Blocked ducts during breastfeeding can happen to postpartum mothers at second or third day after birth when the breast has produced milk. When untreated, it can cause mastitis. Based on reports from Indonesia Demographic and Health Survey (IDHS) in 2007, one third of women aged more than 25 years in the world (38%) were not found to have blocked ducts during breastfeeding due to breast engorgement. The prevalence of the incidence of breastfeeding blockage at Sukadana PHC in 2012 was 29.7%, and increased in 2013 increased to be 38.1%.

This study aimed to determine the relationship between knowledge of postpartum mothers on breastfeeding technique and practice in the post-natal breast care during post partum and the incidence of blocked ducts during breastfeeding in 2015.

This was an analytical with Cross Sectional study design. The sampling used accidental sampling and the sample size was 58 people. This research used a questionnaire and check list for measuring instrument, along with observation and guided interviews. Analysis used univariate and bivariate.

Univariate test results showed that the percentage of blocked ducts during breastfeeding was 27.6%, postpartum mother with bad knowledge were (53.5%) and with the good breast care was 51.7%. The result of chi-square statistic showed that there was a relationship of knowledge about breastfeeding technique and breast care after birth to blocked ducts during breastfeeding in this study.

**Keywords: blocked ducts during breastfeeding, post natal breast care**

## INTRODUCTION

Blocked ducts of breastfeeding is the swelling of the breasts due to increased venous and lymphatic flow, causing blockage and pain accompanied by rise in body temperature (Sarwono, 2005). Mothers who have this blockage feel pain in their breasts, sore nipples and increased body temperature. The pain felt by the mother causes the mother not want to breastfeed their babies, so that the baby is not getting enough milk and will get ill (Saryono and Pramitasari, 2009).

Based on reports from Indonesia Demographic and Health Survey (IDHS). at age more than 25 years one third of women in the world (38%) were found not to breastfeed due to swelling of the breasts, and in Indonesia the coverage number of exclusive breastfeeding reached 32.3% (IDHS 2007). In 2008 46% of mothers was found to experience swelling in the breast. (IDHS, 2008). Then in 2009, it showed that 55% of mothers experienced breastfeeding mastitis and sore nipples (IDHS, 2009).

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Based on data from the Health Office of East Lampung, the highest incidence rate of

blocked ducts of breastfeeding at Sukadana PHC was 38.1% in 2013. The data showed that there are a trend of increasing prevalence at Sukadana health center in the last 3 years; the data of the incidence experienced by breastfeeding postpartum mothers in 2012 were 30 (29.7%) of 101 puerperal women, and increased by 37 (38.1%) of 97 puerperal women in 2013. In 2014, the incidence increased by 39% in Sukadana PHC. The prevalence of breastfeeding blockage on postpartum mother in Sukadana PHC was higher than that in the region of Sekampung PHC as much as 17.3%. The prevalence in Sukadana PHC was also higher than that in Purbolinggo PHC in 2012 as much as 26.5% and in 2013 as much as 22.5%.

Factors that lead to blocked ducts of breastfeeding is emptying the breast that is not perfect, baby sucking inactive, feeding position which is not correct, inverted nipples, too long nipple, and maternal knowledge on breast care and blocked ducts of breastfeeding (Rukiyah and Yulianti, 2010: 346). According to Prasetyono (2010: 166), in addition to the factors already mentioned earlier, not caring the breasts during childbirth also causes this blockage.

Blocked ducts of breastfeeding is one of the causes of failure to achieve exclusive breastfeeding. It is caused by the exclusion of milk which is not smooth, because the baby is not nursed often enough, increased production, late lactation, not good relationship with the baby (bonding), and the restrictions of time breastfeeding (Prawihardjo, 2008). Exclusive breastfeeding for the mother can prevent the breastfeeding blockage and mastitis in the mother, because feeding the baby as much as possible according to the program of exclusive breastfeeding is good for spending breast milk, so as to prevent the occurrence of

breast swelling that can lead to breastfeeding blockage and mastitis (Brinch, 1986).

Dwiyanti research results (2009) at the Hospital Dr. Moewardi Surakarta obtained P value (0.000 <0.05) showing a significant relationship between knowledge about breastfeeding technique and blocked ducts of breastfeeding, while the results of Sholichah (2011) in the village of Karang Duren Semarang obtained P value 0.007 showing the relationship of breast care during childbirth to breastfeeding blockage. In addition, the research results by Sari (2012) in Wiradesa PHC Pekalongan obtained P value of 0.001 meaning there was a significant relationship between breast care during childbirth and breastfeeding blockage.

Data of pre-survey through interviews with 10 mothers postpartum using interview guide / questionnaire obtained the following results: bad knowledge with  $\leq$  mean value (9.8) as many as 7 people (70%), whereas in the practice of post-natal breast care it is said bad when one of breast care items is not done and the data obtained were six people (60%).

## METHODS

This study used a cross sectional design, to determine the relationship of knowledge about breastfeeding and postpartum breast care practices to the incidence of blocked ducts of breastfeeding incidence. The study location was in Sukadana PHC, East Lampung. The study was conducted in April 2015. The population in this research was all mothers in 0-42 days of postpartum in April 2015. Determination of sample in this research was by accidental sampling totaling 58 people. Measuring instrument used was a questionnaire and check list. The measure procedure was through observation and

guided interviews. Analysis used univariate and bivariate.

## RESULTS AND DISCUSSION

**Table 1: Percentage of blocked ducts of breastfeeding after childbirth**

Variable	F	%
Blockage	16	27,6
No blockage	42	72,4
Total	58	100

**Table 2: Percentage of knowledge and breastfeeding technique**

Variable	F	%
Poor knowledge	31	53,5
Good knowledge	27	46,5
Total	58	100

**Table 3: Percentage of breast care after childbirth**

Variabel	F	%
Perawatan payudara kurang baik	28	48,3
Perawatan payudara baik	30	51,7
Jumlah	58	100

**Table 4: Relationship of knowledge and breastfeeding technique and breast care to blocked ducts during breastfeeding**

Variable	POR	p
Independent		
Poor knowledge	1,57	0,017
Poor care	4,87	0,026

The results of frequency distribution of the incidence of blocked ducts of breastfeeding, of 58 respondents, 27.6% (16 women) experienced blocked ducts of breastfeeding and 72.4% (42 mothers) did not. This result was higher than the results of research conducted by Vera (2009) in Kota Gajah PHC of Lampung Tengah, ie, of 155 puerperal women, 15.4% (24 mothers) experiencing the blockage.

Blocked ducts during breastfeeding in puerperal women was due to many factors that can be seen by the characteristics of the respondent at 60.9% (50 mothers) with no job or unemployed, 56.1% (46 mothers) with secondary education background, 28.0% (23 mothers) with parity at risk, and 26.8% (22 mothers) aged at risk.

Based on data obtained during the study, of 16 mothers with blockage, only one person with the status of work outside the home, as civil servants, and the other as a housewife who worked in the house. Mothers with blockage consisted of 62.5% with high school background and 31.25% with junior high school background. Deformities on the nipple was experienced by 11 people (68.75%) of all postpartum mothers where 6 people were with flat nipples and 5 with inverted nipples. Problems concerning nipple shape will pose difficulty for the baby to suckle, because babies cannot suck the nipple and areola, resulting in more milk to produce inside the breasts.

The results of the frequency distribution of knowledge about how to breastfeed showed that, of 58 respondents, 53.5% (31 mothers) had poor knowledge and 46.5% (27 mothers) had a good knowledge. This result indicated that the percentage of mothers with less knowledge was greater as many as 53.5%, compared with the results of research conducted by Muniarti (2012) in RB Nur Hikmah Semarang, ie, of 32 puerperal women, 31.3% (10 mother) with less knowledge.

The higher a person's knowledge about breastfeeding, it will affect a person's mindset and attitude in providing breast milk to the baby. Wrong breastfeeding mechanism may lead nipples to become sore and painful at the time of feeding. As a result, mothers do

not want to breastfeed their babies and blockage occurs. Knowledge is also a result of knowing after one performs on a particular object sensing; sensing occurs through the human senses of sight, hearing, smell, taste and touch. Most human knowledge is obtained through the eyes and ears (Notoatmodjo, 2007).

Maternal knowledge in this study was also influenced by maternal education. The majority of respondents or 36.2% (21 respondents) had the primary level of education and this could influence the mother's knowledge on the correct breastfeeding technique. The mother's higher education level allows the knowledge of mothers on breastfeeding techniques to also be getting better.

From the results of the frequency distribution of women who performed breast care during childbirth, of 58 respondents, 48.3% (28 mothers) did a bad breast care and 51.7% (30 mothers) did a good breast care.

This result showed a habit of doing well on breast care puerperal women was smaller, compared with the results of research conducted by Sholichah (2011) in the Karangduren village of Tengaran sub-District of Semarang District, ie, of 31 puerperal women, 38.7% (12 mothers) with poor breast care during childbirth and 61.3% (19 mothers) with good breast care during childbirth.

Breast care during childbirth is first performed on day 2 after birth at least twice a day, by way of sorting out systematically and regularly, and pay attention to the cleanliness of the breast so as to prevent the milk blockage (Prasetyono, 2012). Breast care during childbirth is very essential in puerperal women, because by doing breast

care during childbirth, this can help smooth the milk to come out, make areola and nipple be more flexible, maintain personal hygiene and also prevent blockage.

Based on the analysis of the relationship of knowledge about how to breastfeed and the incidence of blocked ducts during breastfeeding, of 31 puerperal women with poor knowledge, 12.9% (4 mothers) had experienced blockage and, of 27 mothers with a good knowledge, 44.4% (12 mothers) had experienced blockage. The results of Chi-square obtained p-value of 0.017, meaning that there was a relationship between knowledge and the incidence of breastfeeding blockage in this study. The result was consistent with research conducted by Dwiyantri (2009) that the statistical test obtained was p-value of 0.000, which means there was a connection with the incidence of blocked ducts during breastfeeding and knowledge.

One's higher knowledge of correct breastfeeding technique will affect the mindset and attitude of a person, before feeding, so that will foster positive attitudes to breastfeeding properly, so as to expedite the process of breastfeeding and can prevent sore nipples and blockage, as well as maintain a clean breast (Rukiyah and Yulianti, 2010: 346).

Knowledge of the mothers is also influenced by their upbringing, where a state of low maternal education level can affect the mother's knowledge in breastfeeding properly everyday at home, keeping personal hygiene puerperal women, so as to prevent the occurrence of breast milk blockage. The higher education level of the mother will result in the increased knowledge of the mothers about the correct breastfeeding technique.

Based on the results of the analysis, of 28 postpartum mothers who did poor breast care after childbirth, 42.9% (12 mothers) suffered from blockage and, of 30 postpartum mothers who did good breast care during childbirth, 13.3% (4 mothers) experienced blockage. The chi-square results obtained p-value of 0.026, thus there was a relationship between breast care after childbirth and the incidence of blocked ducts of breastfeeding in this study. The result was consistent with research conducted by Sari (2012) in Wiradesa PHC of Pekalongan that the statistical test showed a p-value of 0.001, which means there was a relationship of breast care after childbirth to breastfeeding blockage.

Breast care is a method to treat breast in order that milk can come out smoothly, and the breasts become clean (Marmi, 2012). Breast care after childbirth is first performed on day 2 after birth at least twice a day, by way of sorting out systematically and regularly, and pay attention to the cleanliness of the mother's breasts daily. Breast care should be done properly, otherwise it would cause breast milk blockage. Preferably puerperal women should be diligent in cleaning the breast and in performing breast care, in order to prevent blockage (Prasetyono, 2012).

This study was in line with the theory that breast care after childbirth is conducted after the mother gives birth to make blood circulation smooth and prevent blocked ducts during breastfeeding (Marmi, 2010). Breast care after childbirth is very helpful for lactation and milk can come out smoothly, because by doing breast care it can make the nipples become more flexible, and easier for the baby to suckle. When the baby is feeding well, it will further help the mother feel comfortable. With the convenience that is felt

by the mother, the mother can feel more of her role as mother that goes well, and this will help smooth milk production and can prevent blocked ducts during breastfeeding. In addition, breast care after childbirth is also beneficial for maintaining hygiene, especially hygiene of nipple to avoid infection, to eventually prevent blocked ducts during breastfeeding.

## CONCLUSION

- a. The percentage incidence of blocked ducts during breastfeeding in puerperal women was 27.6% (16 women).
- b. The percentage of not good maternal knowledge about breastfeeding was by 53.5% (31 mothers).
- c. Percentage of postpartum mothers who did poor breast care after childbirth was 48.3 (28 mothers) of respondents.
- d. There was a relationship between knowledge of mothers on how to breastfeed and the incidence of blocked ducts during breastfeeding (p-value = 0.017).
- e. There was a relationship between breast care after childbirth and breastfeeding blockage (p-value = 0.026).

## RECOMMENDATION

Health workers at Sukadana PHC are expected to continue to improve programs and provide counseling to postpartum mothers to improve education and knowledge of mothers on how to breastfeed correctly such as when the mothers are still at privately practising midwives (BPM), so that the mothers can perform breastfeeding properly and perform breast care well. This can be done by providing breastfeeding counseling right way and teaching how to breastfeed properly commencing in the first postpartum visit, ie, at 6-8 hours of post partum and



continued to the next visits to the midwives regularly.

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# FACTORS RELATED TO ANEMIA IN PREGNANCY AND MAKING OF INTERVENTION MODEL OF MATERNAL PERCEPTION AND FAMILY SUPPORT (PSIDUGA) IN CIKEDAL SUB-DISTRICT OF PANDEGLANG DISTRICT OF BANTEN PROVINCE IN 2016

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## ABSTRACT

Anemia contributes to 20% of all maternal deaths. The incidence of anemia among pregnant women in Indonesia is currently at 36.4% in urban areas and 37.8% in rural areas. The government's program to provide iron supplements is not effective enough to address the problem of anemia. Lack of knowledge and awareness of pregnant women and the role of the family to be one factor in the incidence anemia. This study aimed to look at the various factors that affect anemia in pregnant women and build models and interventions based on the variables that affect anemia. This was an operational research, and the implementation was divided into 2 stages. The study population was pregnant women living with a family by 238 pregnant women. Sampling technique used a probability sampling with multistage cluster sampling. The results of the study showed that there was a significant relationship of the support, knowledge, attitudes, family therapeutic management, knowledge, and maternal therapeutic management to anemia. The FGD results from the groups of pregnant women, family, and midwives gave various reason why anemia in pregnancy could happen in this study. It is concluded that all the variables affected anemia and there is a need to create a model of PSIDUGA for anemia eradication among pregnant women.

**Keywords:** Anemia, pregnant women, PSIDUGA Model

## INRODUCTION

Anemia in pregnancy is maternal condition with hemoglobin (Hb) <11 g%. It is called "the potential harm to the mother and child", because anemia requires serious attention of all involved in health care (Bobak, 2005; Manuaba 2010). The cause of anemia in pregnant women is the lack of iron in the body. The incidence of anemia in pregnancy in Indonesia is currently at 36.4% in urban areas and 37.8% in rural areas (Riskesdas, 2013). This indicates that the figure is approaching severe public health problems with anemia prevalence of  $\geq 40\%$  limit.

In Indonesia, the program of anemia prevention in pregnant women is done by providing iron supplements as many as 90

tablets during pregnancy. However, many pregnant women refuse or do not comply with this recommendation because of various reasons. Taking iron tablet is said to be compliant when  $\geq 90\%$  of the iron tablets are taken.

The direct causes of maternal deaths in Indonesia are bleeding by 30.3%, hypertension by 27.1%, 7.3% by infection, and obstructed labor and abortion by 0.0% and other causes up to 40.8% (Pusdatin Ministry of Health, 2014). The direct causes of maternal death in Banten are 37% due to bleeding, 22% due to infection, and 14% due to hypertension, and other things, such as less prepared family of a mother in labor (Health profile Bantam, 2014). Pandeglang Regency is one of the areas in Indonesia with still high

incidence of maternal deaths due to haemorrhage by 41.17% of the 34 maternal deaths (Profile Department of Health, 2013).

The belief of pregnant women against the iron needs is more effective if accompanied by adequate protein intake but unfortunately it is not always followed by a good diet. This can be caused by a lack of family support in monitoring and facilitating the needs of iron and protein intake of pregnant women. Family support is a support system provided by the family in order to maintain the identity of the social being, the fulfillment of material needs, and health care, and provide information and services to interact with the community (Hitchcock, Schubert, & Thomas, 1999; Pender, Murdaugh, & Parsons, 2002).

The family support is expected to reinforce the perception and beliefs of pregnant women on the effectiveness of iron accompanied with protein intake in addressing the problem of anemia. Family support to pregnant mothers may include the provision of foods high in protein, and be in form of becoming the ones who watch the pregnant women to take tablet Fe. Involving family can provide a reason to be able to overcome the problem of anemia in pregnant women in order to reduce mortality in pregnant women nationwide.

This study was done to look at the various factors that affect anemia in pregnant women and build models and interventions based on the variables that affect anemia

## METHODOLOGY

This was an operational research. The implementation was divided into two stages: Stage 1 to identify the magnitude of the problem and Stage 2 to develop a model based on the results found. This study combined quantitative and qualitative (mixed

methods). The study population was all pregnant women living with a family with a sample of 238 pregnant women. Sample collection technique used a probability sampling technique with multistage cluster sampling

## RESULTS

**Table 1: Frequency Distribution of the incidence of anemia among pregnant women by variables in cikedal village of Banten province in 2016**

Variable	Frequency	(%)
<b>Anemia</b>		
Yes	147	61,8
No	91	38,2
<b>Family support</b>		
Bad	168	70,6
good	70	29,4
<b>Family knowledge</b>		
Bad	131	55
good	107	45
<b>Family attitude</b>		
Bad	154	64,7
Good	84	35,3
<b>Family Therapeutic</b>		
Bad	202	84,9
Good	36	15,1
<b>Maternal knowledge</b>		
Bad	144	60,5
Good	94	39,5
<b>Maternal therapeutic</b>		
Bad	209	87,8
Good	29	12,2

Based on the above data, most (618%) pregnant women suffering from anemia had less support (70.6%), lack of knowledge of the family (55%), less supporting attitude

(64.7%), less family Therapeutic Management (84.9%), less knowledge (60.5%), and less therapeutic management (87.8%). It was found that families with less support had more anemic pregnant women by 75% compared with pregnant women who were not anemic.

**Table 2: relationship of all variables to the incidence of maternal anemia in Cikedal village of Banten in 2016**

Category	Anemia				N	P Value	OR
	Yes n	%	No n	%			
Family support							
Bad	126	75	42	25	168	0,00	7,00
Good	21	30	49	70	70	0	0
Family knowledge							
Bad	120	91,6	11	8,4	131	0,00	32,3
Good	27	25,2	80	74,8	107	0	23
Family attitude							
Bad	128	83,1	26	16,9	154	0,00	16,8
Good	19	22,6	65	77,4	84	0	42
Family therapeutic							
Bad	132	65,3	70	34,7	202	0,01	2,64
Good	15	41,7	21	58,3	36	2	0
Maternal knowledge							
Bad	125	86,8	19	13,2	144	0,00	21,
Good	22	23,4	72	76,6	94	0	531
Maternal therapeutic							
Bad	137	65,6	72	34,4	209	0,00	3,61
Good	10	34,5	19	65,5	29	3	5

Families with poor knowledge had more pregnant women with anemia at 91.6% compared with pregnant women who were not anemic. Families with poor therapeutic management had more pregnant women with anemia at 65.3% compared with pregnant

women who were not anemic. Pregnant women with poor knowledge were more likely to have anemia at 86.8% compared with pregnant women who were not anemic. Pregnant women with poor therapeutic management were more likely to have anemia at 65.6% compared with pregnant women who were not anemic. Family with bad attitude had more anemic pregnant women at 83.1% compared with pregnant women who were not anemic. The results of further analysis showed that there was a significant relationship of family support, knowledge, attitude and family therapeutic management, and knowledge and therapeutic management of pregnant women to anemia during pregnancy.

PSIDUGA intervention model (Mother Perception And Family Support) was built on the theory Health Belief Model (HBM), Family Support, Theory of Planned Behaviour (TPB), and Theory proceeded.

Based on the results of research in anemic pregnant women, the figure was 147 respondents (61.8%) and this was far from the national average by 36.4% in urban areas and 37.8% in rural areas (Risksdas, 2013). Other findings were poor support of families by 70.6, less family knowledge by 55%, poor families attitude by 64.7%, poor families therapeutic management by 84.9%, less mother's knowledge by 60.5%, and poor mothers therapeutic management by 87.8%. Bivariate analysis for all variables showed that family support ( $P = 0.012$ ), knowledge of the family ( $P = 0.00$ ), family attitudes ( $P = 0.08$ ), the therapeutic management of mother ( $P = 0.03$ ), knowledge of the mother ( $P = 0.00$ ) mothers therapeutic management ( $P = 0.00$ ) had a significant association with anemia.

Based on the results of focus group discussion (FGD), during this time women did not ever get health education about anemia during pregnancy; 16 of the 20 mothers did not know the definition, causes, and symptoms/signs and consequences of anemia and there were no special classes for pregnant women. So far, pregnant women were only given tablet Fe by midwives without the included instruction ordinances to take the medication and there was no control associated with the adherence of taking tablet Fe. FGD done by family of pregnant women found that 15 of the 20 families never accompanied the pregnant women in antenatal check. The family also did not know the information related to anemia during pregnancy. They said they did not know and never reminded pregnant women to regularly take tablets Fe. FGD to 3 midwives found that 2 of 3 midwives stated that they carried out counseling to pregnant women in classes held at the health center. Counseling was done only limited advice to consume iron tablet and nutritious food without some system or way of controlling compliance of tablet consumption and nutritious food. When giving Fe iron supplementation, the important thing is monitoring the nutritional status of mothers through food that is nutritious and contains iron substances by midwives (Elias, S 2007). Efforts are being made to include the role of the family as an important factor that is around pregnant women by empowering members of the family, especially the husband for helping pregnant mothers in improving compliance to consume iron tablets. (Kautshar, Syria and Jafar (2013).

The results showed that there was a positive significant correlation between family support and adjustment. Through the support of the family as a form of social support, a pregnant woman can do better adjustment

during her pregnancy. Family support consisting of aspects of attention emotion, instrumental relief, information help, and assessment contribute to the adjustment score consisting of the control aspects of emotion, learning, direct action, and interpersonal relationships. If the family support is good, then the level of maternal anemia will also be low. The support of the family will give motivation to the mother, the changes in behavior of pregnant women to better maintain their health, for example by regularly consuming Fe tablet as well as regulate diet so that the nutritional needs can be met. The health status of the mother would be good, and the mother does not experiencing anemia (Maunaturrohmah, 2013).

Family support consisting of aspects of attention emotion, instrumental relief, information help, and assessment contribute to the adjustment score consisting of aspects of emotional control, ability to learn, direct action, and interpersonal relationships (Astuti, Santosa, Utami and Mada, 2000).

Plan for the next stages of research was the making of intervention model based on the preliminary data that had been obtained in Phase I. This study developed interventions to build independent mother and family support in raising hemoglobin levels of anemic pregnant women. This model would be more optimal than the health promotion program that had been running. Activity in this model was in the form of intensive education to anemic pregnant women with family. The purpose of education was targeted to reach psychomotor, where families and pregnant women with anemia were able to show or practice actions to prevent or treat anemia. The model had been run to overcome anemia in pregnant women



in health promotion in the form of *posyandu* counseling activities.

Researchers assessed these activities to be not effective because it was not intensively in the provision of education. The impact was less intensive health promotion and the lack of growing awareness among pregnant women about the importance of prevention of anemia, when the provision of health promotion did not involve the family. The family as the smallest components of society are supposed to be involved in the treatment of anemia in pregnant women. Based on the above description, the researchers feel it is necessary to create a model that can ultimately foster self-awareness and self-reliance and family support to pregnant women in treating anemia.

This model is based on behavioristic theory proposed by Bandura. The model developed will involve multiple targets such as pregnant women, families, health volunteers and health professionals such as midwives. PSIDUGA models will be performed on pregnant women and families through the development of methods of Client Centered, giving health education in pregnant women and families as well as the implementation of the evaluation that will be done through PSIDUGA Card. The role of health workers on the model PSIDUGA is in the form of monitoring and evaluation of PSIDUGA card and report periodically to the midwife in the local area. Midwife or local health workers will follow up the report of PSIDUGA card when the results are not good and do a control system with SMS reminders about compliance of taking tablet Fe and consumption of foods high in protein.

## CONCLUSION

Implementation of phase 1 in this study has been conducted and it can be concluded as follows:

1. The majority of women in the Cikedal village are anemic by 61.8%
2. There is a significant relationship of family support, family knowledge, family attitude, family therapeutic management, pregnant women knowledge and therapeutic management to the incidence of anemia in the Cikedal village of Pandeglang District of Banten Province.
3. Knowledge of pregnant women is less about anemia, iron tablet administration by midwives is without the included instruction ordinances to take the medication, and there is no control.
4. The family never accompanies the expectant mother in her check-ups and does not get information about anemia, just paying attention to the side of the intake of food that is consumed daily by pregnant women without regard to the content of nutrients in the food, never reminding pregnant women to regular taking iron tablet, and only occasionally taking pregnant women to check to the nearest health center.
5. 2 of 3 midwives state that they carry out counseling to pregnant women classes held at the health center, but the counseling is done only limited advice to consume iron tablet and nutritious food without some system or way of controlling compliance of Fe tablet consumption and nutritious food.

## SUGGESTION

For the next research step, it is to test the effectiveness of the intervention model that has been created by a method that can be adapted to existing conditions in the study so

that the model of intervention can be applied in the treatment of anemia in pregnant women at various places.

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# USE OF HORMONAL CONTRACEPTION EFFECT WITH MYOMA UTERI IN RSU TANGERANG

Rusmartini

## ABSTRAK

The occurrence of uterine myoma will increase morbidity in women of reproductive age. Uterine myoma is a benign tumor most often occurs in women Objective: This study aimed to identify factors related to the occurrence of uterine myoma. This research is an analytic study with cross sectional design. The collection of data is primary data 2015. The study sample as many as 74 people. Results of the study: 27 patients in the diagnosis of myoma uteri and 47 patients in the diagnosis of diseases of obstetrics more, bivariate analysis shows the results there was no correlation between age and parity of patients the incidence of myoma uteri  $p = 0.840$  and  $0.324$ , there is a significant relationship between age menarch and use contraceptives the incidence of myoma uteri ( $p = 0.002$ , OR = 6.7) and ( $p = 0.003$ , OR = 8.6. Conclusion: Women who suffer from myoma uteri aged > 30 years, with parity > 3 and age menarch < 15 years as well as the use of contraceptives hormonal associated with myoma uteri. Suggestion: For health professionals can provide information and screening, especially in patients with risk factors.

**Keywords:** uterine myoma, hormonal birth, age

## INTRODUCTION

Reproductive health, especially in women have a considerable influence and is vital to the continuation of the next generation. It is said that the Women's reproductive health is also a parameter for health service delivery to the community. Although myoma uteri rarely cause mortality, but morbidity caused quite high due to myoma uteri is an indication of the most frequently performed surgery even hysterectomy. The incidence of uterine myoma is constantly increasing in the United States this incident amounted to 2 to 12.8 people per 1000 women per year, (Kang, et al, 2010). Okezie research in Nigeria (Department of Gynecology, University of Nigeria) found that the prevalence of uterine myomas 9.8%, while research in Indonesia in 2008 found myoma uteri of about 19.8%, and in 2009 as much as 11.70% (Ita Rahmi, 2012 ) from other studies gain of 2.39% -11.70% (Devy,IL, Muhammad S, Rochman B, 2012). According to research in space Hospital gynecology Prof. Dr. Margono Soekardjo Purwokerto myoma uteri prevalence reached 63.0% (Wachidah, et al, 2011) while according Azmunir, (2015) in Zainoel Abidin Hospital in Banda Aceh incidence

of uterine myoma ranks five out of ten of gynecological diseases and clinical cases of 7.04%.

Although some of the factors that can encourage the formation of myomas, but the exact cause is not known but there are several factors that have not been axiomatic support one of the hormonal contraceptive. Uterine myoma is a frightening disease for women. Based on research results due to the formation of myomas among others by a family history of fibroids, race, the first period before the age of 10 years, consumption of alcohol, uterine infections and hypertension, obesity and nullipara. The findings found that birth control pills is thought to lower the growing trend these myoma. In early pregnancy about 30% myoma will grow and shrink back after giving birth. Nevertheless the hormone estrogen seems to stimulate the growth of fibroids, but usually fibroids will shrink itself after menopause.

Based on the research of the World Health Organisation (WHO) the causes of maternal mortality in 2010 karenamioma uteri were 22 cases (1.95%) and in 2011 as many as 21kasus (2.04%). Myoma uteri case in Indonesia was

found to be 2.39% -11.7% of all obstetric patients were treated. 62% of women of childbearing age have used contraception, hormonal pill consisting of 22.73, 58.90 and injectable implant of 3.32% on this instrument contains estrogen, either in the form of a combination of progestin with estrogen or progestin. Injectable contraceptive is considered the most effective and widely used by the acceptor, the majority of married women in Indonesia and they chose injectable contraceptive pill and according to the community it would be more practical, but the consequences that arise as osteopenia, myoma uteri, etc. are generally not considered. The purpose of this research is obtain a description of the effect of the use of hormonal contraception with the myoma uteri In RSU Tangerang

## RESEARCH METHODS

The study was conducted in the Department of Obstetrics RSU Tangerang August to November 2015. The study design was cross-sectional analytic approach. The population is all patients Obstetrics and Gynecology either at the clinic or at room nurse who has been in ultrasound, with the inclusion criteria: Not pregnant and exclusion criteria with myoma uteri which can not be assessed. Based on the minimum sample size is 74, the sampling technique is non random. After getting the data is then processed and analyzed by univariate to determine the frequency distribution of each variable and conducted bivariate to see the relationship between independent variables and dependent variable. Chi Square test with significance level ( $\alpha$  0.05) and 95% CI.

## RESULTS AND DISCUSSION

Myoma uteri are benign tumors of the uterine muscle, the incidence of uterine myoma in this study of 74 patients 27 (36.5% suffer from myoma uteri and 47 (63.5%) than any other disease. Myoma uteri can be found through routine gynecological examination. Diagnosis is done by OBGYN physician, myoma uteri suspected when found uterine contour interference by one or more mass the more slippery, but it is often difficult to ensure that the

masses like this is part of the uterus. as for the examination for the presence of myomas do Ultrasonography

Patients with myoma uteri is difficult to know accurately because many do not give rise to complaints, so people do not check themselves to the doctor. Until now, the exact cause is not known and suspected myoma uteri is a multifactorial disease. Factors that influence the onset of clinical symptoms include the size of uterine myomas, uterine myoma localization and changes in myoma uteri.

Clinical symptoms occur in only about 35% - 50% of affected patients. The clinical symptoms that can arise in myoma uteri: (1) Abnormal Bleeding: Clinical symptoms were common (30%). Of bleeding found in the form: menorrhagia, metroragi, and hipermenorrhea. The bleeding can cause iron deficiency anemia. Abnormal bleeding can be explained due to the increase in surface area of the endometrium that cause uterine muscle contraction, distortion and congestion of blood vessels in the lining of the endometrium and its surroundings. (2) Pressing the enlarged uterus so that feels heavy in the lower abdomen. (3) of the urinary tract, urinary frequency, urinary retention, or ureteral obstruction and hydronephrosis. (4) Intestinal: constipation, intestinal obstruction and pain due to nerve depressed. Pain can be caused by nerve compression or torsion stemmed.

Department of Obstetrics Gynecology Hospital, Prof. Dr. RDKandou Manado myoma uteri reached 108 (30.6%) was higher than the results of other studies such as: Ita Rahmi, (2012) found 19.8% of cases myomas, and according Devy,IL, Muhammad, Rochman (2012) get 2, 39% - 11.70%. In RSU Tangerang 36.5% incidence of uterine myoma. Myoma uteri comes from smooth muscle in the uterus for nearly half of cases of uterine myoma found incidentally on routine pelvic examination. Some theories mention is due to tumor growth stimulation of the hormone estrogen. On the network myoma estrogen receptor number was higher than muscle tissue uterus (myometrium) of the uterine myoma around it so often growing faster in pregnancy (enlarged in reproductive age) and usually decrease in size after menopause.



Tabel 1. Relations respondent age and parity with occurrence of uterine myoma

Ages	Myoma		Total	p value	O R
	Not-myoma	Myoma			
20-30	15 (83.3%)	3 (16.7%)	18 (100 %)		3.75
>30	32 (57.1%)	24 (42.9%)	56 (100.%)	0.84	(0.9-1.4)
Parity					
0-3	17 (73.9%)	6 (26.1%)	23 (100.%)		1.98
>3	30 (58.8%)	21 (41.2%)	51 (100.%)	0.324	(0.6-0.8)

Age of patients ranged from 22 to 57 years, with an average (mean) 36.24 years with standard deviation 7.341 years. Of 27 patients with myoma majority age 24 (42.9%) were aged > 30 years. Based on the parity between 0 to 6 with a mean of 2 and SD 1. Having categorized the majority of parity > 3 number of 21 (41.2%).

Generally in this study myoma uteri condition occurs in women over the age of 35 years are not linked but many things with this research is to get the average age is 36.24 years. Based on this research, Department of Obstetrics-Gynecology Hospital, Prof. Dr. R.D. Manado Kandou get myoma uteri ranks first of all gynecological disease patients aged 18-49 years, 108 cases of uterine myoma (30.6%). Purwokerto myoma uteri

in hospitals affects 40-50% of women with age over 40 years.

Age showed no association between age and uterine myoma. This is consistent with the theory that the risk of uterine myoma increases with increasing age. In general, the incidence of uterine myoma is predicted to reach 20-30% in women aged over 35 years (Wiknjastro., 2005). In this study also show that cases of uterine myoma affects more women with more parity than three (never given birth). This is consistent with research Isella Liliani Devi et al 2012, which states that myoma uteri often occurs in women who have given birth with the percentage of 77.9%. This result is also supported by research conducted by Kirana Pratiwi et al stated that myoma uteri common in women with parity status multiparas. Uterine myoma is more often found in nulliparous women or infertile. Although the results showed there was no significant correlation between the parity status on the incidence of uterine myoma, but may be caused by several factors, including nutrition intake, contraception and life styles, Ganong, (2008). First, the pregnancy may facilitate the formation of foci adenomyotic into the myometrium by the entry of invasive trophoblasts in myometrial stretch fibers. Second, the possibility of iatrogenic events adenomyosis due process of cesarean delivery. Thirdly, hormonal influences during pregnancy plays an important role in the development of endometrium ectopic (Taran, 2010)

Tabel 1: Frequency Distribution of Female Reproductive With Contraceptive

Contraceptive Use	N	Percent
IUD	12	16.2
PIL	3	4
INJECTION	48	64.9
IMPLANT	11	14.9
Total	74	100

All the patients had ever used contraception in the first year Last post. KB majority of participants using injections of 48 (64.9%) are then grouped on the use of hormonal contraceptives (injections, pills and implants) and non-hormonal (IUD, MOP/W)

But there is no MOP / W. This is probably caused by a number of samples that are lacking so that the sample distribution is dominated by patients using contraception.

**Tabel : 3 Hormonal Contraceptives With the occurren**

Variabel	Non-myoma	Myoma	Total	p value	OR and CI
Menarche					
< 15 tahun	42 (73.7%)	15 (26.3%)	57 (100 %)	0.002	6.7
≥ 15 tahun	5 (29.4%)	12 (70.6%)	17 (100.%)		(2.03-22.3)
Contraception					
Hormonal	44 (72.1%)	17 (27.9%)	61 (100%)		8.6
Non hormonal	3 (23.1%)	10 (76.9%)	13 (100%)	0.003	(2.1-35.2)

Of the 61 patients who had menarche age <15 years there are 57 people who suffer from myoma and 15 (26.3%) the results of the test with a P value of 0.002 and OR 6.7. On the whole acceptors using hormonal contraception then 17 people (27.9%) suffered from uterine myoma with p value. 0003 and OR 8.6 means that those who use hormonal contraceptives (pills, injections, inplant) 8.6 times the risk for the occurrence of uterine myoma compared to the use of non-hormonal contraception (IUD, etc.). This condition is the same as the results of research Pojianto which has found that the incidence of uterine myoma will increase in the age of 35-50 years it indicates that there is a relationship between the occurrence of uterine myoma with hormone estrogen. Berbeda with DI Lilyani research results stating: There is no relationship between the use of contraception hormonal incidence of uterine myoma (p = 0.859). Identification of the relationship with the incidence of reproductive age myoma uteri, it is known that in patients with myoma uteri most age was 34-49 years (58.4%) compared with age <34

years. Myoma uteri risk increases with increasing age, these cases mostly in the age of 40-49 years with an average age of 42.97 years as much as 51%. Myoma uteri is rare in women under 20 years of age and has not been reported in women before menarche. Myoma uteri will usually show clinical symptoms at age 40 years and older.

In the method of hormonal contraception is related to lifestyle that is not balanced, it will cause disturbances in hormones and possible myoma uteri. myoma uteri are also influenced by hormonal factors, the number of calories and genetics

## CONCLUSIONS

Myoma that frequently occurs in women over the age of 35 years is about 36 percent of cases of uterine myoma is rarely cause initial complaint. In patients did not have any complaints and did not realize that they were containing a tumor in the uterus. Myoma uteri are more prevalent in parity > 3 children as well as the hormonal contraceptive users.

Suggestion: Therefore it is important to detect early private to avoid and prevent the disease before the onset of intensified and lead to serious complications for the surrounding organs to perform routine gynecological examination.

health workers can provide information and initial screening especially in patients with risk factors.

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# THE CORRELATION BETWEEN THE PERIODS OF THE USE OF AKDR WITH MENSTRUAL PATTERN ON KB ACCEPTORS IN CIMANGGU VILLAGE OF BANDUNG BARAT REGENCY IN 2016

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## Abstract

According to BKKBN Birth rate of National population census the Indonesia population increased as many as 17.4 in 2000 to 17.9 in 2010. In West Java area, the population increased by 35,729,537 in 2000 into 43,053,732 in 2010. This has implications for poverty, unemployment, MMR (Maternal Mortality Rate) and IMR (Infants Mortality Rate). A contraceptive method plays an important role in reducing the birth rate; one of them is IUD which is a long-term contraceptive and most effective. Cimanggu village is a village with the highest number out of four other villages in the clinic in related IUD method change to another. IUD has side effects that change in menstrual patterns at the beginning. This resulted in inconvenience of acceptor so that susceptible to relocate contraception. The aim of research is to determine the periods of the use of IUD with menstrual pattern on KB acceptors. The method was correlative analytic research with cross-sectional design. Samples were 44 IUD acceptors with quota sampling. Data obtained using the checklist table then analyzed by univariate and bivariat. The results showed that the majority of respondents use an IUD with period of the use of IUD > 3 months as many as 27 people (61.4%) and the period of ≤ 3 months as many as 17 people (38.8%). There is a relationship between duration of use of IUD with menstrual pattern on IUD acceptors in the Cimanggu village as many as (P = 0.000), (OR = 37 143) with duration of use IUD of acceptors ≤ 3 months has the risk of irregular menstrual patterns as many as 37 times. For health workers in Ngamprah Public health center, it is expected to include husbands in providing family planning counseling, so that the majority of the husband as decision makers can understand the condition of his wife, so it would support the choice of family planning or to maintain continuity of family planning, especially IUD. Besides that, it is expected to conducted more programs in family planning, counseling on reproductive health, safari of family planning, and counseling the use of ABPK to each acceptor

**Keywords : AKDR, Menstrual Pattern, KB Acceptors**

## INTRODUCTION

Based on the results of the census in 2010, the population of Indonesia as many as 237.641.326 peoples, consisting of 119.630.913 males and 118.010.413 female residents. The result of census in 2010 showed LPP annually during 1971-1980 as many as 2.31% and declined over the year 1990-2000. In 2000 amounted as many as 1.40% of LPP. The decline is possibly likely due to the success of family planning programs announced by the government. Different things happen in the period of 2000-2010, the

amount of LPP as many as 1.49% per year, slightly improved compared to 1990-2000. This increasing was made possible because of the family planning program cannot inhibit the birth rate in Indonesia. In order to realize the effective government management, transparent, accountable, and results-oriented performance, the BKKBN make an agreement in 2015 in realizing the targets in accordance with Annex

**Table 1.1 working agreement in 2015**

Strategic objective	Performance indicator	Target 2015
Declining Population Rate	Percentage of population rate (LPP)	1,38 (2010-2015)
The decline of Birth rate Total Fertility Rate (TFR) per WUS (15-49)	total fertility rate / TFR) per WUS (15-49)	2,37
Increased the use of Contraception (CPR)	Contraceptive prevalence rate/ CPR)	65,2 (all method)
The decline of family planning needs are not met (unmet need)	Percentages of family planning needs are not met (unmet need) (%)	10,60
The decline in birth rate in Adolescents 15-19 years (ASFR 15-19 years)	The birth rate in adolescents aged 15-19 years (ASFR 15-19 years)	46 per 1000 birth
The decline in unwanted pregnancies from WUS (15-49)	The percentage of unwanted pregnancies of WUS (15-49)	7,1

Based on table 1.1 above, the last LPP of Indonesia in 2014 according to the Central Statistics Agency was 1.40 then the target to suppress the LPP as many as 1.38 in 2015 has not shown the success, so it will take hard work for BKKBN and their staffs to boost the achievement of family planning and maintaining its sustainability. The contraception with long-term contraceptive method is still very low, temporary head of BKKBN, Sudibyo Alimoeso (2013) says, Long Term Contraception most effectively suppresses the birth rate and population. The reason is the acceptor does not need many times to repeat the use of contraceptives. Repetition the use of contraceptives such as pills and injections, are often not adhered by the acceptor, so the risk of unplanned pregnancies become larger. Unfortunately, the use of the contraceptive is still very weak. The achievement of the contraceptive the periods tend to have no change ranged between 11.6% in 2010, 12.6% in 2011 and 25% in 2012. In 2014, the National Population and Family Planning (BKKBN) targeted to achieve around 27.5%.

Contraception with long-term contraceptive method (LTM) is still very low, Acting Head of BKKBN, Sudibyo Alimoeso (2013) says, LTM most effectively suppresses the birth rate and population growth rate. The reason, the acceptor does not need many times to repeat the use of contraceptives. Repetition The use

of contraceptives such as pills and injections, are often not adhered to by the acceptor, so the risk of unplanned pregnancies become larger. But unfortunately, the use of LTM is still very minimal. Achievement LTM during some periods tend to have no change ranged between 11.6% in 2010 and 12.6% in 2011 and 25% in 2012. In 2014, the National Population and Family Planning (BKKBN) targets to achieve 27.5%. According Sumawan and Ernawati (2006) in Zannah et al (2012) side effects and failure are some of the factors that led to the failure of family planning and the drop-out of a contraceptive method. The drop-out of acceptor is a discharge acceptors of contraception due to various reasons such as, pregnancy, moving contraceptive method due to side effects were felt by acceptors. According to Hartanto (2004) Side effects that often occur in IUD use is a change in menstrual cycle, some of the danger signs of IUD use is amenorrhea (no menstruation), the excessive of abdominal pain, fever and chills, vaginal discharge in large quantities and smelled, spotting, menstrual and widely distributed blood clots.

According glaciers and Gebbie (2005) in Zannah, et al (2012) There are several things that are often complained by the acceptor of IUD when they checked by health workers include 10% of acceptor reported menstrual disorders, 4% of acceptor remove the IUD as a result of an increase in the number of blood,



pain, and spotting including menstrual period. The drop-out on the IUD acceptors with menstrual complaints will impact on pregnancy and lead to an increase in Population Rate.

Ngamprah Public Health Center is located in Bandung Barat Regency. The Public Health Center is a place with a highest number of drops out family planning compared with others 32 public health centers which located

in Bandung Barat Regency. Total of askeptor drop-outs as many as 3.9% in 2014 and increased as many as 4.17% in 2005. It is caused by various factors, one of which is the side effects that make the acceptor uncomfortable and decided to stop to use family planning.

**Table 1.2 The number of Drop Out in Ngamprah Public Health Centre Periode of January to May in 2016**

No	Village	Januari	Februari	Maret	April	Mei
1	Ngamprah	3	0	0	5	28
2	Cimanggu	10	3	2	6	30
3	Bojongkoneng	13	0	13	2	73
4	Mekarsari	9	19	12	12	70
5	Sukatani	7	11	5	10	61

*Source: the data of drop out family planning periode from January to may in 2016*

Mekarsari is one of the village coverage of Ngamprah Public Health Centre. Based on table above, Cimanggu Village is a place with a higher of dropout than most other villages. The number of dropout rate in Cimanggu village increased from January to March, then drop out rate settled in April and rose again in May.

## RESEARCH METHOD

The design of the resarch used an analytic that is a study design to see two or more variables without any treatment or intervention. This objective can be achieved by considering several approaches are time-based data collection and determination of the object of research. The reseach design used is cross sectional to study the dynamics between the risk factors with the effects, the approach,

Then the number of samples used by researchers in order to a dropout is as many as 116 people. Sampling technique used was simple random sampling so that all members

observation or data collection at the same time or once at a time (point time approach).

In this research, the researchers wanted to know the relationship between the periods of the use of IUD with menstrual pattern on the IUD acceptors in Cimanggu village in 2016. This research was conducted in Cimanggu village exactly in Ngamprah Public Health Centre in Bandung Barat Regency. The study was conducted in August 2016.

The populations are all active participants in family planning in Cimanggu village in 2016 which is the estimated average traffic per month acceptor of the month from January to May 2016 as many as 170 acceptors, so the populations in this research were 170 acceptors.

The sample is partly IUD acceptors who get an the services from the government health service at Cimanggu Village in 2016

The sample calculations performed using the formula:

of the population have an equal chance to be selected as a sample. The sample taken by is sampling by way of raffle members of the population.

The data collection used primary data which obtained directly from respondents using tables' checklist for data retrieval menstrual patterns and the period of the use of IUD by direct interview of the menstrual cycle, long period, the amount of menstrual blood, duration of the use of IUD. This process is done with the help of cadres by person to person to each home which has been chosen as respondents.

The bivariate analysis conducted on two variables was related that s free free or independent variables (period of the use of IUD) with the dependent variable (menstrual pattern). Considering that the independent variables and the dependent variable is a categorical variable then to prove a link and test the hypothesis between these two variables Chi-Square test was used.

## RESULT AND DISCUSSION

### The picture of the period of the use of IUD on acceptors in cimanggu village of Bandung Barat rency

Based on the survey revealed that the majority of the 44 respondents are already using IUDs with the period of use > 3 months as many as 27 people (61.4%), and the period of use ≤ 3 months as many as 17 people (38.8%). This is because most of the mothers had used an IUD over a year and is based on interviews said that there was no problem in it. IUD has side effects, where one of the side effects is a change in menstrual patterns in the first three months. Other reasons expressed by the respondents are changes in menstrual patterns at the beginning of the installation is not so intrusive activity of the mother, and after three months the installation of a mother feels more comfortable as well as the IUD is a contraceptive and do not need to repeat contraception every day or every month so that mothers continue to use IUD.

This is consistent with Saifuddin (2012) states that the benefits of the use of IUD is a long-term contraception (10 years of protection from the cut-380A and does not need to be replaced) which is effective after the installation of the high effectiveness of > 0.6 to 0.8 pregnancies / 100 -127 125 women in pregnancy. Mothers do not need to remember to repeat the contraception, there are no

hormonal side effects with Cu IUD (cut-380A), does not affect the quality and volume ation, no interaction with drugs and inserted immediately after delivery or after abortion. Besides the advantages of using an IUD, contraceptive IUD has side effects, one of which is a change in menstrual pattern at the beginning of the installation.

Research conducted by Murdiyanti (2007) deal with the differences menstrual cycles between mothers who use the IUD contraceptive with injection. From the research that has been done, the menstrual cycle in women who use contraceptive IUD tend to have normal menstrual cycles after the first 3 months of usage is 28-35 days. In fact, according to research results that 100% of women who use contraceptive IUD have a normal menstrual cycle. While mothers who use injection contraceptives tend to have shorter menstrual cycles, there were 20 (52.5%) of mothers who have a short menstrual cycle and 12 (37.5%) of mothers who have a normal menstrual cycle.

The results also showed that nearly half of the respondents had used an IUD ≤ 3 months as many as 17 people (38.8%). It is due because it is the first experience for the mother in using contraceptive. The mother for the first time decided to use an IUD after getting information from the midwife about IUD with the average age is under 35 years old and have 1 or 2 children and includes in reproductive age so that they desire to have another children. This is consistent with the Hartanto (2010) which states that the new acceptors who have 1 or 2 children not interested in using long-term contraceptives such as IUDs.

In the use of contraception, many women have to make a difficult choice of contraception, not only because of the limited number of methods are available but because of certain methods may not be accepted in connection with the health. Besides that, after the use of contraception women should be confronted with a variety of side effects of the contraceptive method. One of the example is the acceptor bleed more during menstruation, long periods become longer, the cycle is relatively short, a little pain, cramping and spotting when the initial installation.

The use of IUD may also be influenced by knowledge of *PUS*. Research conducted by Rochma (2012) in Puskesmas Gandus

Palembang regarding the relationship between knowledge and use of Contraceptives In Womb / IUD was found that out of 26 knowledgeable respondents, there were 18 (69.2%) used IUD Contraception and who do not use as many as (30.8%). While from 19 low knowledgeable respondents, there are 5 (26.3%) used IUD contraception, and there are 14 respondents (73.2%) who did not use. This indicates that the knowledge will be one of the factors that affect women in making decision about contraception.

Research conducted by Fitriani (2015) factors that influence the selection of contraceptive methods of IUD in public clinics and maternity hospitals at Medika Utama in Wonokupang village with respondents as many as 36 people. It is showed that almost all of respondents with a fear of side effects of IUDs as many as 31 respondents (86.1%) example of the fear of side effects experienced by the respondents, discharge (expulsion), bleeding, spotting, bleeding is longer and more during menstruation, menstrual pain and disorders of the sexual relationship. So that the fear experienced by respondents resulted in low interest in the use of IUD at the Clinic and Maternity hospital Medika Utama Wonokupang.

It can be concluded that the IUD is a an effective contraceptive, safe and reversible for women, especially those who never have an STI (Sexually Transmitted Disease) and had given birth. IUD is a device made of plastic and small metal inserted into the uterine cavity through the cervical canal (Manuaba, 2010). So that the use of IUD may be influenced by knowledge, economics, maternal age, number of children, and the side effects that often occur such as changes in menstrual patterns with a short cycle, long periods, and the volume of blood ejected relatively large.

### **The picture of menstrual pattern on IUD acceptors in Cimanggu village of Bandung Barat Regency**

Based on the survey revealed that out of 44 respondents fraction have irregular menstrual patterns as many as 11 people (25%), and respondents with regular bleeding patterns as many as 33 people (75%). Based on the interview, irregular menstrual pattern changes experienced at the beginning of the use of

IUDs. In addition, it was found that from one respondents that had been used IUD > 3 months with irregular menstrual patterns, she is a 44 years old mother, worked as a farmer with the workload and working time with long and heavy.

This is in line with the theory of Hendrik (2006) the regular and irregular menstruation patterns will not be affected by various factors such as diet, weight, use of IUDs, environmental exposure, endocrine disorders, bleeding disorders, physical activity, and stress. The uses of IUD lead to irregular menstruation pattern because of their side effects caused by the IUD. The influences of the activity of hydrolytic enzymes break down the egg in the uterine wall which the number of hydrolytic enzymes so much so that the menstrual faster than usual.

Menstruation is a regular uterine bleeding as a sign that the organ was functioning as mature. Three main periods of the menstrual cycle, namely: the menstrual period for 3 to 7 days, a period polyferasi up to fourteen days, and a period in which the corpus rubrum secretion into corpus luteum which secrete progesterone. Menstrual pattern is a series of menstrual cycle, duration of menstruation, and the volume of blood ejected during menstruation. Hormones that play a role in the process of menstruation are prostaglandins, prolactin and estrogen.

Factors that influence the occurrence of these side effects are the basic material of which is copper. Copper has an alkaline PH. In the state of the enzyme alkaline PH hydraulic inside will increase while the hydraulic enzyme damaging cells. Hydraulic means more enzymes in the fallopian tubes, the uterus will be the more damaged cells in the uterus wall decay due to the number of eggs. In addition the prostaglandin hormone levels will decrease. Hormone prostaglandin developing well in acidic pH while using the IUD has a PH alkaline. Prostaglandin hormone serves to slow the bleeding.

Research conducted by Zannah (2012) about the image of complaints due to the use of IUD acceptors in Sukajadi public health centre in Bandung with 65 acceptors obtained the acceptors who complained of menstrual cycle changes as many as 3 respondents (4.62%), the increase in the number of blood during menstruation as many as 28 respondents

(43.08%), spotting as many as 18 respondents (27.69%), dismenorrhoe as many as 13 respondents (20%), and changes in blood pressure as many as 49 respondents (75.38%), changes in menstrual pattern will occur at the acceptor in the first 3 months of use of IUD and will be reduced after 3 months.

The results of the research also showed that out of 44 respondents the majority of respondents as many as 33 respondents (75%) have a regular menstrual pattern. The mothers with regular menstrual patterns have been using IUD > 3 months. This is due to the acidic nature of the wall of the uterus that can beat a base of copper as the material of the IUD. Besides that, the regulation of estrogen and progesterone in the body are very good so a hydrolytic enzyme will set regularly while it shed the ovum.

Research conducted by Ratna & Irdayanti (2012) about the differences influence the use of contraceptive IUD and injections of the menstrual cycle in women with respondents were the new participants of family planning who use the injection contraceptive and IUD as many as 69 people, and 85 participants using injection. There are differences of each menstrual characteristics experienced by users of IUD and Injection contraceptive.

From the results conducted that the menstrual cycles in women who use contraceptive IUD tend to have a normal menstrual cycle as many as 28-35 days. In fact, according to the results that as many as 65 (94.20%) of 69 women who use contraceptive IUD have a normal menstrual cycle while those who use injection contraceptives tend to be shorter, there were 55 respondents (64.7%) of women with a short menstrual cycle and 30 respondents (35.29%) women with normal menstrual cycles.

Statistical analysis obtained  $t$  as many as 2.754 with a  $P$  value of 0.008 are less than 0.05 then  $H_0$  is rejected and  $H_a$  accepted. From the average value, the menstrual cycle in women who use contraceptive IUD as many as 22.00. Meanwhile, the average menstrual cycle in women who use injection contraceptive as many as 19.38. In that research, the respondents will only experienced an irregular menstrual pattern in terms of numbers and long periods of normal before using the IUD.

Menstrual patterns in every woman different depending on their physical activity, state of health, environmental exposure, stress,

bleeding disorders, endocrine system, and the use of contraception. IUD acceptors tend to have irregular menstrual patterns in the early of use such a short cycle, the long period of menstrual and menstrual blood volume.

### **The correlation between the periods of the use of IUD with Menstrual pattern on IUD acceptors in Cimanggu Village of Bandung Barat Regency**

Based on the results, it is revealed that out of 17 respondents who have irregular menstrual patterns majority of respondents use an IUD  $\leq$  3 months as many as 10 people (58.8%). From the 27 respondents who have regular menstrual pattern, almost all of the respondents use the IUD > 3 months as many as 26 people (96.3%). Statistical test results obtained  $t$   $P = 0.000$  ( $\alpha < 0.05$ ) so that  $H_0$  refused, so we can conclude that there is a relationship between duration of use of IUD with menstrual pattern on IUD acceptors in the Cimanggu village of Bandung Barat Regency in August 2016.

The analysis showed that the value of OR = 37.1, meaning that the IUD acceptors with the use  $\leq$  3 months old has a chance as many as 37 times the risk of irregular menstrual patterns compared with IUD acceptors with the use > 3 months. Based on the results, it is obtained from the interview that have been occurred in 5 new IUD acceptors with duration of use < 3 months continued to bleeding for 3 months so that the acceptor does not continue use of IUD.

This is in accordance with the opinion of Hartanto (2004) that the IUD users will experience irregular menstrual pattern in the first 3 months after installation or a few years depending on the condition of users. Irregularity of the menstrual cycle is indicated by the menstrual periods become longer. Therefore there is a difference between the old and new users IUD.

The normal menstrual cycle usually occurs regularly with marked between 28 to 35 days which is influenced by a variety of hormones like estrogen that is owned by every woman. Nevertheless, it is different with the woman who used IUD acceptors in the first 3 months of installation. Irregular menstrual patterns are caused by the use of IUDs, which are made of a copper of alkaline, so hydrolytic enzyme

increase that serves to damage the lining of the uterus when the ovum is not fertilized.

Hydrolytic enzymes increase the pH to be more alkaline and increase the bleeding to IUD users. It is caused by the process of adaptation in IUD users where the adaptation is a process that accompanies the individual in response to foreign objects so that at the beginning of the use of IUD the uterus will make the process of adaptation to foreign substances (IUD) which is in contact with the uterine wall.

This is according to research conducted by Sari (2013) which entitled the relations of adaptation period of the use of IUD with the incidence of menorrhagia acceptor IUD in Kadipaten village in Yogyakarta village shows the results has already reach as many as 21 respondents (67, 7%), most of the acceptors are not experiencing menorrhagia as many as 19 respondents (61.3%), and stated that there was a significant relationship between the adaptation period of use of IUD with menorrhagia incident on IUD acceptors in the Kadipaten Village in Yogyakarta with p value = 0.000 ( $\alpha < 0.05$ ).

In line with research conducted by Karmila (2013) that the period of the use of IUD experienced normal menstrual patterns after more than one year (78.12%), while new users are not normal after less than one year (65, 66%). This shows the difference in menstrual patterns between the old and new user of IUD Reinforced by research conducted by Nurlita (2011). It obtained results of answers in statement item answered "yes" by the respondent is a statement of the respondents feel shaky when menstruation after using the IUD as many as 53 people (56.4%), there are differences in the cycle menstruation before and after using the IUD as many as 54 people (57.4%), and replace the pads more than 3 times a day as many as 54 people (57.4%). The questions are answer "not" by the respondent is about to feel pain during menstruation or dysmenorrhea after using an IUD as many as 48 people (51.1%), period of menstrual 1-7 days as many as 54 people (56.4%), and replace the pads 2-3 times a day during menstruation as many as 56 people (59.6%).

Research conducted by Yayuk (2013) showed that as many as 29 people (82.8%) had irregular menstrual cycles, 6 peoples (17.1%)

had a regular menstrual cycle, 3 peoples (8.9%) are acceptors passive that his visit is not in accordance with the schedule. There is a relationship between a non-hormonal contraceptive use with the menstrual cycle P value = 0.004. In the research, respondents who experienced some side effects of IUD are some of them who switch to another form of contraception that suits his physical condition after consultation with the doctor.

It can be concluded that the use of IUD can influence the changes in menstrual patterns, especially in the first 3 months because at this time the uterus in are the process of adaptation of receiving foreign objects that are in pairs and in direct contact with the wall of the uterus. It can be seen from the workings of IUD which prevents fertilization of the egg by the sperm and prevents implantation fertilized egg in the uterine mucous membrane. For the IUD that containing copper works is disturbing decision by the endogenous estrogen uterine mucosa and cause changes in menstrual patterns In the condition of enzyme alkaline the hydraulic ride that serves to damage the lining of the uterus so that eventually can cause irregular menstrual patterns with the high number of blood, the periods are longer, and the cycle is relatively short.

## CONCLUSION

Based on the research, it can be concluded as follows:

From the statistical test result there is a relationship between duration of use of IUD with menstrual pattern on IUD acceptors in the Cimanggu village of Bandung Barat Regency (P = 0.000), with the value (OR = 37.1) meaning that the IUD acceptors with the period  $\leq 3$  months old have the opportunity as many as 37.1 times the risk of irregular menstrual patterns compared with IUD acceptors with tehe period  $> 3$  months.

## SUGGESTION

Based on the results and discussion that has been described in the previous Chapter and the conclusions, the researchers gave suggestions including:

For health workers in public health centers in Ngamprah expected to include their candidate



husbands in providing family planning counseling, so that the majority of the husband as decision makers can understand to the condition of his wife so it would support the choice of family planning or to maintain continuity in family planning, especially long term contraception ( IUD).

PHC it is expected to Ngamprah Public Health Centre to create a program in the participation of family planning as more often held counseling on reproductive health, family planning safari, and counseling using ABPK to each acceptors.

For the mother in between the period expected can access information about family planning health care workers, so they will get the right and correct information.

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# CORRELATION BETWEEN INDIRECT FACTORS AND PLACENTA PREVIA IN PREGNANCY THIRD TRIMESTER AT KOJA HOSPITAL, NORTH JAKARTA 2013-2015

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## ABSTRACT

*Placenta previa is a problem that can threaten the welfare of the mother and the fetus. The purpose of the research is knowing correlation between indirect factors and the placenta previa in pregnancy third trimester at Koja hospital, North Jakarta 2013-2015.*

*Methods: The study design use analysis study cross sectional. Dependent variabel is placenta previa; Independent variables are the reproductive age, parity, SC history, and abortus history. The population of research is pregnant women third trisemester who have placenta previa at Koja hospital, North Jakarta 2013 to 2015 as many as 88 people. The research sample third trimester pregnant women who have placenta previa at Koja hospital, North Jakarta 2013 to 2015 with a total sampling as many as 88 people. The analysis is bivariable analysis chi square test*

*Results: The highest incidence of placenta previa is palsenta previa parsialis as many as 45 people (51.20%), indirect factors such as age highest reproduction unhealthy reproductive age (<20 or > 35 years) as many as 65 people (73.90%), the highest parity multigravida or grandemulti as many as 68 people (77.30%), have a history of SC are 7 people (8.00%) and a history of abortion, as many as 11 people (12.50%). The relationship between reproductive age and the incidence of placenta previa (Pvalue = 0.045).*

*Conclusion: Most Placenta Previa which occurred at Koja Hospital is Placenta Previa Parsialis, mostly healthy reproductive age (20-35 years), have parity multigravida or grandemulti , no history of SC and with no history of abortion . There is a relationship between reproductive age and the incidence of placenta previa.*

**Keywords :** *Placenta previa , the age of reproduction , the third trimester of pregnancy , History of SC, History of abortion*

## INTRODUCTION

Placenta previa is a problem that can threaten the welfare of the mother and the fetus. The Plasenta Previa can cause bleeding which can threaten the safety of mother and the fetus (Wardana, 2007). The effect from placenta previa for the mother can inflict antepartum bleeding which can cause shock. For the fetus can cause prematur birth, asphixia which can cause death. (Mochtar, 1998). This study shows placenta previa is very bad for the mother and fetus.

The incidence of antepartum of haemorrhage due to placenta previa in Indonesia for pregnant women were still found.

Antepartum of hemorrhage is caused by of placenta previa by 20%, solusio the placenta by 30%, and rupture uteri by 0.5% (SDKI, 2012). These facts indicate an increase in cases of placenta previa.

They are several factors that cause placenta previa in pregnancy. These factors include maternal age <20 years or > 35 years, child birth interval, history of Seksio Cesaria and history of abortion. (Aditama Y, 2000)

The Incident of antepartum hemorrhage in DKI Jakarta in the year of 2012 is 40,0% (SDKI, 2012). The incident of antepartum haemorrhage in Koja hospital is 36,2%. That number increased in 2013 amounted to

41,2%, and in 2014 increased amounted to 43,6%. (Medical Record of Koja hospital, 2013-2014).

The purpose of the research is knowing correlation between indirect factors and the placenta previa in pregnancy third trimester at Koja hospital, North Jakarta 2013-2015

## METHODS

This research uses a simple analytical method (cross sectional method) that examines the relationship between indirect factor (reproductive age, parity, history of SC, history of abortion) with the incidence of placenta previa in one time.

This study used total population sampling which is The study population was the whole third trimester pregnant women who have placenta previa at Koja hospital, North Jakarta. There are 88 pregnant mothers from 2013 to 2015.

The research is done by collecting secondary data obtained from medical record documentasion. Koja hospital year 2013-2015. The taking Technic sample with total sampling. Dependent variabel is placenta previa. Independent variables are the reproductive age, parity, history of SC, and history of abortion.

The research at Koja hospital, North Jakarta. The time of the research was done on June 2016. Bivariable analysis through test by chi square.

## RESULT AND DISCUSSION

### 1. The result of univariabel analysis

**Table 4.1: Distribution Characteristics of Research Subjects indirect factor in the incidence of placenta previa in pregnant women third trimester at Koja Hospital in North Jakarta 2013-2015**

Research Subject Characteristics	Total (n=88)	%
<b>Education</b>		
Elementary	1	1,10
Junior	26	29,60
High	60	68,20
Degree	1	1,10
<b>Work</b>		
Employee	7	8,00
Unemployee	81	92,00

Table 4.1 shows the characteristics of data from 88 research subjects, the highest high school education is 60 people (68.20%), the highest of unemployee is 81 people (92.00%).

**Table 4.2: Distribution of indirect factor to the incidence of placenta previa in the third trimester pregnant women at Koja Hospital, North Jakarta 2013-2015**

Variable	Total(n=88)	%
<b>Age (years)</b>		
Healthy (20-35)	23	26,10
Unhealthy (<20 or >35)	65	73,90
<b>Parity</b>		
Primigravida	20	22,70
Multigravida or grandemulti	68	77,30
<b>History of SC</b>		
Yes	7	8,00
No	81	92,00
<b>Hystory of Abortion</b>		
Yes	11	12,50
No	77	87,50

Table 4.2 presents data indirect factors such as age highest reproduction unhealthy reproductive age (<20 or > 35 years) as many as 65 people (73.90%), the highest parity multigravida or grandemulti as many as 68 people (77.30%), have a history of SC are 7 people (8.00%) and a history of abortion, as many as 11 people (12.50%).

**Table 4.3: Distribution Placenta Previa incidence in pregnant women in the third trimester at Koja Hospital , North Jakarta 2013-2015**

Placenta Previa	Total (n=88)	%
Totalis	38	42,00
Marginalis	0	00,00
Parsialis	45	51,20
Low position	6	6,80

Table 4.3 shows a picture of the highest incidence of placenta previa is placenta previa parsialis as many as 45 people (51.20%)

## 2. The result of bivariabel analysis

**Table 4.4: Analysis of the relationship with the incidence of indirect factor Placenta previa in pregnant women in the third trimester at Koja Hospital, North Jakarta 2013-2015**

Variable	Kategori	P value	OR
Reproductive age	Healthy	0,045	0,364 (0,127-1,040)
	Unhealthy		
Parity	Primigravida	0,282	0,643 (0,228-1,810)
	Multigravida		
History of SC	Yes	0,652	0,986 (0,207-4,692)
	No		
History of Abortion	Yes	0,560	1,111 (0,312-3,955)
	No		

Table 4.4 shows the relationship between reproductive age and the incidence of placenta previa (Pvalue = 0.045).

## DISCUSSION

The study found that most of placenta previa occurs in third trimester pregnant women at Koja Hospital, North Jakarta is placenta previa parsialis (table 4.3). The study found the majority of pregnant women who have placenta previa is healthy reproductive age (20-35 years) (Table 4.2).

It is possible the reproduction of a healthy pregnancy is repeated so that the implantation of the placenta may not correspond to the normal location. Placenta Previa that occurs in women aged <20 years could be due to the rudimentary endometrium and placenta previa occurs in the mother's age > 35 years could be due to endometrial infertile. (Boyle, M, 2007).

The analysis found reproductive age associated with the incidence of placenta previa (P value = 0.045). (Table 4.4) Previous research in Aceh 2013 was the prevalence of placenta previa increased 3 times on the mother's age > 35 years. (Kurniawan H, et al, 2013).

Placenta previa might occur because of sclerosis of blood vessels arteli kecil and arterioles myometrium which cause blood flow to the endometrium is uneven so placental wider surface area is greater, to get the blood flow adequately (Mose JS, 2004). This shows Placenta previa occurs on maternal age > 35 years, because the organ has begun to decrease its function.

The results of this study, the majority of Placenta previa occurs in multigravida or grandemulti (Table 4.2). It is caused by a lack of vascularization and atrophy decidua



past due to childbirth. In pregnant women who have placenta previa will be bad for the mother and fetus. (Manuaba, 2008).

The results of the analysis found no association between parity and the incidence of placenta previa (P value = 0.282) (Table 4.4). In previous research in Bengkulu 2011 found that the highest risk occurs primigravida Placenta Previa, but in fact multigravida has the highest rate. This shows the incidence of placenta previa increased in multigravida and multigravida women had 2.53 times greater risk for experiencing Placenta Previa. (Boyle, M, 2007).

The research showed that most Placenta previa occurs not because of SC history. (Table 4.2) SC history that occur repeatedly make the placenta is too close to the cervix, so if the cervix is open can cause miscarriages and severe bleeding. (Mose JS, 2004)

The results of the analysis found no association between a history of SC and placenta previa (P value = 0.652) (Table 4.4) These results contradict with previous studies in Bengkulu 2011, mothers who are Placenta Previa recommended by labor SC because if the persalians normal will be bad for mother and fetus. SC previous history will increase the risk of placenta previa is about 3.9% higher when compared with the figure of 1.9% for the overall obstetric population. (Herawati, et al, 2011)

On the results of this study, the majority of Placenta Previa not occur on abortion history (Table 4.2). History of abortion is a risk factor Placenta Previa. Mothers with a history of abortion had a four times risk more than women with no history of abortion. (Mose JS, 2004)

The results of the analysis found no association between abortion history with placenta previa (P value = 0.560) (Table 4.4). This is contrast with the results of previous

studies in Bengkulu 2011 which found in women who had experienced curettage, are suspected endometrial wound predisposes implantasi placental abnormalities. There is Placenta Previa prevalence of 0.32% for mothers with 1 abortion, 2.1% in women more than 2 times abortus, and 2.48% in women who had four times the previous abortion. (Herawati , et al, 2011)

## CONCLUSION

Most issues of Placenta Previa at Koja Hospital is Placenta Previa Parsialis, mostly occurred in healthy reproductive age (20-35 years), have parity multigravida or grandemulti , no history of SC and with no history of abortion . There is a relationship between reproductive age and the incidence of placenta previa.

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# KNOWLEDGE AND ATTITUDES TOWARDS CONTRACEPTIVE ACCEPTORS DECISIONS IN THE USE OF TUBEKTOMI CONTRACEPTIVES IN 2016

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## ABSTRACT

**Introduction:** The use of methods MOW tend to remain low relative to kontrasespsi others, can be seen from the results of the health profile of Indonesia that the contraceptive method most used by participants active family planning is injecting (47.54%) and the most to two pills (23.58 %). While the contraceptive method chosen by the least active participants KB namely Operation Method Man (MOP) as much as 0.69%, then Operation Methods Women (MOW) condoms as much as 1.50% and as much as 3.15%. This study aims to determine the relationship between knowledge and attitude of women to decision acceptors in the use of the method of operation kontrasespsi women (MOW) in Cilincing subdistrict health center. **Methods:** This study used a cross-sectional study type (cross-sectional), the study population is 83 acceptors active women, the study sample using the total population. The statistical analysis used bivariate analysis using chi-square. **Results:** Knowledge and attitude is not related to the decision-making contraceptive use MOW, but age and income related to decision making contraceptive use MOW with  $p < 0.05$ . **Discussion:** Age and income have an impact on decision making contraceptive use MOW. It takes a special counseling services on contraception MOW and cooperation across programs to facilitate acceptors who want to use contraception.

**Keywords:** MOW, Knowledge, Attitude, age, income.

## INTRODUCTION

Each year of married couples of childbearing age is increasing. An increasing trend of married couples of reproductive age will have an impact on increasing the birth rate and population density. If this is not set will affect the welfare and quality of life of a family. The population growth in Indonesia ranges from 2.15% per annum to 2.49% per year. Indonesia implemented to control the population by promoting family planning program. According to the Demographic and Health Survey in 2012 the percentage of companies planning participants consisted of several methods of contraception that is

injectable 2,949,633 (47.94%), pills 1,649,256 (26.81%), implant 527 569 (8.58%), condoms 462 186 (7,51 %), IUD 459 177 (7.46%), tubal ligation 87 079 (1.42%) and vasectomy 17 331 (0.28%). MOW method of use tends to be low compared with other contraceptives, can be seen from the results of the health profile Indonesia in 2015 that methods of contraception most widely used by participants active family planning is injecting (47.54%) and the most to two pills (23.58 %), IUD (11.07%), implants (10.46%). While the contraceptive method chosen by the least active participants KB namely Operation Method Man (MOP) as much as 0.69%, then Operation Methods

Women (MOW) condoms as much as 3.52% and as much as 3.15%. Based on the data BKKB Jakarta in 2012, the number of family planning acceptors active in Jakarta as many as 1,067,522 acceptor. In the municipality there are 3,812 acceptors Thousand Islands, Central Jakarta 92 333 acceptor, the acceptor 218 942 North Jakarta, West Jakarta 254 014 acceptors, South Jakarta 189 034 acceptors, and East Jakarta 309 387. Many women who have difficulty in determining the choice of contraception. This is not only because of the limited methods available but also by their ignorance of the requirements and safety of contraceptive methods, various factors should be considered including health status. Low public interest in contraception Medical Operative Women (MOW) due to lack of counseling for participants. This resulting encountered some MOW participants who experienced side effects, because their understanding of contraception MOW very less. Side effects that arise, if not solved immediately will increasingly cause negative rumors against contraception. The purpose of this study was to analyze the relationship between knowledge and attitudes towards family planning acceptors MOW 2016 decision.

## METHODS

This research is quantitative research methods cross sectional design (cross-sectional). The study was conducted in Cilincing Sub-district health center in 2016, the research subjects were active family planning acceptors who come to visit the health center Cilincing. The independent variables in this study is the use of family planning decision MOW, while becoming dependent variable is the knowledge and attitudes as well as confounding variables including age, occupation, education, number of children

and pendapatan. Analisis bivariabel in this study using chi square analysis.

## RESULTS

The results of the study the relationship between knowledge and attitudes acceptors for making decisions on the use of KB MOW for univariate analysis can be seen from the image and the following table:

**Figure 1 Decision contraceptive choice**

### MOW

Note: 1 = not decide  
2 = decide

Based on the above picture can be seen that most of the study subjects (66.3%) decided not to use the MOW.

Table 1 Knowledge and Attitudes Research Subjects (n = 83)

Variabel	Amount	%
Knowledge		
• Less	45	54,2
• Good	38	45,8
Attitude		
• Negatif	48	57,8
• Positif	35	42,2

According to the table 1 above, the subject of this study more have less knowledge as much as 54.2%, mean 6.18, median 6.00 and mode 7, the maximum value of 10 and a minimum of two, while respondents who had a negative attitude as much as 57.8% , with a mean of 38.28, median 38 and mode 38.

**Table 2 Characteristics of Research Subjects (n = 83)**

Characteristic	Amount	%
Usia ibu (tahun)		
• <20 dan >35	18	21,7
• 20-35	65	78,3
Parity		
• ≤ 2	70	84,3
• > 2	13	15,7
Education		
• < 12 years (SD-SMP)	45	54,2
• > 12 years (SMA-PT)	38	45,8
Work		
• Do not work	74	89,2
• Work	9	10,8
Salary (millions)		
• <1,5	28	33,7
• >1,5	55	66,3

According to the table 2 above, the subject of this study more aged 20-35 years by 78.3%. Characteristics parity more research on the subject that have children ≤2 as much as 84.3%. Based on the characteristics of education dominated by subjects who have primary and secondary education as much as 54.2%, based on job characteristics more research subjects who did not work as much as 89.2%, based on the characteristics most income research subjects had a family income of > 1.5 million.

To determine the relationship of knowledge, attitudes and characteristics of the study subjects used the chi-square analysis in Table 3 below:

**Table 3 Relationship of Knowledge, Attitude and Characteristics of Subjects with Decision Research in Contraceptive Use MOW 2016**

Variabel	Decision used mow Not use	use	Amount p <sup>*</sup> )	OR (CI 95%)
<b>Knowledge</b>				
Less	33	12	0,166	2.00 (0,795-5,032)
Good	22	16		
<b>Attitude</b>				
Negatif	34	14	0,352	1,619 (0,646-4,059)
Positif	21	14		
<b>Age (years)</b>				
<20 atau >35	8	10	0,046	0.306 (0,104-0,899)
20-35	47	18		
<b>Parity</b>				
≤2	46	24	1,000	0,852 (0,238-3,055)
>2	9	4		
<b>Education</b>				
<12 tahun	30	15	1,000	1,040 (0,417-2,591)
>12 tahun	25	13		
<b>Work</b>				
Do not work	50	24	0,478	1,667 (0,410-6,772)
Work	5	4		

Based on Table 3 above, it can be seen that the variables of knowledge and attitude is not related to decisions in contraceptive use MOW, but the confounding variables of age and income variables have a relationship with a value of  $p < 0.005$ .

## DISCUSSION

Based on the research that has been done, the data obtained acceptors in Cilincing Sub-district Puskesmas most have less knowledge as many as 45 people (54.2%), after the chi-square test results are not there



is a relationship between knowledge and decision contraceptive choice MOW.

On the attitude variable data obtained acceptors in Cilincing Sub-district health centers have a negative attitude many as 48 people (57.8%), after the chi-square test results are not there is a relationship between attitudes to the election decision MOW contraception.

In the confounding variables that maternal age, parity, education, employment and income after the chi-square test then there are two variables related to the election decision MOW contraception variable maternal age and income. Knowledge is the result of the know and this occurred after people perform on a particular object sensing, sensing occurs through the human senses, the senses of sight, hearing, smell, taste and touch, if the knowledge of either the respondent will have a positive attitude. The results of research that lack of knowledge (54.2%) and a negative attitude (57.8%) was probably caused by personal experience, the influence of others that are considered important, the influence of culture and mass media as a means of communication, educational institutions and religious institutions as well as the influence of emotional factors. Sometimes an attitude is a form of expression based on the emotion that serves as a kind of channeling frustration or alienation of ego defense mechanisms.

The negative attitude shown and less knowledge became one of the factors that affect the use of family planning acceptors MOW contraception. Respondents who did not vote MOW is because it was already fit and comfortable with a contraceptive method that is currently selected, a service that is easily accessible, do not get permission from the husband, fears and still

want more children, although the number of children had > 2 as well as the rumors a thriving community, for example, sterilization can cause reduced sexual desire. In addition, non-technical factors were the main reason the community is that the term "operations" gives the impression of scary.

Many things that influence a person to make the decision to use or not to use contraception MOW. This is consistent with the summary of the MOW contraception study which reported that the low level of acceptance is influenced by many factors Judging from the aspect of the client itself which is the socio-cultural barriers, aspects of program management, as well as from the aspect of the provider as the service provider. In general, the internal factors that are individual decisions and their partners which include social, cultural, however, internal factors closely related to the state of the economy unlucky. Thus, in this study there is a relationship between age and income, where most age 20-35 years old with a family income of > 1.5 million that should have been established in deciding to family planning with MOW instead it decided not to use contraception MOW.

## CONCLUSION

Knowledge and attitudes are not associated with contraceptive use keputusandalam MOW, but age and income linked to decisions on contraceptive use MOW.

## SUGGESTION

It takes a special counseling services on contraception MOW and research agreement to facilitate cross-program acceptors who want to use contraception.

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## EFFECTIVENESS OF CUPPING THERAPY AND ABDOMINAL STRETCHING EXERCISE TO DECREASE MENSTRUAL PAIN IN ADOLESCENTS LIVING IN SEDATI SIDOARJO

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### ABSTRACT

Almost all women in the world have experienced menstrual pain or dysmenorrhea. Its incidence rate ranges from 45-95 % among women at productive age at various levels, ranging from very painful sores around the pelvis and inside parts to menstrual pain, which forces women to take a rest or results in the reduction of performance quality and daily activities. Even, some women get unconscious (fainted) because they cannot cope with the pain (Manuaba, et al., 2009; Proverawati & Misaroh, 2009). Menstrual pain management can be done in two ways: non-pharmacological and pharmacological therapy. Pharmacological therapy is the administration of non-steroidal anti-inflammatory drugs (NSAID), traditional herbal drinks, whereas non-pharmacological therapy which can reduce pain includes skin massage, diathermy, immobilization, distraction, transcutaneous electrical nerve stimulation (TENS), guided imagery, feedback, relaxation technique with abdominal stretching exercise, and cupping therapy (Tamsuri 2006 ; Sharaf , 2012). The general purpose of this study was to analyze the effectiveness of cupping therapy and abdominal stretching exercise on the level of menstrual pain in adolescents living in Pepe Village, Sedati Sidoarjo. This study used pre-experimental design. The population involved adolescents living in RW 1 Pepe Village, Sedati, Sidoarjo who experienced menstrual pain, totaling 32 people chosen using total sampling technique. Data Analysis was done using a computer program using Wilcoxon Signed Rank test with  $\alpha = 0.05$ .

The results obtained using Wilcoxon signed rank test showed the effects of cupping therapy on the level of menstrual pain in adolescents living in RW 1 Pepe Village, Sedati, Sidoarjo. Whilst, the statistical test using Wilcoxon signed rank test showed the effectiveness of abdominal stretching exercise to decrease menstrual pain in adolescents living in RW 1 Pepe Village, Sedati, Sidoarjo.

**Key words: Cupping therapy, abdominal Stretching, Exercise, menstrual pain**

### INTRODUCTION

Every woman experiences different menstrual period. Some women may have period without complaints, but many of them have period accompanied with pain in lower abdomen and back heels called dysmenorrhea. The pain begins at the onset of menstruation and reaches its peak as the large amount of menstrual blood flows during the first to the second day of menstrual period (Hockenberry et al, 2008)

At the time of the endometrial lining sheds, endometrium releases prostaglandins (group of compounds similar to strong hormone consisting of essential fatty acids), the increase in the prostaglandin hormone stimulates the muscles of the uterus (womb) and affects the blood vessels that cause ischemia of the uterus (reduction of blood supply to the uterus) through the contraction of the myometrium (muscle wall of the uterus) and vasoconstriction (narrowing of blood vessels), which results in the onset of menstrual pain (Anurogo, 2011).

Almost all women in the world have experienced painful menstruation or dysmenorrhea. The incidence rate of menstrual pain ranges from 45-95% among women of productive age with a variety of levels, ranging from severe painful sores in **around the pelvis and its inside parts**. Menstrual pain forces women to take a rest or results in the reduction of performance quality and daily activities. Even, some women get unconscious (fainted) (Manuaba,dkk., 2009; Proverawati & Misaroh, 2009). The primary menstrual pain affects the quality of life for 40-90% of women, in which 1 of 13 women who experiences menstrual pain cannot not attend work and school for 1-3 days per month (Woo and McEneaney, 2010). In the United States, the economic losses up to 2 billion and reduced work productivity happen due to the loss of work hours up to 600 million work hours as a result of dysmenorrhea (Zhu X et al, 2009).

Dysmenorrhea often encourages patients to check or consult a doctor, public health center/clinic, or midwife. Even, some women become dependent on the consumption of analgesics/anti-pain drugs during dysmenorrhea. In general, 50-60% of women require analgesics to overcome the problem of menstrual pain (Annathayakheisha, 2009).

Menstrual pain management can be done in two ways: non-pharmacological and pharmacological therapy. Pharmacological therapy is the administration of non-steroidal anti-inflammatory drugs (NSAID), traditional herbal drinks, whereas non-pharmacological therapy which can reduce pain includes skin massage, diathermy, immobilization, distraction, transcutaneous electrical nerve stimulation (TENS), guided imagery, feedback, relaxation with

abdominal stretching exercise, and cupping therapy (Tamsuri 2006; Sharaf, 2012). Treatments with non-pharmacological therapy have no side effects at all compared to pharmacological treatments with drugs such as non-steroidal analgesics and steroids that have harmful side effects on the stomach and kidneys (Sharaf, 2012). Among various non-pharmacological therapy, cupping therapy and abdominal stretching exercise can be an alternative solution to overcome dysmenorrhea.

Cupping therapy is a non-pharmacological therapy that can treat painful menstrual pain. This therapy reduces the level of prostaglandins to reduce uterine contractions and sensitivity to pain. Cupping therapy can increase endorphin and enkephalin production and can stimulate blood circulation in the uterus to reduce uterine contractions and sensitivity to pain. (Sharaf, 2012)

According to Senior (2008), by doing exercise, the body will produce endorphin hormone. This hormone is produced in the brain and spinal nervous system. It serves as a natural tranquilizer, causing a sense of comfort. When doing exercise, endorphin hormone increases four to five times in the blood. Thus The more physical exercise, the higher the level of endorphin. When doing physical exercise, endorphin is produced and captured by receptors in the hypothalamus and the limbic system which serves to regulate emotions (causing relaxation and comfort). Evidences show that the increase of endorphin results in a decrease in pain, as well as normalization of blood pressure and breathing. Based on those considerations, the researchers are interested in examining the effectiveness of cupping therapy and abdominal stretching exercise for decreasing menstrual pain level in Pepe Village, Sedati, Sidoarjo.

## RESEARCH METHOD

This quantitative research used pre-experiment design with one-group pre-post test design. The purpose of this study was to determine the effectiveness of cupping therapy **luncur** and abdominal stretching exercise to decrease menstrual pain in adolescents. The population in this study involved all adolescents (aged 10-19 years) who experienced menstrual pain, totaling 32 respondents.

The respondent's pain level was measured before and after the treatment by providing observation sheets for pain measurement using a numeric pain intensity scale (NRS) 0-10. During the first cycle of menstruation, the researchers implemented cupping therapy for 15-30 minutes by using appropriate equipment standardized by ABI (Indonesian Cupping Therapy Association) when the respondents experienced menstrual pain. Then, in the next cycle, the respondents did abdominal stretching exercise for 10 minutes, guided by the researchers using the same SOP (Standard Operating Procedure) The data were analyzed with SPSS 20 using Wilcoxon Signed Rank test with  $\alpha = 0.05$ .

## RESULTS AND DISCUSSION

### 1. CUPPING THERAPY

Menstrual pain level before receiving cupping therapy

Results of research on the characteristics based on the level of menstrual pain before receiving cupping therapy were obtained as shown in Table 1 below:

**Table 1** The frequency distribution of the respondents based on the frequency of menstrual pain before receiving cupping therapy in adolescents living in RW 1 Pepe Village, Sedati, Sidoarjo

Menstrual Pain Levels Before Cupping Therapy	Frequency	Percentage (%)
No Pain(0)		
Mild pain(1-3)	0	0
Moderate pain (4-6)	7	21.9
Severe pain (7-9)	22	68.7
Very severe pain (10)	1	3.1
Total	32	100

Sources: Primary data, March 2016

Table 1 shows that among 32 respondents, most of them (68.7%) experienced severe menstrual pain before receiving cupping therapy

Menstrual pain felt by the respondents is usually occurred in the lower abdomen and can spread to the inside part of the thigh or lower part of the waist and the back. This situation causes nausea, vomiting, diarrhea, inability to move normally; it even results in unconsciousness or fainting.

According to Morgan and Hamilton (2009), dysmenorrhea occurs as a result of increased endometrial prostaglandins in high quantities. Under the influence of progesterone during the luteal phase of menstruation, endometrium containing prostaglandin increases to the maximum level during menstruation. Prostaglandins cause strong contractions of the myometrium which are able to constrict the blood vessels resulting in ischemia, the disintegration of the endometrium, and pain.



**a. Menstrual pain level after receiving cupping therapy**

Results of research on the characteristics based on the level of menstrual pain after receiving cupping therapy were obtained as shown in Table 2 below:

**Table 2 The frequency distribution of the respondents based on the level of menstrual pain after receiving cupping therapy**

Level of Menstrual Pain after Cupping Therapy	Frequency	Percentage (%)
No Pain(0)	16	50,0
Mild pain(1-3)	12	37,5
Moderate pain (4-6)	4	12,5
Severe pain (7-9)	0	0
Very severe pain (10)	0	0
<b>Total</b>	<b>32</b>	<b>100</b>

Sources: Primary data, March 2016

Table 5.2 shows that half (50.0%) of the 32 respondents experienced no menstrual pain after receiving cupping therapy

According to Sharaf (2012), cupping therapy is effective to decrease menstrual pain. It indicates that cupping therapy serves to reduce the level of prostaglandins to reduce uterine contractions and sensitivity to pain. This therapy serves to increase the production of endorphin and enkephalin which reduce pain. It plays its role to stimulate blood circulation in the uterus to reduce uterine contractions and sensitivity to pain. Bruises and blood clots resulted by this therapy stimulate the fibrinolytic system to dilute the menstrual blood clot so that the uterus does not need to contract for the blood discharge. Cupping therapy is helpful to relax the cervical muscles to avoid obstruction in menstrual blood flow and

prevent uterine contractions. Cupping therapy also helps to relax the isthmus region (the part between the cervix and uterus) and stimulates blood circulation in the uterine wall so as to prevent damages to sensitive nerve endings.

**b. Effects of Cupping Therapy on Menstrual Pain Level in adolescents living in RW. 01 Pepe Village, Sedati, Sidoarjo**

Results of research on the characteristics based on the effects of cupping therapy on menstrual pain level before and after receiving cupping therapy were obtained as shown in Table 5.3 below:

**Table 3 The distribution of the different levels of menstrual pain before and after receiving cupping therapy in adolescents living in RW 1 Pepe Village, Sedati, Sidoarjo**

Menstrual Pain Level before receiving cupping Therapy	Pre-Test		Post-Test	
	Frequency	Percentage (%)	Frequency	Percentage (%)
No Pain(0)	0	0	16	50,0
Mild pain(1-3)	17	63,3	12	37,5
Moderate pain (4-6)	4	12,5	0	0
Severe pain (7-9)	0	0	0	0
Very severe pain (10)	0	0	0	0
<b>Total</b>	<b>32</b>	<b>100</b>	<b>32</b>	<b>100</b>

Sources: Primary data, March 2016

Based on Table 3 showing the level of menstrual pain before receiving cupping therapy (pre-test), most of the respondents

(68.7%) experienced severe menstrual pain (7-9); and after receiving cupping therapy (post-test), half of the respondents (50.0%) experienced no menstrual pain (0).

Wilcoxon signed rank test showed the value of  $p = 0.001$  and the value of  $\alpha = 0.05$ , meaning that  $p < \alpha$  so that  $H_0$  was rejected. It described the effects of cupping therapy on the level of menstrual pain in adolescents living in RW 1 Pepe Village, Sedati, Sidoarjo.

Severe menstrual pain occurs due to increased prostaglandins that stimulate strong contractions in the uterus. The longer menstruation happens, the more often the uterine contractions occur. Consequently, when more prostaglandins release due to excessive prostaglandins production, it causes more pain. Menstrual pain management using cupping therapy is very easy, practical, and no side effects, unlike the use of expensive pharmacological treatments which have side effects on the stomach, kidneys and other body organs.

According to Umar (2012), one of non-pharmacological treatments for menstrual pain management is cupping therapy, a method of treatment using tubes or cups which are faced down on the surface of the skin to cause local blocking (damming). This is caused by the negative pressure within in the tubes (cups) to collect blood locally. Then the blood is removed from the skin through suction from injury, purposed to improve energy chi and blood circulation, which causes analgesic effects or reduce pain, reduce swelling, and expel pathogenic wind either cold or humid.

## 2. ABDOMINAL STRETCHING EXERCISE

The results showed that among 15 respondents, an average age of the respondents were 21 years. On average, the first menstrual period occurred at the age of 13.07 years. Most of the respondents (53.3%) experienced menstrual pain for 2 days every month. Based on the history of drug use, most of them (66.7%) took drugs when having menstrual pain.

### a. Menstrual pain levels before performing abdominal stretching exercise

Results of research on the characteristics based on the level of menstrual pain before doing abdominal stretching exercise were obtained as in table 5.4

**Table 4 The frequency distribution of menstrual pain level before doing abdominal stretching exercise in adolescents living in RW 1 Pepe village, Sedati, Sidoarjo**

level of Pain	Frequency	Percentage (%)
No Pain	0	0
Mild pain	7	21,9
Moderate pain	17	53,1
Severe pain	8	25
Very severe pain	0	0
Total	32	100

Sources: Primary data, March 2016

Table 4 showing the frequency distribution of the respondents' level of menstrual pain before doing abdominal stretching exercise, most of them (53.1%) experienced moderate menstrual pain.

Most of the respondents experienced moderate menstrual pain because they have long experiences in having menstrual pain so that the body can adapt and get used to feel the pain every month; and few respondents who are unfamiliar with the pain yet categorized it was in moderate level. In line with Sigit (2010), individuals who are accustomed to pain will be more ready and easier to anticipate the pain compared to those who have little experiences of having pain.

### b. Menstrual pain level after doing abdominal stretching exercise

Results of research on the characteristics based on the level of menstrual pain after doing abdominal stretching exercise were obtained as in tabel 5.

**Table 5 The frequency distribution of the level of menstrual pain after doing abdominal stretching exercise in adolescents living in RW 1 Pepe village, Sedati, Sidoarjo in March 2015.**

level of Pain	Frequency	Percentage (%)
No Pain	4	12,5
Mild pain	15	46,9
Moderate pain	9	28,1
Severe pain	4	12,5
Very severe pain	0	0
<b>Total</b>	<b>32</b>	<b>100</b>

Sources: Primary data, March 2016

Based on Table 5 showing menstrual pain level frequency distribution of the respondents after doing abdominal exercise stretching, almost half of the respondents (46.9%) experienced mild menstrual pain.

Tjokronegoro (2008) states that the physical exercise has the benefit of reducing menstrual pain. First, it increases efficient work of lungs. Someone who regularly does physical exercise can provide oxygen nearly double per minute so that oxygen will be delivered to the blood vessels which experience vasoconstriction and will cause a decrease menstrual pain. Second, it increases the volume of blood flowing throughout the body, including the reproductive organs that facilitate the supply of oxygen to the blood vessels experiencing vasoconstriction. It causes menstrual pain to be reduced. In addition, regular and moderate physical exercise can increase the release of beta endorphin (natural pain relievers) into the bloodstream that can reduce menstrual pain.

### c. Effects of abdominal stretching exercise on the levels of menstrual pain in adolescents in RW. 01 Pepe Village, Sedati, Sidoarjo

Results of research on the characteristics based on the effects of abdominal stretching exercise on menstrual pain level before and after performing abdominal stretching exercise were obtained as showed below.

**Table 5.6 The Frequency distribution of menstrual pain level before and after doing abdominal stretching exercise in adolescents in RW 1 Pepe Village, Sedati, Sidoarjo in March 2015.**

Abdominal stretching exercise	Menstrual Pain Level					Total
	No Pain (%)	Mild (%)	Moderate (%)	Severe (%)	Very severe (%)	
Pre	0 (0)	7 (21,9)	17 (53,1)	8 (25)	0 (0)	32 (100)
Post	4 (12,5)	15 (46,9)	9 (28,1)	4 (12,5)	0 (0)	32 (100)
Uji statistic Wilcoxon signed rank test						
Asymp Sig (2-tailed) = 0,002						
Negative rank = 10						
Positive rank = 0						
Ties = 5						

Sources: Primary data, March 2016

Table 5.6 showed that among 32 respondents before doing abdominal stretching exercise, most of the respondents (53.1%) experienced menstrual pain. After doing abdominal stretching exercise, nearly half of respondents (46.9%) experienced mild menstrual pain. The statistical test using Wilcoxon signed rank test showed that the value of post test was less than the pre test which scored the value of 10. It means that there are 10 respondents experienced the decrease of menstrual pain after doing abdominal stretching exercise. The value of post test was greater than the pre test which scored the value of 0 meaning that there was no respondents who experienced increased level of menstrual pain after doing abdominal stretching exercise. Moreover, the value of pre-test was equal to the value of post test scoring the value of 5 illustrating that as many as five respondents who experienced persistent pain (no change) both before and after doing abdominal stretching exercise. Statistical test results using Wilcoxon signed rank test with significance level  $\alpha = 0.05$  obtained  $P = 0.002$  in which  $P < \alpha$  so that  $H_0$  was rejected. It means that abdominal stretching exercise is effective to decrease the level of menstrual pain in adolescents in RW 1 Pepe Village, Sedati Sidoarjo.

Based on the above data, it can be concluded that abdominal stretching exercise was effective in reducing menstrual pain. Among 32 respondents who performed abdominal stretching exercise, 20 respondents experienced decreased menstrual pain. After abdominal stretching exercise for  $\pm 10$  minutes, the respondents revealed that the movements of the abdominal stretching exercise made the abdominal muscles stretched and caused the body to relax. After doing abdominal stretching exercise respondents felt the pain to subside. Before performing abdominal stretching exercise,

the respondents who initially experienced severe menstrual pain like crumpled pain that makes them unable to move and must take a rest turned into moderate menstrual pain characterized by lighter body and feel stabbing pain, but still be able to move. Whilst, the respondents who experienced menstrual pain before abdominal stretching exercise like being stabbed in the abdomen which interferes with the activity turned to have mild pain, such as sores and twining abdomen that only come a few times and did not interfere with the activities. Moreover, the respondents who experienced mild pain after abdominal stretching exercise did not feel no menstrual pain. The results of research supported by the opinion from Daley (2008) who states that the exercise is effective to reduce menstrual pain.

The benefits of abdominal stretching exercises is to help improve the oxygen or the process of exchange of oxygen and carbohydrates in the cells and stimulates drainage lymph system, so it can improve muscle tone by returning the muscles in length is natural and can maintain its functions properly and improve elasticity or flexibility of body tissues and reduce muscle cramps (Nurhadi, 2007).

## CONCLUSION

Based on the above results it can be concluded that the procedure and abdominal stretching exercise is effective and can be recommended in reducing menstrual pain. However, limitations in this study was not conducted jointly test to determine the most effective therapy in reducing menstrual pain.

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## FAMILY SUPPORT RELATIONSHIP WITH UMBILICAL CORD CARE PRACTICE IN REGIONAL HEALTH CENTER SEGIRI SAMARINDA

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### ABSTRACT

Background: Infection of the cord and neonatal tetanus can occur because the umbilical cord care is not clean and proper. One attempt to solve the problem and reduce infant mortality due to infection of the umbilical cord and neonatal tetanus among others are each pregnancy given tetanus toxoid, cutting the umbilical cord which is done properly and maintained its sterile and proper cord care. In this case the role of the family support is very influential when the mother became new parents because the mother will take responsibility for the baby's care such as bathing, umbilical cord care, holding and feeding the baby. Objective: The aim of this study was to determine the relationship between family support with umbilical cord care practices in Regional Health Center Segiri Samarinda. Research Methods Descriptive Correlation by using cross sectional design. Subjects were 52 women who took care of their newborn umbilical cord that are taken proportionately sampling. The independent variable was family support. The dependent variable is the umbilical cord care. Collecting data using questionnaires and observation. Result: There was a significant correlation between emotional family support and umbilical cord care practices, there is a significant relationship between informational family support with cord care practices, there is a significant relationship between instrumental family support with umbilical cord care practices, there is a significant relationship between ratings / awards family support with cord care practices Conclusion: the correlation of test results with Chi Square and Fisher's Exact showed there is a significant correlation between family support with umbilical cord care practices.

**Keywords:** family support, Umbilical cord care practices.

### INTRODUCTION

According to Samarinda City Health Office (2012), Infant Mortality and Toddlers in the city of Samarinda accomplishments tend to decline but still above the target province which is 9.0 / 1000 KH, in 2011 AKB: 12.15 / 1.000 KH (314 cases) and in 2012 IMR as much as 10.67 / KH 1000 (293 cases).

Samarinda leading causes of death in the age group of perinatal as many as 62.8%, neonatal as many as 14.33% and age infants (29 days-11 months) as many as 22.87% of 293 cases. The cause of death was asphyxia (33.18%), low birth weight (26.61%), jaundice (2.65%), neonatal tetanus (2.65%),

umbilical cord infection (1.32%) and others (33.62%). Segiri Health Center is a contributor to neonatal death rate was 12 cases (4.09%) which is one cause of death neonatalnya is umbilical cord infection)

One attempt to solve the problem and reduce the number of Infant Mortality as umbilical cord infection and neonatorumtetanus includes every pregnancy given tetanus toxoid which is very useful to prevent neonatal tetanus in addition supposed sterility must be very careful when cutting the umbilical cord as well as umbilical cord care next (Sodikin, 2009: 76-79). In this case, the role of the family support is very influential when the mother became new parents because the mother will take responsibility for the baby's care such as bathing, umbilical cord care, holding and feeding the baby (Sulistiyawati, 2009),

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Results of research conducted by Deviana in 2011 that most of the mothers at the maternity hospital Kartika Jaya have enough knowledge about umbilical cord care that is 52.4% and has less knowledge of 21, 4%. Lack of knowledge about umbilical cord care can be a factor causing in high mortality rate due to infection of umbilical cord. Based on preliminary studies done by researchers at Puskesmas Segiri by interviewing to some postpartum mothers who have activities taking care of the umbilical cord of her own baby said that the family was often advised to take care of the cord properly, paid attention when the mother having trouble caring for the umbilical cord baby and family indifferent when the mother was taking care of the umbilical cord.

## RESEARCH METHODS

This research method is descriptive correlational, namely a study conducted to describe a phenomenon that occurs in the community and research or study of the relationship between two variables in a situation or group of subjects (Notoatmodjo, 2012: 47-48).

Based on the time of the study, the research design was cross-sectional (cross-sectional) where the measurements or observations performed at the same time or at a time (Nursalam, 2008: 83). Samples are postpartum mother who takes care of her baby's umbilical cord at Segiri health centers in the region of Samarinda as many as 52 people. This data collection tools such as questionnaires and checklists. Test the validity of this research that is done at Village Sidodadi Samarinda. Data were tested using Chi Square test dan uji Fisher Exact.

## RESULTS AND DISCUSSION

The results of the study reveals that most of them have less emotional support as many as 29 respondents (55.8%) and had good support as many as 23 people (44.2%), a total of 39 respondents (75.0%) have less

family support informational and which has a good support as many as 13 people (25.0%), as many as 29 respondents (55.8%) had a good instrumental support and who have less support as many as 23 people (44.2%), and as many as 41 respondents (78.8 %) had a family support ratings / awards less and who have good support as many as 11 people (21.2%).

Umbilical cord care practices, most respondents do not perform properly as many as 34 people (65.4%) and that doing it right as many as 18 people (34.6%). The result of Chi Square test p value 0.000 <a (0.05), and value X<sup>2</sup> 17.064, This shows that there is a significant relationship between emotional support with umbilical cord care practices. Results Fisher Exact Test p value 0,040 <a (0.05) This shows that there is a significant relationship between the informational support with cord care practices. The result of Chi Square test p value 0.004 <a (0.05), and value X<sup>2</sup> 8.479, This shows that there is a significant relationship between instrumental support with umbilical cord care practices. Results Fisher Exact Test p value 0.034 <a (0.05) This shows that there is a significant relationship between support ratings / awards with umbilical cord care practices, such as in Table 4, 5 and 6.

Table 1. The frequency distribution of Respondents Based on Emotional Support, Informational, Instrumental and judgments / awards at Puskesmas Segiri Samarinda working area

Umbilical Cord Care Practice	Total	Percentage (%)
Do not do	34	65,4
Do	18	34,6
<b>Total</b>	<b>52</b>	<b>100</b>

Tabel 2. The Frequency Distribution Of Respondents Based Nursing Practice Umbilical Cord at Puskesmas Working Area Segiri Samarinda

Emotional support	Practic				Total n	P Value
	Do not do		do			
	n	%	n	%		
Not good	26	89,7	3	10,3	29	0,00
Good	8	34,8	15	65,2	23	0
Total	34	65,4	18	34,6	52	

Tabel 3. Relationships with Family Support Emotional Umbilical Cord Care Practice at Puskesmas Segiri Samarinda

Type of Family Support	Good		Not Good	
	total	%	Total	%
Emotional support	23	44,2	29	55,8
informational Support	23	44,2	55,8	75%
Instrumental Support	29	55%	23	44%
Rating / awards Support	11	21%	41	78%

Tabel 4. Relationships with Family Support Informational Umbilical Cord Care Practice at Puskesmas Segiri Samarinda

informa tional Support	practice				N	P value
	Not Do		Do			
	Total	%	Total	%		
Not Good	29	74,4	10	25,6	39	
Good	5	38,5	8	61,5	20	0,040
Total	34		18			

Tabel 5. Relationships with Family Support Instrumental Umbilical Cord Care Practice at Puskesmas Segiri Samarinda

Support	Practic		N	P value
	Not Do	Do		
	N	N		
Not Good	20 87,0%	3 13,0%	23 100%	0,004
Good	14 48,3%	15 51,7%	29 100%	

Tabel 6. Relationship Family Support Ratings / Choice Perawatan Tali with Practice Center at Puskesmas Segiri Samarinda

Assessment / awards Support	Practic		Do	N	P value
	Not Do				
	Total	%	Total	%	
Not Good	30	73,2	11	26,8	41 0,034
Good	4	36,4	7	63,6	11
Total	34		28	34,6	52

Based on the results of statistical analysis with Chi Square test, p value = 0.000 less than a (0.05), then Ho is rejected, so it can be concluded that there is a significant relationship between emotional family support with umbilical cord care practices in Puskesmas Segiri City Samarinda.

The results of this research study was supported by research conducted by Pratiknya (2012) concerning the factors that affect the practice of umbilical cord care, showed that there was a significant relationship between the family support cord care practices with p value 0.012. This is in line with the opinion House (1994) that the emotional support of a sympathetic or empathetic support. This support aims to provide support to mothers in the care of the umbilical cord. This support is needed by the mother in facing problems that may be encountered in the way umbilical cord care. With the emotional support of this, the mother will not feel alone and feel the problem is no one to help. Eg mother difficulties when caring for the umbilical cord, the family listened to the mother and helping to figure out how to clean umbilical cord care well and correctly.

Based on the results of statistical analysis with Fisher Exact test, the analysis obtained by Ho rejected, so it can be concluded that there is a significant relationship between family support informational with cord care practices in Puskesmas Segiri Samarinda. The results of this study are supported by a previous study conducted by Indriani (2010) about the relationship characteristics and support for families with

umbilical cord care showed that no significant relationship between the support informasonal with cord care with p value 0,007.

The results of this study are caused by the importanceof informational support and influence the mother's knowledge to perform umbilical cord care practices. Information can be obtained either from the media, health education and experience. One of the informants are often for a motherwhose good to poor knowledgeof the family will determine whether mothers doumbilical cord care practices correctlyor not. By providing direct informational support can reduce the problems faced by mothers for caring for the umbilical cord. Clear information from the family to mothers will reduce the obstacles that may be experienced by the mother for taking care of the umbilical cord.

Based on the results of statistical analysis with Chi Square test, p value = 0.004 less than a (0.05). Based on the analysis, then Ho is rejected, so it can be concluded that there is a significant relationship between family support instrumental with umbilical cord care practices in Puskesmas Segiri Samarinda

The results are consistent with research conducted by Pratiknya (2012) about the factors that affect the practice of umbilical cord care, showed that no significant relationship between family support instrumental with umbilical cord care practices with p value 0.012

Some results of this research because instrumental support close relation to the fulfillment of support facilities. This support could be material, medical equipment, facilities and infrastructures for healthcare. With instrumental support that meets the family can provide what is required by mothers in umbilicalcord care practices. In this regard, with sufficient material, the mother can also check the baby so mom also get information from health officials about how to properly cleanumbilical cord care. Besides his own mother can also access

information about cord care through the mass media so that women are more skilled in cord care practices (Suprayitno, 2004)

Based on the results of statistical analysis with Fisher Exact Test, p value = 0.034 less than a (0.05). Based on the analysis, then Ho is rejected, so it can be concluded that there is a significant relationship between family support ratings / awards with umbilicalcord care practices at Puskesmas Segiri Samarinda

The results of this study are supported by a previous study conducted by Winda (2011) with the result that the umbilical cord care how poorly most of as many as 16 respondents (57.1%). Another study conducted by Indriani (2010) about the relationship characteristics and support for families with umbilical cord care showed that no significant relationship between support awards with cord care with p value of 0.011

Some results of this study due to the support of family tribute act as guidance feedback, guiding and mediating solution and as a source and identity validator members. It occurs via expression of respect (appreciation) which is positive for the mother, the urge forward, or agreements with individual ideas or feelings and a positive comparison to the mother. Support award is a source of motivation for mothers after childbirth. The award is given nearest person or family can improve maternal willingness to care for the baby to be better in terms of umbilical cord care practices (Suprayitno, 2004).

## CONCLUSION

The results of the study familysupport relationships with umbilical cord care practices are as follows:

1. There was a significant correlation between emotionalfamily support with umbilical cord care practices
2. There was a significant correlation between informationalfamily support withumbilical cord care practices.



3. There is a significant relationship between instrumental family support with umbilical cord care practices.
4. There was a significant correlation between ratings / awards family support with cord care practices.

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## CONSUME THE ARI AND PAPAW FRUIT ESSEN THE DEGREE KONSTIPASI OF PREGNANT MOTHER

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### ABSTRACT

Factors that cause constipation in third trimester pregnant women include a wide variety of internal factors that occur because of an increase in progesterone which causes intestinal peristalsis becomes slower. A decrease in the intestine as a result of the relaxation of smooth muscles and increasing the absorption of the colon. Internal factors are predominant due to lack of intake of electrolytes and water incontinence culture. The purpose of this study was to determine the Influence of Water Consumption And Fruit Papaya (*Carica Papaya*) Reduce the degree of Constipation In Pregnancy Trimester III In Polindes Ngadirenggo Wlingi District of Blitar 2015.

Design research is correlational analytic study. The population studied were all pregnant women in the third trimester Polindes Ngadirenggo Blitar District of Wlingi of 20 people with pre-post test control techniques grub design. Research instrument used is the provision of water and buah papaya for 3 days. Results of the study were analyzed using the Wilcoxon test and Mann-Whitney. The results showed that the incidence of constipation before being given water therapy and papaya entirely Constipation and after therapy is given water and fruit papaya almost entirely (90%) did not occur constipation in third trimester pregnant women treated group in Polindes Ngadirenggo District of Wlingi Blitar 2015.

The analysis showed no difference between before and after the water treatment and papaya against constipation in pregnant women in the third trimester Polindes Ngadirenggo Wlingi Blitar District of the Year 2015. Based on the results of the study are expected for all pregnant women to consume enough water approximately 1500ml and papaya 400gram per day to prevent constipation and pregnancy went smoothly.

**Keywords: Water Treatment, Constipation, Pregnant Trimester III**

### INTRODUCTION

Konstipasi or constipation is condition or somebody circumstance which cannot defecate consecutively or exactly oppositely also cannot defecate at all. Generally many people which often experience of this matter. Like feces of human being ossifying and earn of the size very big feces or very small (Djojoningrat, 2006).

Serious level at disease konstipasi or constipate this also very different each other in each its patient. There are some one who experience of the brief problem konstipasi

during, however there is also natural some people it long-range during chronic or. Usually long-range konstipasi will generate to feel the pain and also feel the is not balmy which can bother and influence the everyday activities and is immediately checked to medical so that get the furthermore handling or referred. Konstipasi can just be experienced of by whom, inclusive of mother which with a child, [in] pregnancy age of unlimited, whether in early, middle, and also final or even as long as itself pregnancy

Pregnancy of Trimester III is include the week to- 29 until 42 pregnancy. Trimester III is frequently referred for "period await the, waiting and allert the" ( Sutarjo, 2010).

\Is not balmy that happened at pregnancy of Trimester III for example often berkemih, out of breath, swelling and muscle-bound at feet, trouble sleep and easy to fatigue, pain in bone of stomach of under, konstipasi, varises and pile.

From trimester of above there are one of problem eliminasi which must become the attention of health steward that is konstipasi. At pregnancy, konstipasi became of by 10-40% woman (vazquez, 2010). Result of doctor Research in North Carolina of United States mention that konstipasi improve the risk of colon cancer till twofold (My child, 2007). In Indonesia number of occurrence of konstipasi year 2012 got equal to 57,4% from existing grand total. In puskesmas Wlingi got by number konstipasi of equal to 21,3% from grand total pregnant mother. In Polindes Ngadirenggo of number konstipasi of pregnant mother of trimester III show 60% from 10 patient.

From data intake of early in the year 2015, from year of know number of occurrence konstipasi at pregnancy of trimester III progressively mount the. Year 2012-2013 from totalizeing 32 pregnant mother 14 pregnant mother experience of the kostipasi. Pursuant to survey which have been conducted by during practice of midwifery community in chief of village of Ngadirenggo date of 12 January 2015 got by result that from amount as a whole 37 pregnant mother, 20 pregnant mother experience of the kostipasi.

Height of Occurence konstipasi of above because of pattern consume the water which less, continent culture irrigate the, continent

culture eat etcetera. Researcher experience of during midwifery practice indicate that Ms. pregnancy tend to less pay attention to the prevention konstipasi in accomplishment drink the/ dilution which adekuat so that experience of the trouble gastrointestinal. Dilution input which not adekuat represent one of the so much cause konstipasi.

During pregnancy happened by because: Make-Up of hormone progesteron causing relaksasi muscle so that intestine less be efficient, konstipasi is also influenced by because change uterus which big progressively.

So that uterus depress the stomach area, and other cause of konstipasi or constipation is because iron tablet (iron) given by doctor / midwife. At pregnant mother, usually cause the konstipasi, others iron tablet also cause the pregnant colour feses mother of blackish chromatic but needn't be felt concerned about by pregnant mother because change of colour feses of because this ferrum influence is normal (Djojoningrat, 2006).

Konstipasi of above can make the difficult in pregnancy, impact generated from konstipasi that is result the make-up of number of occurrence konstipasi. Konstipasi happened more or less 1-2% from public population searching medication (Simadibrata, 2006). Konstipasi which do'nt get the good handling will generate assorted other health problem. Generally chronic konstipasi result the happening of hemoroid, effect of Feses ossify, by naluriah is mother of inviting to release the feses. Finally, rektum swell and bleed the effect of break the venous in anus. In course of copy, its impact is arising moment difficulty process the copy of vagina, effect of there are pile or ambeyen at elbow street born and mother may not spastic too ossify.

But, to overcome the konstipasi that happened at pregnancy penatalaksanaan of early is improve the fibre consumption, dilution and do the aktivitas physical (practice gymnastic). If at penaktalaksanaan of early don't improve the condition, is hence used a certain medication for example gift of probiotik and laxatives (pencahar).

Way to overcome of Konstipasi or constipation is: Drinking white water is which enough minimize 6-8 glass/day, Eat the high fibrous food like vegetable and fruits (papaw fruit) because papaw fruit contain the papain which can mellowing feses, conduct the light athletics regularly like walking (Jogging). Dilution Input which is more amounts also improves the daily peristaltik intestine in comparison with dilution input which is a few/little. Positive effect of pregnant food gift fibre as much 25g at konstipasi also will mount through dilution input 1,5-2 litter per day (Simadibrata, 2006).

Pursuant to description of is above researcher interested for the know of influence consume the dilution and papaw fruit to konstipasi of pregnant mother of trimester III in POLINDES Ngadirenggo of subdistrict of Wlingi of Regency Blitar.

This Research aim to know the influence consume the dilution (air) and fruit papaya (carica papaya) lessening degree konstipasi of pregnant mother of trimester III.

## RESEARCH METHOD

Research Device is all process needed in the plan and research execution (Nasir, 2010). This research represent the research type "Experimental" with the Device of research of this *pre post tes control grub design*. Design entangle two group subjek, one given the treatment eksperimental

(experiment group) and other not given the something (group control the) (Notoatmodjo, 2012).

*Sampling* technique is the way of which is gone through in intake sampel, so that obtaining really sampel as according to entirety of subyek research (Nursalam, 2008). *Sampling* technique selected is *purposive sampling* that is intake sampel of pursuant to criterion specified by researcher.

## RESULT AND DISCUSSION

Tables of. 1 Difference of prosentase of occurrence of konstipasi post of pregnant mother of trimester III group control and treatment in Polindes Ngadirenggo of Subdistrict of Wlingi of Regency Blitar, June 2015 ( n = 20).

Occurrence ofGroup konstipasi post control	Treatment Group
Normal	0 90
Light	30 10
Medium	70 0
Chronic	0 0
<i>Mann Whitney test, p value= 0,000</i>	

Occurrence konstipasi of pregnant mother of trimester III at category is equal to 70% (7 respondent) and at normal category treatment group equal to 90% (9 respondent).

From statistical test result of Mann Whitney got by value  $p = 0,000$  (smaller than 0,05) inferential so that that there is difference of occurrence konstipasi of among group control and treatment group of pregnant mother of trimester III so that its meaning there is gift influence consume the dilution (air) and fruit papaya to konstipasi of pregnant mother of trimester III in Polindes Ngadirenggo Subdistrict Wlingi Regency Blitar.

Occurrence Konstipasi of Before Gift Consume The Dilution (Air) and Fruit Papaya at Ms. Pregnancy of Trimester III. From result of data collecting to 20 pregnant mother of trimester III got at group control almost semi pregnant mother experience of the light konstipasi before gift consume the dilution (air) and fruit papaya that is equal to 40% (4 respondent) and at treatment group of semi pregnant mother experience of the light konstipasi before gift consume the dilution (air) and fruit papaya that is equal to 50% (5 respondent). This Occurrence konstipasi measurement is used by scale bristol so that light konstipasi at pregnant mother of this trimester III at scale of bristol type 3-4.

Pregnant woman (BUMIL) which have higher education to will push the somebody will look for the information which is more about konstipasi at pregnant mother of trimester III and with the formal education basically will give the knowledge and will affect at incidence of process to prevent incidence of konstipasi at pregnant mother of trimester III.

#### **Occurrence Konstipasi Hereafter Gift Consume The Dilution (Air) And Fruit Papaya of Ms. Pregnancy of Trimester III**

From result of data collecting to 10 pregnant mother of trimester III in Polindes Ngadirenggo of Subdistrict Wlingi Regency Blitar got at group control most pregnant mother experience of the konstipasi is that is equal to 70% (7 respondent) without gift consume the dilution (air) and fruit papaya. Scale Bristol at pregnant mother of this trimester III at type 2-3 and tend to experience of the make-up of type Bristol toward bad.

From result of data collecting to 10 pregnant mother of trimester III. Subdistrict Wlingi Regency Blitar got by a pregnant mother of trimester III of treatment group experience of not experience of the konstipasi or normal hereafter gift consume the dilution (air) and fruit papaya that is equal to 80% (8 respondent). Scale Bristol of pregnant mother of trimester III hereafter gift consume the dilution (air) and fruit papaya at type 5 that is faeces have the characteristic of [is in form of like bland circle, smooth surface, and enough easy to be released.

Pregnant Mother moment experience of the sigh konstipasi, pregnant mother require to do this matter for the fluent of process the normal defekasi so that pregnant mother own the freshment at the (time) of pregnancy of trimester III.

#### **Difference Consume the Dilution (Air) And Papaw Fruit To Konstipasi of Ms. Pregnancy of Trimester III of Group of Treatment and Group Control**

Pursuant to tabulation traverse the occurrence konstipasi of knowable control group of pregnant mother tend to experience of the occurrence konstipasi [is] from 40% (4 respondent) becoming 70% (7 respondent) hereafter gift consume the dilution (air) and fruit papaya that is equal to 45% (9 respondent). Result of statistical test of *Wilcoxon* got by value  $p = 0,564$  (smaller than 0,05) inferential so that that no difference of occurrence konstipasi of pregnant mother of trimester III of group control in the countryside.

Pursuant to tabulation result traverse at knowable treatment group at natural respondent treatment group of light konstipasi become to experience of not experience of the konstipasi or normal



hereafter gift consume the dilution (air) and fruit papaya that is equal to 50% (5 respondent). Result of statistical test of *Wilcoxon* got by value  $p = 0,004$  (smaller than 0,05) inferential so that that there is difference of occurrence konstipasi of pregnant mother of trimester III. Result two test *Wilcoxon* of group control and treatment can explain the existence of difference of occurrence konstipasi of second of group. This matter is indication with the existence of intervention of treatment group can degrade the occurrence konstipasi of pregnant mother of trimester III. Intervence in the form of gift consume the dilution (air) and fruit papaya can degrade the occurrence konstipasi become normal.

Existence of degradation of degree of this konstipasi show the existence of influence from gift consume the water and papaw fruit which can give the freshment of pregnant mother of trimester III. Gift consume the water of morning after develop; building sleep can quicken the happening of defekasi of because stomach stay in the empty circumstance at morning after develop sleep, so that permeable stomach wall irrigate swiftly to is later poured into by colon (Hamad, 2007). Stimulus water of incidence of movement peristaltik to move the mass feses forwards is so that happened by the desire for the defekasi of. This occurrence arise two until thrice one day and stimulated by refleks gastrokolik after eating, specially after first food enter at morning.

#### **Gift Influence Consume The Dilution (Air) and Papaw Fruit To Konstipasi of Ms. Pregnancy of Trimester III of Group of Treatment and Group Control**

Pursuant to tables 4.3 knowable at group control the occurrence konstipasi of pregnant mother of trimester III of category is equal to 70% (7 respondent) and at group of

treatment of occurrence konstipasi of pregnant mother of trimester III at normal category equal to 90% (9 respondent). Result of statistical test of *Mann Whitney* got by value  $p = 0,000$  (smaller than 0,05) inferential so that that there is difference of occurrence konstipasi of among group control and treatment group of pregnant mother of trimester III so that its meaning there is gift influence consume the dilution (air) and fruit papaya to konstipasi at pregnant mother of trismester III.

Food Fibre can be defined by as a remains which is left behind in colon after food digested or after see vitamin of nutrition in food permeated by a body. Papaw of is inclusive of fruit having high content, papaw fruit contain the enzyme, vitamin and mineral, containing vitamin A, complex vitamin B, and vitamin E. papaw Fruit contain the functioning enzyme Papain quicken the protein ingestion. Energy digest given by enzyme Papain can digest 35 times fold so that make the pregnant food of protein can be taken by its benefit better. Sanjoaquin, et al (2004) opening that dilution input which is more amount will improve the daily peristaltik intestine in comparison with dilution input which is a few/little. Positive effect of pregnant food gift of fibre as much 25g also will mount through dilution input 1,5-2 liter of per day. Consume the water and papaw fruit which enough will assist the digestion organ of like large intestine of so that functioning to prevent the konstipasi of because intestine movement become more fluent and metabolism in body will walk finely.

#### **CONCLUSION**

Pursuant to result analyse and solution obtained a the following conclusion :

Occurence konstipasi of before gift consume the dilution (air) and fruit papaya of

pregnant mother of trimester III in Polindes Ngadirenggo Subdistrict Wlingi Regency Blitar at control group experience of the light konstipasi that is equal to 40% (4 respondent) and at treatment group experience of the light konstipasi that is equal to 50% (5 respondent).

While occurrence konstipasi of before gift consume the water and fruit papaya of pregnant mother of trimester III of control group experience of the konstipasi that is equal to 70% (7 respondent) and at treatment group not experience of the konstipasi or normal that is equal to 90% (9 respondent).

So that there is difference consume the dilution (air) and papaw fruit to konstipasi at pregnant mother of trimester III of group of treatment and group control. And there is gift influence consume the dilution (air) and fruit papaya to konstipasi at pregnant mother of trimester III with the value  $p= 0,000 (< 0,05)$

## SUGGESTION

To research place, braiding job of is of equal good among pregnant mother and health service which can in realizing in continual health education giver about is not balmy at the (time) of pregnancy specially occurrence konstipasi and its way to overcome.

Health education can be given by through interesting leaflet brochure or so that can draw attention the pregnant mother and can conduct it is at home. To pregnant mother, improving understanding of about is not balmy at the (time) of pregnancy specially occurrence konstipasi and its way to overcome is good through mass media, internet an also of health service

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# EFFECTIVENESS OF GIVING RED GINGER AND TAMARIND TO DECREASE DYSMENORRHEA IN STUDENT

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## ABSTRACT

Dismenorhea is painful menstruation. One way to decrease Dismenorhea is the use of herbal plants such as red ginger and tamarind. The purpose of this study to determine the effectiveness of red ginger with tamarind to decrease Dismenorhea. Pre-experimental research design with the design of "Two Group Posttest Only Design". Population were all students as many as 102 students in a sample of 30 respondents taken by purposive sampling technique. Data were analyzed with the Mann-Whitneytest. The results showed there was no difference in the effectiveness of red ginger and tamarind to the decrease Dismenorhea in student. Red ginger tamarind or equally effective for decrease Dismenorhea. It is hoped that the respondent immediately consume Tamarind or redginger when getting Dismenorhea.

**Keywords:** tamarind, red ginger, Dismenorhea

## INTRODUCTION

Dismenorhea is abdominal pain that comes from uterine cramps and occur during menstruation. Usually the pain began to appear shortly before or during menstruation, peak within 24 hours and after 2 days will disappear. Dismenorhea also often accompanied by headache, nausea, constipation or diarrhea and frequent urination. Sometimes until there is vomiting (Devi and Fenning, 2008). Dismenorhea primary if not found the underlying cause and secondary Dismenorhea if the cause is a disorder of the womb. This condition often experienced by women who have experienced menstruation (Arifin, 2007).

About 50 percent of menstruating women experiencing Dismenorhea and 10 percent have severe symptoms that require rest in bed (Hacker, 2011). Primary Dismenorhea often happens, the possibility of more than 50% of women experience it and 15% of them experienced pain during menstruation great. The prevalence of primary dysmenorrhea in each country is different. The average prevalence in Asia

approximately 84.2%, with a specification of 68.7% occurred in Northeast Asia, 74.8% in the Middle East Asia, and 54.0% in West Asia. The prevalence in Southeast Asian countries also differ, Malaysia estimate the number of women who experience primary dysmenorrhea was 69.4%, Thailand 84.2%, and in Indonesia 65% of reproductive age experience primary dysmenorrhea. In Indonesia angka events Dismenorhea sure yet. But the results of a 2002 study in four junior high school in Jakarta (733 subjects) approximately 74.1% of students experiencing mild Dismenorhea until weight (Info Sehat, 2002).

Dysmenorhea if not addressed will affect the mental and physical functioning of individuals so urgent to take action / therapeutic pharmacological or non-pharmacological. Pharmacological therapy either by administering drugs analgesics. Drugs known as NSAIDs (Nonsteroidal antiinflammatory Drugs) can relieve this pain by blocking prostaglandins that cause pain. Treatment with NSAIDs have side

effects that are harmful to other body systems (stomach pain and the risk of kidney damage) (Wibowo, 2004).

Non pharmacological therapies include the setting position, relaxation techniques, touch management, environmental management, distraction, behavioral support, imagination, compress and administration of herbal ingredients. Therapeutic herbs can be done by using traditional medicines derived from plant materials. Some plant material believed to reduce pain. One of these plants is ginger (*Zingiber officinale* Rosc.) Which is part of the rhizome serves as an analgesic, antipyretic and anti-inflammatory (Pramono, 2002).

Dysmenorrhea is the most common primary dysmenorrhea (Wong & Khoo, 2010). Primary dysmenorrhea usually arise in adolescence, which is about 2-3 years after the first period. Secondary dysmenorrhea is less common and occurs in 25% of women who experience dysmenorrhea. Secondary dysmenorrhea often begin to emerge at the age of 20 years (Pri'e, 2009). Approximately 50% of women who are menstruating experiencing dysmenorrhea and 10 percent have severe symptoms that require bed rest (Hacker, 2011).

Primary Dismenorhea caused by hormonal imbalances in the body without any anatomical defects / congenital abnormality / disease). Usually primer arise in adolescence, which is about 2-3 years after the first period. Secondary Dismenorhea often begin to emerge at the age of 20 years. Another factor that can exacerbate Dismenorhea uterus is facing backward (retroversion), lack of exercise and stress psychological or social stress (Susilo 2007).

Preliminary study on 4 April 2015 STIKes Surya Mitra Husada the 10 respondents, 8

student experience Dismenorhea. From 8 coed, 7 (85.7%), back pain and breast as well as 1 student (14.3%), back pain and headaches. During the handling carried out by a student who experience menstrual pain is by taking medicine pharmacology is feminax, mefenamic acid and ibuprofen. If this is ignored then it can affect student participation to the absence figures in the learning process, which is also highly influential as the requirement to take the exams and ultimately lower academic achievement.

This is confirmed by research Sulastrri (2006) that as a result of complaints Dismenorhea in adolescent girls in Purworejo impact on daily activities disorders causing school absences  $\leq 3$  days. Results of recent studies indicate that nearly 10 percent of adolescents who suffered Dismenorhea absence rate 1-3 days per month or inability teenagers in performing his daily duties due to severe pain (Poureslami, in Sulastrri et al, 2006). This was confirmed by Jarret, et al in Sulastrri (2006) levels of pain during menstruation is 47.7 percent mild pain and severe illness by 47 percent.

Dismenorhea necessary to overcome a correct understanding of menstruation, especially for teenagers who do not know and understand (Nawawi, 2006). To reduce pain can prescribe non-steroidal anti-inflammatory (eg, ibuprofen, naproxen and mefenamic acid). These drugs are most effective if taken 2 days before menstruation and continued until 1-2 days of menstruation. In addition to pain medications can also be reduced with adequate rest, regular exercise (especially walking), massage, yoga, orgasm in sexual activity and warm compresses on the abdominal area. It is recommended to drink beverages and sour ginger (*Zingiber*



officinale) because the plant is known as root plants that contain phenols which have anti-inflammatory effects and rewarding to drive out joint disease also experienced muscle tension (Pramono, 2002). Besides the chemical containing acid include citric acid, tartaric acid, succinic acid, sour apple, and others. These substances are antibiotics, anti-edema, fever, and also anti-inflammatory or anti-inflammatory. Fruit acids can also cope with abdominal pain or pain due to menstruation (Editors Agro Media, 2008). The purpose of this study was to determine the effectiveness of administration of Red Ginger and Tamarind against Dismenorhea on student Prodi D-III Midwifery Semester II and IV STIKes Surya Mitra Husada Kediri.

## RESEARCH METHODS

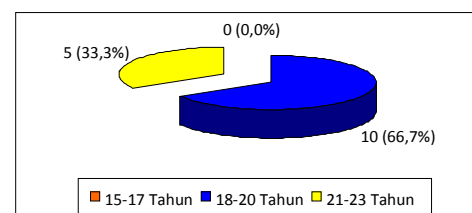
The research design is the design of pre-experimental design with "Two Group Posttest Only Design" is by researchers in identifying the effectiveness of red ginger and tamarind against Dismenorhea on the students in Prodi D-III Midwifery semesters II and IV STIKes Surya Mitra Husada Kediri. Samples are partly student in Prodi DIII Midwifery Semester II and IV STIKes Surya Mitra Husada Kediri experiencing Dismenorhea by 30 respondents. Measurement of these two variables is only done once in 2 days. A total of 15 respondents were given Red Ginger and 15 respondents are given Asam Jawa for 2 days and the second day is done Observations. Sampling technique chosen is purposive sampling that is based on criteria established by researchers, including young women who are not allergic to the red ginger and tamarind, young women who are willing to drink red ginger and tamarind and willing to study, adolescent girls who experience Dismenorhea moderate and severe. Data collection procedures, set covers data

collection method is based on the research variables, develop instruments as a tool to collect data that observation sheets, specify the respondent to be studied, the researchers propose a permit researching of STIKes Surya Mitra Husada, approached the respondent and give informed consent if agrees to become a respondent, delivering drinks red ginger and tamarind, carry out an assessment after giving Dismenorhea red ginger and tamarind. Data analysis using the Mann-Whitney test.

## RESEARCH RESULT

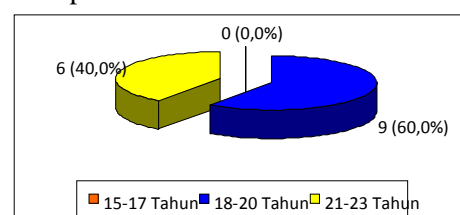
Characteristics of

Respondents Characteristics of Respondents by Age at Giving Tamarind groups



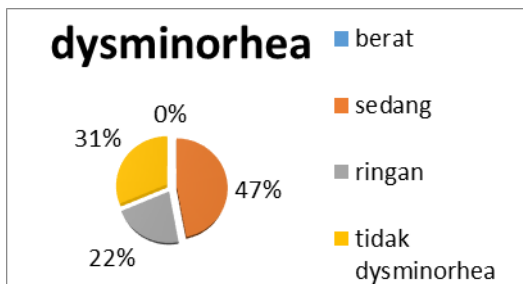
Based on the diagram above 4.1 is recognized that most respondents aged 18-20 years of the 10 respondents (66.7%).

Characteristics of Respondents by Age at Giving Red Ginger Groups



Based on diagram 4.2 above known to most respondents aged 18-20 years of the nine respondents (60.0%).

Characteristic of *Dismenorhea*



Based on diagram 4.3 above, known to almost half of the respondents had dysmenorrhea being as much as 47%.

### Variable Characteristics

Table 4.1 Dysmenorrhea After Giving Tamarind on a student in Prodi D-III Midwifery Semester II and IV STIKes Surya Mitra Husada Kediri

<i>Dismenorhea</i> (Tamarind)	f	%
Weight	1	6,7
Moderate	1	6,7
Light	2	13,3
No Pain	11	73,3
Total	15	100

Based on Table 4.1 is recognized that most respondents had given Dismenorhea after tamarind including category are not painful menstruation (dysmenorrhea) as many as 11 respondents (73.3%) of the total of 15 respondents.

Table 4.2 Dismenorhea After Giving Red Ginger on a student in Prodi D-III Midwifery Semester II and IV STIKes Surya Mitra Husada Kediri

<i>Dismenorhea</i> (Red Ginger)	f	%
Weight	0	0,0
Moderate	1	6,7
Light	3	20,0
No Pain	11	73,3
Total	15	100

Based on table 4.2 is recognized that most respondents had given Dismenorhea after red ginger belongs to the category is not painful menstruation (dysmenorrhea) as many as 11 respondents (73.3%) of the total 15 respondents.

### Statistic Result

Table 4.5 Results of Mann-Whitney Test Effectiveness Giving Red Ginger and Tamarind to Decrease Dismenorhea the student in the D-III Midwifery Semester II and IV STIKes Surya Mitra Husada Kediri.

Variabel	Z	p
Dismenorhea-Tamarind-Red ginger	-0,134	0,894
n = 30		
$\alpha = 0,05$		

According to the table 4.5 in mind there is no difference in the effectiveness of red ginger and tamarind to the decrease of Dismenorhea in Student D-III Midwifery Semester II and IV STIKes Surya Mitra Husada Kediri (Mann-Whitney,  $p = 0.894 > 0.05$  then  $H_0$  is accepted).

### DISCUSSION

#### Dysmenorrhea After Giving Tamarind

Dysmenorrhea (painful menstruation) is abdominal pain that comes from uterine cramps and occur during menstruation (Yuwieluninu, 2008). There are several ways to reduce menstrual pain. One of these herbs for example tamarind. Acid is a fruit that has high levels of antioxidants and will increase levels of antioxidants when combined with other herbs. Chemical constituents contained in fruit acids include citric acid, tartaric acid, succinic acid, sour apple, and others. These substances are

antibiotics, anti-edema, fever, and also anti-inflammatory or anti-inflammatory. Fruit acids can also cope with abdominal pain or pain due to menstruation (Editors Agro Media, 2008). Its energy content is high enough that 239 kcal per 100 grams of fruit. Therefore combination with brown sugar will produce freshness primarily a result of the energy produced (Nair, et al., 2004). Acid serves to improve blood circulation, thus preventing the occurrence of vascular konstriksi when Dismenorhea (Astawan, 2009). While most beneficial in terms of anti-inflammatory and antipiretika are anthocyanins because the agent is capable of inhibiting the action of the enzyme cyclooxygenase (COX) so as to inhibit the release of prostaglandins (Anindita, 2010).

#### **Dysmenorrhea After Giving Red Ginger**

Dysmenorrhea is pain during menstruation may include mild cramps in the genitals until something bad happens in everyday tasks (Bagus, 2008). As has been described above that menstrual pain can be reduced by a variety of drugs including herbal plants. One herb that is believed to have benefits in reducing menstrual pain is ginger. Ginger is a plant that has a stimulant restorer power (tonic) and pain relievers (analgesics). Gingerol compounds as a powerful antioxidant that effectively address inflammation. Ginger is a traditional ingredients are able to overcome conditions such as nausea, abdominal cramps, fever, infection, and others (El-Baroty et al, 2010). Usability / benefits of red ginger quite a lot including one to relieve pain and muscle pains, relieve muscle pain, allergies, menstrual pain, stomach pain (Suharmiati & Hand, 2006). Calcium and vitamin C in ginger is useful to calm nerves and reduce pain (Natural & Hadibroto, 2007). Inflammation in the body due to the autoimmune system secrete a substance called prostaglandin that causes pain in the

area of inflammation. Ginger contains gingerol which is capable of blocking prostaglandin (Wibowo, 2004). Research shows that ginger has the same effectiveness with mefenamic acid and ibuprofen in relieving pain in primary Dismenorhea (Ozgoli, Goli, & Moattar 2009).

#### **Effectiveness Giving Red Ginger and Tamarind to Decrease Dysmenorrhea**

Dysmenorrhea is abdominal pain that comes from uterine cramps and occur during menstruation. Usually the pain began to appear shortly before or during menstruation, peak within 24 hours and after 2 days will disappear. Dysmenorrhea also often accompanied by headache, nausea, constipation or diarrhea and frequent urination. Sometimes until there is vomiting (Devi and Fenning, 2008). Pharmacological therapy either by administering drugs analgesics. Drugs known as NSAIDs (Nonsteroidal antiinflammatory Drugs) can relieve this pain by blocking prostaglandins that cause pain. Treatment with NSAIDs have side effects that are harmful to other body systems (stomach pain and the risk of kidney damage) (Wibowo, 2004). Nonpharmacologic therapies such as by setting the position, relaxation techniques, touch management, environmental management, distraction, behavioral support, imagination, compress and administration of herbal ingredients. Therapeutic herbs can be done using traditional medicines derived from plant material. Some plant material believed to reduce pain among other red ginger (*Zingibers officinale* Rosc.) And tamarind are part rimpangnya serves as an analgesic, antipyretic and anti-inflammatory (Pramono, 2002).

The results of the study there was no difference in the effectiveness of red ginger and tamarind to the decline Dysmenorrhea on the students, this is due to both the material

have the same substance that can reduce pain. Tamarind contains high levels of antioxidants, citric acid, tartaric acid, succinic acid, sour apple are antibiotics, anti-edema, fever, and also anti-inflammatory or anti-inflammatory. Therefore by eating tamarind, it can cope with pain due to menstruation. In pathophysiology with tamarind consume it will improve blood circulation, thus preventing the occurrence of vascular konstriksi when Dismenorhea. Anthocyanin substances contained in tamarind will inhibit the action of the enzyme cyclooxygenase (COX) so as to inhibit the release of prostaglandins. Substance called prostaglandin that causes pain in the area of inflammation.

Ginger has a stimulant pain reliever (analgesic). The substance is a compound gingerol known as a powerful antioxidant that is effective in treating inflammation. The content of calcium and vitamin C that is Arifin. A. M., 2007. *Endokrinologi Ginekologi*. Jakarta: Media Aeskulapius Fakultas Kedokteran Universitas Indonesia

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Harsono, T., Takashima, Y., Morita, Y., Nishimura, Y., Sugita, Y., Isami, C.,

in the ginger is useful for calming the nerves that can reduce pain. Ginger also contains gingerol which is capable of blocking prostaglandin. Previous research also shows that ginger has the same effectiveness with mefenamic acid and ibuprofen in relieving pain in primary Dismenorhea. Therefore red ginger also able to reduce pain during menstruation (Dismenorhea).

## CONCLUSION

Most respondents awarded after tamarind including not painful menstruation (dysmenorhea) as many as 11 respondents (73.3%) of the total of 15 respondents. Most respondents after given red ginger including not painful menstruation (dysmenorhea) as many as 11 respondents (73.3%) of the total 15 respondents. There is no difference in the effectiveness of red ginger and tamarind to the decline in student Dismenorhea in D-III Midwifery Semester II and IV STIKes Surya Mitra Husada Kediri

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## EVALUATION OF INTEGRATED ANTENATAL IMPLEMENTATION IN PEOPLE MEDICAL CENTERS OF PEKALONGAN REGENCY

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### ABSTRACT

The success of mother healthy program can be measured using the indicator which depicts the coverage of Antenatal Care. The effort done by Ministry of Health Affairs in order to improve antenatal service is by conducting integrated antenatal service. Midwife is one of vital healthy labors in providing integrated antenatal service. Midwife performance becomes the most critical aspect in the efforts of maintaining and improving the health of mother and the children especially in integrated antenatal service. This research aims to identify the implementation of integrated antenatal service. The research subjects are 69 midwives which are acquired through Proportional Random Sampling. Type of this research is descriptive with cross sectional approach. Result of this research shows (60.4 %) conducting incomplete anamnesis, (56.5%) conducting complete examination, (100%) conducting the implementation of further action case, (65.2%) conducting incomplete documentation, (52.2%) conducting KIE (Communication, Information, Education) communicatively.

**Keywords: Midwife Integrated Antenatal**

### INTRODUCTION

The health of mother and children is one of Ministry of Health Affairs' main priorities and is one of 2010-2014 National Middle Range Healthy Development Plan main indicators. However, the challenge in accelerating health improvement of mother and children is quite challenging (Kemenkes, 2013). Mother Death Number (AKI) in Indonesia based on 2007 SDKI are 228 per 100.000 alive birth dan in 2012 are 359 per 100.000 alive birth (BKKBN, 2013).

Basically cause of mother's death is avoidable; it will decrease AKI in Indonesia. One of efforts for decreasing maternal morbidity and mortality as well as perinatal is by conducting ANC (Antenatal care) service. The success of maternal healthy program can be measured using indicator

which depicts ANC (Antenatal Care) service coverage (Depkes, 2009).

One of efforts done by Ministry of Health Affairs to improve antenatal service is by conducting integrated antenatal service. This service is comprehensive and quality antenatal service directed to all pregnant women to fulfill the rights of every pregnant woman in getting quality antenatal service to be able to have healthy pregnancy, well baby-delivery and healthy baby birth (Kemenkes, 2013)

Antenatal service during the pregnancy is capable in decreasing perinatal mortality risk. The result of research conducted by Vogel J, Habib N, Souza J, Gülmezoglu A, Dowswell T, Carroli G, Baaqeel H, Lumbiganon P, Piaggio G and Oladapo O (2012) indicated that perinatal mortality

occurs in the age of 32-36 weeks, the regular antenatal visit is expected to be able to minimize such risk using fetus condition monitoring and maintaining. This result is similar with research conducted by Hollowell J, Oakley L, Kurinczuk J, Brocklehurst P, Gray R (2011) which showed that antenatal care is able to reduce baby mortality number and prevent premature pregnancy and delivery. One of factors which influence antenatal service is the limitation of resources, the far location of health facility and cultural factor (Jalal and Shah, 2011). In accordance with that research, Pell C, Menaca A, Were F, Afrah N, Chatio S, Taylor L, Hamel M, Hodgson A, Tagbor H, Kalilani L, Ouma P, Pool R (2013) stated that in the existing social and cultural diversity, the relation with healthy labor will influence visit amount of pregnant women.

The research result of Low P, Paterson J, Woules T, Carter S, Williams M, Percival T (2005) indicated that pregnant women conducting less antenatal care visits compared with the recommended amount of visits. K1 and K4 service coverage must also be improved, antenatal service quality must be strengthen especially for the low first trimester visits, This antenatal care service coverage must be improved especially for the women who live in the rural village (Dairo and Owoyokun, 2012). Healthy system must ensure antenatal care availability in primary care level and establish mobile clinic for those who live far from the healthy facility (TuladharH. Dhakal N, 2011). Third Trimester must also be improved besides First Trimester since it is able to reduce perinatal death (Hofmeyr and Hodnett, 2013).

Midwife is one of important healthy labors in providing integrated antenatal service. Midwife's performance becomes the most

important factor in the efforts of maintaining and improving mother and children healthy especially in integrated antenatal service (Kusmayati 2012).

Maternal mortality number in Pekalongan Regency is relatively high, it is noted that in the last four years; there were 26 cases or 162/100.000 KH in 2010, there were 17 cases or 105/100.000 KH in 2011, which increase into 31 cases or 184/100.000 KH in 2012, there were 29 cases and it increase into 39 cases in 2014 and it becomes the fifth highest in Central Java Province (Dinkes Kabupaten Pekalongan, 2015).

## RESEARCH METHOD

This research is conducted in all 27 Regency Main People Medical centers; Kandangserang, Paninggagan, Lebakbarang, Petungkriyono, Talun, Doro I, Doro II, Karanganyar, Kajen I, Kajen II, Kesesi I, Kesesi II, Sragi I, Sragi II, Siwalan, Bojong I, Bojong II, Wonopringgo, Kedungwuni I, Kedungwuni II, Karangdadap, Buaran, Tirto I, Tirto II, Wiradesa, Wonokerto I and Wonokerto II in January-February of 2015

Type of this research is quantitative non experimental, with descriptive design, in order to identify the implementation of integrated antenatal in People Medical Centers of Pekalongan Regency in 2015. The applied approach in this research is cross sectional approach.

The populations of this research are all 456 midwives in People Medical Centers of Pekalongan Regency in 2014. The sampling method in this research is Proportional Random Sampling. According to Arikunto (2006), 10-15% or 20-25% can be used as the sample if the research subject is quite many. This research randomly uses 15% out

of 456 midwives in all People Medical Centers of Pekalongan Regency (69 midwives), therefore it can represent all samples.

Primary data is used in this research. This research uses checklist as data collection method, which is done by distributing a set of checklist. The checklist is compiled in specific way to cover all research goals.

This research uses univariate analysis which is presented in the form of frequency distribution.

## RESULT AND DISCUSSION

**Table 1 Respondent Characteristics**

Variable	f	%
Age		
< 36 years old	34	49,3
≥ 36 years old	35	50,7
Working periode		
< 14 year	36	52,2
≥ 14 year	33	47,8
Education		
< D4	43	62,3
≥ D4	26	37,7
Knowledge		
Low	26	37,7
High	43	62,3
Motivation		
Low	36	52,2
High	33	47,8

Table 1 shows that more than half (50,7%) of research subject is ≥36 years old. More that half of the research subjects have < 14 years (52, 5%) working time. Then, for eduction level, more than half (62, 3%) of research subject are in D4 midwifery. Knowledge shows that more than half of research subjects (62,3%) have a high knowledge. Motivation shows that more than half of research subjects (52, 2%) have a low motivation.

**Table 2 The Implementation of Integrated Antenatal Anamnesa**

variable	f	%
Incomplete	41	60,4
Complete	28	40,5

Table 2 shows that more than half of research subjects (60,4%) perform incomplete of anamnesa.

**Table 3 The Implementation of Integrated Antenatal Examination**

Variable	f	%
Incomplete	30	43,5
Complete	39	56,5

Table 3 shows that more than half of research subjects (56,5%) carry out complete examination.

**Table 4 The Follow up Implementation Case of Integrated Antenatal**

Variable	f	%
Good	69	100

Table 4 shows that all research subjects (100%) perform the folow up implementation case well.

**Table 5 The Implementation of Integrated Antenatal Documentation**

Variable	f	%
Incomplete	45	65,2
Complete	24	34,7

Table 5 shows that more than half of research subjects (65,2%) perform incomplete documentation.

**Table 6 The Implementation of KIE in Integrated Antenatal**

Variable	f	%
Less Communicative	33	47,8
Communicative	36	52,2

Table 6 shows that more than half of research subjects (52,2%) undertake KIE communicatively.

Midwife must have midwifery competence include knowledge, skill, and attitude in performing midwifery practice safely and responsibly in every health care structure (Zulvadi, 2010). Anamnesa that is done by midwife in implementing the integrated antenatal concern some points. Midwife that has incomplete anamnesa in attitude point, her attitude will change such as noisy, restless, withdrawn herself and ask the violence that may be experienced by the woman. From that finding, anamnesa which is less complete is in psychology aspects. Anamnesa in psychology aspects is important because psychologically pregnancy is regarded as emotional crisis. If the emotional crisis does not control, it result prolonged crisis and give the consequence to mother and her baby (Shahhosseini Z, Poursaghar M, Khalilian Salehi A, 2015).

Health education to the parents is needed to help reducing anxiety and worry about childbirth and normality in childbirth. The finding in this research can also be influenced by the lack of knowledge of midwife about integrated antenatal. The knowledge of midwife in midwifery practice will greatly affect the quality of service given. (McNail J, Lynn F and Alderdice F, 2012)

Routine examination and special examination are performed by midwife in accordance with gestation In this case, HIV

examination is not done because the examination and consultation of HIV and syphilis are not available. Furthermore, there is also lack of awareness from patients to know their condition. Yet, in this case, midwives undertake early detection by using anamnesa of husband's occupation and symptoms of HIV. This early detection is done to detect HIV/AIDS. The follow up cases management based on finding result is done well by midwife. It is done to take early detection of pregnant mother at high risk. Cases which cannot be handled will be referenced based on reference system (Kemenkes, 2013).

Based on the result of research more than half research subjects are incomplete in documentation. It can be caused by the low of midwife motivation and the lack of monitoring and evaluation. High motivation in occupation will produce optimal competence and good skill. In vice versa, low motivation will limit job performance. (Blank *et al*, 2013). Monitoring activity is one of the efforts to increase service quality particularly in integrated antenatal service. The purpose of monitoring is to observe the activity directly and give technical support (Mangkunegara, 2007).

The communication done by midwives is communicative. Midwife who is less communicative is caused by the lack of material mastery and also the work period. Long working period that related to the age will make someone's productivity weaken. Individual skill especially speed, ingenuity, strength is contribute to the productivity. In addition, decreasing coordination, boredom, and lack of intellectual stimuli in occupation are also contribute to productivity decline (Robin & Judge, 2008).

## CONCLUSION

This research shows that anamnesa component, examination, documentation, and KIE still need to be improved because in reality these components are less complete. Then, for follow up cases management should be preserved. Community Health Centre should increase the technical guidance and routine briefing to midwife. Beside that, it should give the feedback and appreciation, build the responsibility and supervise to increase midwife motivation. Furthermore, Community Health Service should provide adequate facilities and infrastructures to support the examination in integrated Antenatal service. Midwives should increase their knowledge by following the seminars, socialization, and training about new programs and also increase their motivation by increasing the awareness and responsibility toward their occupation and competence.

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# THE DIFFERENT OF TNF $\alpha$ LEVELS IN HUVECS CULTUR EXPOSED TO PLASMA PREECLAMPSIA PATIENT WITH PLASMA OF NORMAL PREGNANT WOMEN

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## ABSTRACT

Preeclampsia is one of the main causes of maternal mortality in Indonesia. Preeclampsia is characterized by endothelial dysfunction. TNF $\alpha$  is proinflammatory cytokine with multifunctional, and is one marker of immune activation process andalso endothelial dysfunction. The objective of research to determine differences in the levels of TNF $\alpha$  in HUVECs exposed to preeclampsia patient plasma with plasma of normal pregnant mothers. Method of research is true experiment with the approach of posttest only control group design. The sample is HUVECs culture exposed to 2% preeclampsia patient plasma and plasma of normal pregnant mother. This sample is assigned into two group, which are positive control (HUVECs exposed to 2% heavy preeclampsia patient plasma) and negative control (HUVECs exposed to 2% plasma of normal pregnant mother). More over, statistic analysis using a computer program and the analytical result is verified by comparative tests involving independent sample t-test. Result of analysis indicated that there is a significant difference TNF $\alpha$  rates in HUVECs culture exposed to 2% heavy preeclamptic plasma with normal plasma of pregnant mother ( $p < 0.005$ ). It is concluded that the rates of TNF  $\alpha$  in HUVECs culture supernatant incubated for 24 hours with heavy preeclampsia plasma are indeed increasing or remains higher than those expose to plasma of normal pregnant mothers

*Kata kunci:*

**Preeklampsia; HUVECs; TNF $\alpha$**

## INTRODUCTION

In line with the causes of maternal mortality ratio (MMR) around the world, preeclampsia is the leading cause of maternal mortality in Indonesia. In 2007 MMR in Indonesia amounted to 228 per 100 thousand live births, while in 2012 rose to 359 per 100 thousand live births. It is even more away from the target Goals Millennium Development (MDGs) in the amount of 102 per 100 thousand live births in 2015. According to the Ministry of Health of Indonesia, (2013) The maternal mortality rate in Indonesia is caused by

hypertension in pregnancy of  $\pm 30\%$ . One type of hypertension in pregnancy is preeclampsia.

Preeclampsia is a syndrome characterized by inadequate placentation, for their failure in the trophoblast vascular remodeling uterine arteries, resulting in hypoxia / ischemia placenta. Hypoxia causes increased secretion regulation of inflammatory mediators from the placenta is working on vascular endothelium, including immune factors, and inflammatory cytokines thought to play an important role in the pathology of this disease.

TNF $\alpha$  is a proinflammatory cytokine with multifunctional, and is one marker of the

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immune system activation and endothelial dysfunction. An overactive immune system causes an abnormal increase in proinflammatory cytokines. Human umbilical vein endothelial cells (HUVECs) culture is the method used to describe the smallest structures of the human life cycle with preeclampsia. Culture HUVECs were exposed to plasma severe preeclampsia and eclampsia are cytotoxic to endothelial cells and induce a state of oxidative stress in HUVECs.

From the description above, researchers wanted to examine is there a difference in the levels of TNF  $\alpha$  in cultured HUVECs to exposed with plasma Preeclampsia Patients and Plasma normal Pregnancy.

### OBJECTIVE

To determine differences in levels of TNF  $\alpha$  in cultured HUVECs to exposed with Preeclampsia Patients Plasma and Plasma normal Pregnancy

### METHODS

This study design using true experimental with the selected approach posttest only control group design, in the Laboratory of Physiology of the Faculty of Medicine, University of Brawijaya. The research was conducted in October 2014 - March 2015. The sample in this study was cultured endothelial cells within 3 days from the placenta and umbilical cord immediately after birth, mothers with normal pregnancy through childbirth Sectio Caesarea (SC) without complications.

### RESULT

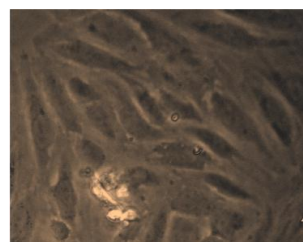
Exposure severe preeclampsia plasma samples in cultured endothelial cells in this study using a 2% concentration.

**Table 1. Characteristics of the study sample**

Sample Type	NP	PB	Baby's cord
Name	Ny. W	Ny. S	Ny.M
Age	24 years	35 years	31 years
Age	37 week	36-37 week	39-40 week
Pregnancy			
Blood pressure	90/70 mmHg	170/110 mmHg	110/80 mmHg
Proteinuria	-	(nega) +++	- (neg)
HB	11,2 gr%	-	11,8 gr%
A/S	-	7/8	8/9
BB	83 kg (mother)	2000 gr	3200 gr (baby)
DJJ	131x/mnt	130x/mnt	138 x/mnt
Indikasi	Normal pregnancy	Heavy preeclampsia	SC with CPD

Note: NP: plasma from normal pregnancy; PB: plasma from preeclamptic patient

HUVECs cultures were incubated at 37°C in a solution of serum free medium (SFM), and dilakukan washing the cells if necessary. In Figure 1 we can see that the cell culture HUVECs expressed confluent on day 3 with the characteristics of the cells can be attached to the medium (attachment site), between cells interact, the cells increasingly meeting, there was the appearance of the cell nucleus, cytoplasm and plasma membrane. These images viewed using a light microscope OLYMPUS type inverted with 400x magnification.



**Figure 1. Endothelial cell culture day 3**

In this study, HUVECs expressed confluent cultures of 80-90% on the 3rd day. After culturing confluent HUVECs expressed, performed the treatment on HUVECs culture medium. HUVECs culture medium that has been subject to treatment, were incubated for 24 hours. The treatment groups were: negative control group (culture HUVECs were exposed to plasma of normal pregnancy) and a positive control group (culture HUVECs exposed to

heavy preeclampsia plasma). The level of TNF- $\alpha$  use Human Elisa kit.

**Table 2. Results of the comparison control group**

Level	CHNP	CHPB	<i>p-value</i>
kadar	T		0.000<Error!
<b>Error!</b>			<b>Reference</b>
<b>Reference</b>	2808±550.	15368±1277.4	<b>source</b>
<b>source</b>			<b>found.</b>
<b>found.</b> (pg/r			

Note: CHNP: Combination HUVECs with NP; CHPB: Combination HUVECs with PB

The results of measurements of the levels of TNF- $\alpha$  in the culture HUVECs were exposed to maternal plasma of normal (2a), and culture HUVECs were exposed to heavy preeclampsia plasma (2b).



**Gambar 2. Kultur HUVECs yang dipapar plasma ibu hamil normal dan plasma PEB 2%.**

T-test results in this study showed a significant difference ( $p = 0.000 <$ ) mean TNF- $\alpha$  levels between the negative control group (HUVECs + NP) ( $2808 \pm 550.2$  pg / mL) with the positive control group (HUVECs + PB) ( $15368 \pm 1277.4$  pg / mL). Based on the mean value of serum TNF- $\alpha$  looked at the negative control group is smaller in value when compared with a mean value of serum TNF- $\alpha$  positive in the control group. This means that the HUVECs were exposed to severe preeclampsia showed elevated levels of TN- $\alpha$  when compared to HUVECs exposed pregnant women of normal plasma. It can be said that the HUVECs were

exposed to plasma severe preeclamptic patients showed elevated levels of TNF- $\alpha$ .

Based on the results of the above description it can be said that the treatment of HUVECs exposed to severe preeclampsia proven to show elevated levels of TNF- $\alpha$ .

## DISCUSSION

Based on the results of the research show that in normal pregnant women also contained inflammatory response. It also showed that the levels of inflammatory cytokines (TNF- $\alpha$ ) in pregnant women with PB increased higher when compared to normal pregnant women Raghupathy, (2013) and Jonsson (2005) states that the inflammatory response that occurs in pregnancy is necessary, but should be controls to prevent abnormal inflammatory response. This can be achieved by reducing the production of proinflammatory cytokines and enhance the anti-inflammatory cytokine production. Increased inflammatory response in preeclampsia allegedly caused by the increased activation of leukocytes, monocytes, and neutrophils (Baratawidjaja and Rengganis, 2013; Subowo, 2013; Playfair & Chain, 2012).

Wang, Y, Lewis, DF, Alexander, JS, & Grenger, DN. (2007) states that the boundaries of the endothelial cells that provide a response signal vary in circulating blood. Vascular endothelium plays an important role in the regulation of vascular tone, coagulation and fibrinolysis, and the inflammatory response to internal and external stimuli. Activation of endothelial cells is a major component in the inflammatory response.

Baktiyani (2007) showed that exposure of 2% plasma severe preeclampsia / eclampsia against the culture of HUVECs significantly increase levels of H<sub>2</sub>O<sub>2</sub>. Severe preeclampsia plasma containing circulating factors derived from placental factors. Factors maternal circulation

can alter endothelial function by activating the inflammatory cells such as monocytes, leukocytes and neutrophils (Wang, et al., 2007; Faas, MM, Van Pampus, MG, Anninga, ZA, Salomons, J, Westra, IM, Donker, RB , Aarnoude, JG & De Vos, P., 2010). Other studies also show that the plasma of patients of severe preeclampsia and eclampsia have a cytotoxic effect on the endothelial cell culture and lead to a state of oxidative stress in HUVECs (Baktiyani, 2007).

Oxidative stress is a condition where there is an imbalance between prooxidant and antioxidant. Oxidant ratio imbalance is associated with elevated levels of ROS is excessive, while ROS are important mediators of inflammation (Cindrova-Davies, 2009). Cytokine responses were abnormal in maternal and infant thought to play a role in the pathogenesis of preeclampsia.

Some studies indicate that TNF- $\alpha$  is one of the key markers of endothelial cell dysfunction (Sharma, A, Satyam, A, & Sharma, JB, 2007). This study is consistent with previous research by showing that TNF- $\alpha$  is a cytokine with multifunction and is a marker of the immune system activation and endothelial cell dysfunction (Xie, C, Yao, ZY, Liu, JB & Xiong, LK., 2011; Xiao, Yin YX Gao YF, Lau S, Shen F, Zao M, Chen Q., 2012).

The exposed Preeclampsia plasma exposure in vitro stimulating transendothelial and neutrophil migration. Infiltration of neutrophils in the intima space associated with inflammatory markers in endothelial cells. Activation of neutrophils to the vascular endothelium directly attached to the surface of the endothelium and release of ROS, protease and lipid mediators that have on endothelial function and increases the permeability of microvessel (Wang, et al., 2007). ROS are important mediators of inflammation. ROS activates signal transduction pathway of NF- $\kappa$ B and activating protein 1 (AP-1) that drive gene transcription

processes including cell growth, immunity, inflammation, apoptosis and stress response. Activation of NF- $\kappa$ B can increase transcription of most genes involved in vascular inflammation, including adhesion molecules, cytokines and chemokines (Abbas & Lichtman, 2015; Cindrova-Davies, 2009). Pada plasma preeclampsia dengan peningkatan faktor inflamasi ditemukan adanya peningkatan ekspresi NF- $\kappa$ B.

In preeclampsia with increased plasma inflammatory factors found an increased expression of NF- $\kappa$ B. If the situation continues, there will be endothelial dysfunction. In pregnant women with preeclampsia endothelial cell dysfunction. Endothelial dysfunction occurs due to increased oxidative stress (Baktiyani, 2010).

Endothelial cell cultures grown in vitro derived from the placenta and umbilical cord immediately after birth than women with normal pregnancy through childbirth without complications SC.

## CONCLUSION

1. In Culture HUVECs exposed to normal plasma of pregnant women also contained inflammatory response (TNF- $\alpha$ ).
2. Levels of inflammatory cytokines (TNF- $\alpha$ ) in culture HUVECs were incubated for 24 hours and exposed pregnant women with PB increased higher when compared to normal pregnant women.

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## THE CORRELATION BETWEEN PREGNANCY HIATUS/BREAKS AS OPPOSED TO/AND ABORTION RATES/TRENDS/CASES

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### Abstract :

According to the *World Health Organization* (WHO) in 2010 the level of abortions in Indonesia is the highest in Southeast Asia, reaching up to 2 (two) million cases of all cases occurred in countries of *Association Of South East Asian Nation* (ASEAN) and amounting about 4.2 million cases per year. The abortion rate in Indonesia is quite high, accumulating 2.4 million per year. According to data from the *National Population and Family Planning* (BKKBN) of Indonesia, an increase of about 15% is expected annually. This research is an analytic method, case control design with a sample of 62 cases (abortion-record) and 62 controls (non-abortion history). The influence of independent and dependent variables are determined based on the Odds Ratio (OR) in the Confidence Interval (CI) of 95%, then analyzed by multiple logistic regression. Based on the results of research on the relationship within the mother's pregnancy on the incidence of abortion data obtained most pregnant women with the biggest abortion rate occurred in the group of pregnant women who had a pregnancy spacing  $\leq 2$  years were 45 people (36.2%). The results also showed that there was a significant association between maternal pregnancy spacing on the incidence of abortion in the case group and the control group by *chi squared* test result with a *P value* = 0.000, 0.05. While  $\alpha = 0.000 < 0.05$  thus  $H_0$  is rejected it means there is a relationship between the distance of the pregnancy/pregnancy breaks/hiatus with the mother(s) of abortion.

**Keywords:** pregnancy break/hiatus, abortion

### INTRODUCTION

Pregnancy is a reproduction-bound/oriented process, resulting a baby's delivery. Nevertheless, many pregnancy cases often lead to or, end up with miscarriages. In general, pregnancy is considered to be the happiest and most fulfilling moment for each and every married couple or the ones within a family. Moreover, it is said to be a threat to every woman undergoing physical, emotional and social change within a family household (Saifudin, 2009)

According to WHO statistics, the probability of an abortion taking place is relatively high, approximately 15-40% occurrence rate found in the tested positive mothers-to-be/expecting women where as 60%-75% abortion ratio

came about before 12-week of early-stage pregnancy/first trimester. Worldwide statistics affirms that 20 million cases of abortion are taking the countries by storm every year and 70.000 pregnant women die of abortion, also every year round. The events of abortion in South East Asia only is 4,2 millions per year including Indonesia, while the spontaneous abortion frequency in Indonesia is 10-15% of 6 million pregnancies every year or 600.000-900.000 where on the flip side, manufactured/assisted/artificial abortion are carried out about 750.000-1.500.000 cases per year, with 2500 resulting death (Mahdiyah, 2013).

Abortion rate in Indonesia is pretty steep, amounting to 2,4 millions per year.

According to *The Indonesian Population & Family Information Network* (BKKBN) the figures had shown an increase to nearly 15% every upcoming year. (BKKBN, 2010).

Data presented in Tangerang District in year 2015 displayed that abortion occurrence in Regional Public Hospital were a total of 804 abortion cases examined from 3324 pregnant women. (*Tangerang Regional Public Hospital*).

Roughly about 1 out of 6 pregnancies experiences miscarriages, most frequently detected between week-6 and week-10 of pregnancy. In a healthy reproduction cycle/timeline it is realized that the safe age for pregnancy and delivery/labor was ranging between 20-30 years old. The cause of abortion due to reproduction factor was the mother's age factor, where the pregnant women suffering from miscarriages under 20 are proven to be more massive, demographicly speaking, than the 20-29 age gap which progressed an in a later year after hitting 30 to 35 years plateau (Prawirohardjo, 2012).

Miscarriages most likely to transpire in women under 25 years of age, where the case manifested 1 in every 10 women, and usually in older women. After 35, 1 out of 5 pregnancies finalized in miscarriage (Saifuddin, 2009). Women that are pregnant at such a young age (< 20 years old) haven't fully developed their reproductive organs yet. From a psychological standpoint, at these life-phase, these group of prematured women are not yet seasoned/ready/equipped morally, emotionally or even heavily bothered, challenged and distracted by medical burdens. As for pregnancies over 45, the elasticity of pelvic muscles will deteriorate and the reproductive system will physically embody setbacks, juga wanita pada women at this specific point in life time will most likely

have antenatal complications, abortion being a highlight topic to name one of few (Rochmawati, 2013).

The action programs laid by *Conference on Population and Development (Konferensi Internasional Populasi dan Pembangunan)* recommends all governmental institutions and other allied associations/ organizations to bring up abortion aftermaths/birth defects/side effects a main pivotal/riveting issue to public health in order to alleviate/minimize abortion numbers from happening by advocating the benefit of family planning.

To initiate such campaigns, the policy makers therefore will be requiring informations regarding the negative impacts of abortion on women's health, the abortus prevalence - along with its underlying determinants, triggering factors contributing to abortion (Cunningham, 2012).

Hazardous complications in abortion consists of 5 (five) types: First and foremost, the bleeding can be overcome / managed by emptying the uterus from the conception residuals, utilizing blood transfusion, if necessary. Death by harmful bleeding will appear if assistance/first care neither present in the moment at a pressing time nor given on time and spot-on.

Secondly, uterus perforation in scrapings tends to exist in uterus, positioning in hyperreflexy manner. The third one, infection in septic abortion - portraying high bacteria virulence spreading towards the myometrium, tube, parametrium and peritoneum. If the infected areas are widely infiltrating, then common peritonitis or sepsis with a chance of shock might come into play. Fourth component: Abortion shock in abortion cases are often precipitated by

(haemorrhagic shock) and by serious infections.

Fifth element: malignance degeneration, miscarriage can turn out to be corio carcinoma with percentage of 15%-20%. Gejala korio karsinoma adalah terdapat perdarahan berlangsung lama, terjadi pemberasan/ perlukaan rahim (Trias Akosta Sison), terdapat metastase ke vagina atau lainnya The symptoms of corio carcinoma is the long-overdue bleeding, uterus scarring (Trias Akosta Sison), forming/producing metastatic state to the vagina or other parts (Prawirohardjo, 2012)

The objective of this research is to identify the correlation between the pregnancy period break and abortion rate.

## METHODS

The research laid out by Case Control on analytic design. Case control studies were performed by determining case classifications and groups, which later retrospectively explored by risk factors that could possibly elaborate whether the case or the control might be exposed or not. The design used in group cases was the expecting women facing/undertaking abortion by pregnancy period break, later followed by mothers-to-be with non-pregnancy break situations up to aterm gestational age.

This research was held at Tangerang Regional Public Hospital in during May 2016, exercising secondary data within January-December 2015 period. The population in this research comprises of case and control population meeting the inclusive criterias/standards.

The population of the research case at hand were all the expecting women withstanding abortion in Tangerang Regional Public Hospital in year 2015, as many as 804

participants/subjects. The controlled research population were all the pregnant women with zero abortion cases in Tangerang year 2015, composed of 3262 respondents.

Random sampling technique was conducted using instruments like data collection procedures obtained from secondary datas. The proportion of the research subject was decided by the merit of consecutive sampling; that is to take surveys of all the matching patients by the inclusive criterias or standards until the inquiries for analysis terms and conditions are met, encompassing total respondents of 124 persons, divided by half: 62 case group and 62 control group. This research displayed univariate and bivariate analysis.

## RESULT AND DISCUSSION

**Table 1. Abortion Frequency Distribution**

Abortus	Frequency	Percentage
Yes	804	24.1
No	2520	75.9
Total	3324	100,0

This results implies that the frequency distribution of expecting women with abortion of 804 people (24,1%) , whilst the non-abortion having group of 2520 people predominated (by 75,9%).

**Table 2. Frequency Distribution Between Pregnancy Breaks and Abortus**

Breaks	Case Group		Control Group		N	(%)
	N	%	N	%		
< 2 Years	45	36,2 %	20	16,1 %	65	52,3 %
Similar or ≥ 2 Years	17	13,8 %	42	33,9 %	59	47,7 %
<b>Total</b>	<b>62</b>	<b>50,0 %</b>	<b>62</b>	<b>50,0 %</b>	<b>124</b>	<b>100 %</b>

Concerning the data, it can be presumed that pregnant mothers with the breaks of less 2

years' time and had abortion were 45 persons (36,2%), where as the other 42 pregnant mothers with the same breaks or more or exactly in 2 years' time did not endure/survived the gestures of abortion (33,9%).

**Tabel 3. Cross-sectional Tabulation of Case and Control Group as Compared to Pregnancy Breaks/Hiatus and Expecting/Pregnant Women with Abortion**

Pregnancy Breaks	Case Group		Control Group		N	P (%)	P
	N	%	N	%			
< 2 Years	45	36,2	20	16,1	65	52,3	
Similar or 2 Years	17	13,8	42	33,9	59	47,7	5.559
<b>Total</b>	<b>62</b>	<b>50,0</b>	<b>62</b>	<b>50,0</b>	<b>124</b>	<b>100</b>	

According to the data stated above, P value was gained = 0,00 whilst  $\alpha = 0,05$ . If  $0,000 < 0,05$ , then  $H_0$  is denied, meaning that there is a hiatus of pregnancy as opposed to abortion moms. OR (Odds ratio) of 5,559 was of the pregnant women with pregnancy breaks less than 2 years' time, owning a chance of 5,55 times abortion when juxtaposed to women with pregnancy hiatus more than 2 (two) years or exactly in 2 (two) years' time.

**Abortion.** The result of the research indicated that in Tangerang Regional Public Hospital were gathered 3324 pregnant women and from those 3324 subjected repondents, 804 people (24,1%) pregnant ladies with abortion and 2520 (75,9%) pregnant women, with no abortion history. Abortion is commonly prologued by cervical mucus bleeding or desidua basalis, damaging/rupturing the surrounding tissues, removing/releasing partial or whole fetal mass (Prawirohardjo, 2012).

According to (Prawirohardjo, 2012) abortion is an extract/excretion/secretion/disposal of conception produce before the fetus could

maintain a life or survive outside the womb, with the weight less than 500 grams or less than 20-week period. Another proposition brought by (Manuaba, 2012) defines abortion as the release of conception residuals before sustaining life outside the womb with birth weight less than 1000 gram or less than 20-week pregnancy.

**Pregnancy breaks / hiatus.** 45 people (36,2%) of pregnant women with less than 2 years pregnancy breaks plus abortion history (case group) dan 17 other (13,8%) with similar pregnancy breaks/hiatus of more or exactly in 2 years' time, and non-abortion having (control group) of 20 (16,1%) with pregnancy breaks of less than 2 years' time dan 42 (33,9%) with similar pregnancy hiatus of more than or exactly 2 years' time.

Confirmed that the ideal birth space/timeline less than 9 months up to 24 months since previous birth. The calculation was less than 9 months, considering the s good as new to what it once was, 3 (three) months tops, minimum – like the uterus involution in progress/on process. When not pregnant the weight was 30 grams, after birth was 1000 grams and reduced by 60 grams-to reach the optimum weight back to normal will take up about 3 months' time – as well as the blood circulation/flow.

While pregnant, there was blood from mother to child. After the baby is born, the blood flow reproductive organ will be back in shape and awere cut off and to get back to normal blood circulation, a mother needs a period of 15 days after giving birth. Soon (9-24 months), all reproduction organs and genitalias are expected to return to its original size, prior to pregnancy.

**Pregnancy Hiatus / Breaks.** According to the research score of  $0,000 < 0,05$  – then it can be verified that there is a connection



between expecting mothers and abortion rate/history in pregnant women. The result shows that out of 124 pregnant women sample of less than 20 weeks, as many as 65 people (52,4%) from mothers with abortion history and pregnancy break of less than 2 tahun and there are 59 people (47,6%) from mothers without abortion milestones and having similar break of exactly or more than 2 years. No discrepancies or flaws were found between theory and case, which serves the purpose by putting theories from Manuaba (2012) to work, claiming that one of the abortion-prone factors are the environments of the endometrium affected by lack of nutrition from anemic mothers bad timing on proper and fit pregnancy hiatus. A child's death tendency rate tends to skyrocket rapidly by 50% should the breaks/hiatus between 2 pregnancies are less than 2 (two) years' apart, which is an evident, inevitably biological fact. This research also were in line with the particulars of (Qodariyah, 2013) saying apparently that too short of a break or hiatus can jeopardize the living of the baby, the ideal length of time is starting from 9 months to 24 months counted since last birth. The break/hiatus of less than 2 (two) years is a death risk factor by abortion; the closer the hiatus/breaks between pregnancies gets, abortion will validate judging by the obvious risks.

Besides that, in short-break/hiatus or close-knit pregnancies of less than 2 (two) years, the possibility of malnutrition will appear, especially in nursing/lactating mothers when they do not get sufficient/enough supply, causing the fetus to go through lack of nutrition-more so until the fetus will also have to persevere this side effect, which then takes its toll by miscarriage – oxytocin, in baby's nipple sucking, is dangerous and yet can be directly transferred/exchanged from mother to baby. The same oxytocin also

tenses up the mother's stomach and cause it to contract, will also attract bleeding/excess blood show and miscarriage scare – with death as worst case scenario.

## CONCLUSIONS

Looking back upon the data analysis, the substance / essence may be interpreted that there lies a correlation between pregnancy breaks / hiatus as compared to abortion; mothers with pregnancy breaks less than 2 years' apart are prone to bear five times greater times of delivery or pregnancy risk. This research utilized case control research method, resulting a relationship / connection between abortion with pregnancy breaks / hiatus longer or exactly within two years' time period.

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# ENGLISH COMPETENCY AND BARRIERS IN DOING SCIENTIFIC RESEARCH AMONG MIDWIFERY LECTURERS

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## ABSTRACT

Every lecturer must write a scientific writing; however, they get difficulty when the references used are English-based articles. This also happens to midwifery lecturers since they must provide themselves with results of research for academic purposes or individual benefits. This study was conducted to investigate reasons why English-based texts become a problem for the midwifery lecturers when they are doing some scientific research.

This was a qualitative study using a phenomenological approach. The samples were forty midwifery lecturers in two cities in Indonesia, ie, Jakarta and Pekanbaru, both public and private institutions. The instrument was a structured questionnaire to reveal some phenomena found based on the comments of the respondents.

The findings were mainly related to English as a barrier when the respondents have to read and comprehend English texts for their references. They also got difficulty to determine the terms as the keywords when they wanted to search for specific article. In addition, since their lacking ability of English, they did not know the quality of their files when translated into English by a translator.

**Keyword: English scientific article, research, phenomena**

## INTRODUCTION

Scientific writing is a means to explore, to learn and to comprehend what one is learning about a subject. The lecturers of midwifery programs are also faced with this activity to do some research for their own benefits to improve their knowledge and reasoning. Therefore if the English competency is lacking, the writing skills or research composition will be hindered.<sup>1</sup>

Lecturers as part of scientists are expected to master English—at least to some extent—to obtain international recognition and to access relevant publications. However, English also creates problems for non-English-speaking countries, including the midwifery lecturers in Indonesia. Worse, if the lecturers are not able to read English publications, to reap the societal benefits they must still translate this knowledge into a national context.<sup>2</sup>

This study was conducted to investigate whether English has posed some problems to the midwifery lecturers when they are being faced to do some scientific research.

## RESEARCH METHODS

This was a qualitative study using an approach of phenomenology. This phenomenological approach was used to see some phenomena that happened with the respondents under the theme being discussed.<sup>3</sup> Our respondents were 40 midwifery lecturers in Jakarta and Pekanbaru, both from public health schools and private health school. The respondents were numbered according to the city, 20 persons in Jakarta numbered 1-20 and 20 persons in Pekanbaru numbered 21-40. We conducted this study from 18 August 2015 to 18 December 2015. The instrument we used was a structured questionnaire. We categorized the comments from the midwifery lecturers based on the categorization of the similar theme found in the comments.

## RESULTS AND DISCUSSION

We categorized the comments regarding the importance of English language as a means of learning support system to gain maximal achievements into three main themes. The results are as follows:

### **English language as a barrier to the success of scientific writing composition**

Of 40 respondents, almost all provided a uniform comment that one of the obstacles for them not to use English-based references was their difficulty in understanding the context of the articles. The excerpts from their comments are presented below:

*“Me, I prefer not to read because I am already confused with the words. Yes, it is very important but gives a big problem when I have to understand the article. So, until now, when I do research, for example, I will only use local references as they are easy to understand, though the number is limited not English-based articles”.* (R3)

*“I have already had so many things to do. If I must read articles with English language, I surrender before I make a step. Yes.... of course it is my mistake why I did not study this language seriously. This language is important, yes.....my mistake”.* (R5)

*“English for my research? Of course it will help much, but if I am good at it. Unfortunately, I am not and it makes me difficult when I have to do some research. Yes, almost all references are in English but I cannot understand them. Therefore, I end up only with Indonesia language articles. I want to learn English, at least how to read and comprehend an English article. Yes, at least that.”* (R9)

*“One thing I remember when I have to do research. The references. Yes, everybody knows, mostly in English. I want to do the research, but the references are my big problem here.....”* (R12)

According to the respondents, English language-based articles become one dominant problem when they are being faced to do research. Their poor ability in comprehending English texts makes them difficult to put the correct sources for their research.

Inevitably, one of the domains where English widely prevails is Higher Education sector where lecturers are working, including midwifery lecturers. In this context, English has long been the language of universities when it is claimed to be an international-based university.<sup>4</sup> The universities that wish to have cooperation with overseas universities should also prepare their lecturers to be able to communicate in English well.<sup>5</sup>

Concerning English as a means of assisting the midwifery lecturers to succeed in doing a research, English becomes one of the central tools at higher education or college as an International language, English is involved in the process of teaching, research and service functions of the institution.<sup>6</sup> Therefore, it is true that the respondents feel that English is one key for them when they want to do research successfully with international-based articles as references.

### **English words as a barrier to get a keyword in journal searching**

Of 40 respondents, almost all stated that they were confused when they want to search related journals they wanted. The excerpts are as follows:

*“Before I go to further steps in the research, I have been faced with reality that I do not know the terms I want to search in searching engine. Like the words ‘bendungan ASI’, is it really ‘milk dam’ like when I translated it into Google? Is it really ‘dam’, like the physical dam?..... that’s what I am confused.”* (15)

*“Yes, really confused when having to find articles in English. I do not know the keywords. Yes, I do not know the terms. Once I asked someone to get me some journal articles under the theme of antenatal care, he gave me many articles with the word prenatal care. I confirmed to him that what he got was wrong. But, yes, shame on me. It was the same. Yes, because I do not know the terms.”* (R23)

*“The terms..... I don’t know the terms. Before searching? Of course I am already stuck with the terms. Sometimes, I don’t know where I have to consult with the terms. You know, midwifery is a specific field of science. Not everyone who knows English knows midwifery terms.”* (R25)

*“Once I consulted with Google translation and I got the wrong term, I don’t want to do it anymore. Yes, i prefer Indonesian journals because I know the terms exactly.”* (R29)

Not knowing specific vocabularies in midwifery terms in English becomes the obstacle for the lecturers to do research. When they are about to do some research, they will put some keywords directly in English although the journals that they will get is limited. They are afraid to find English

texts because they are confused with the correct terms that they will use.

This makes the lecturers must think again when they choose to use international sources as references rather than the local articles. In fact, the local articles found in the search engines are very limited. Not all research results which are good are presented in Indonesian since students of higher education in undergraduate or graduate/doctoral programs are forced to make their publication paper in English.

This certainly makes another problem to the midwifery lecturers when wanting to do some research with determining the specific keywords has already become a problem. Therefore, the lecturers must update themselves with midwifery terms, at least what they are familiar with, without having to master English as a whole.

#### **English translation as a barrier for publishing the publication paper in English**

Another important issue that is faced by the midwifery lecturers after they finished doing the paper writing is translating the publication paper in English. Of 40 respondents, almost all stated that sometimes they felt afraid if the translation was misinterpreted. They understood their weakness so that they could not check whether the file having translated by a translated was correct or not both in terms of content and in terms of language. The *excerpts for this theme are as follows:*

*“Yes, sometimes I am not sure with the results of the translation. For example, I wrote a term ‘tenaga kependidikan’ and the translator translated it into ‘teaching staff’. In fact, it should be administrative staff. You know, not all translators know the exact terms, especially the specific ones.” (R30)*

*“Me, I don’t know English that much. Of course, I don’t know whether my files translated by a translator, for example, are correct or wrong. In my heart, of course I have doubts, but what I can do.” (R35)*

It is a sad phenomenon that the lecturers cannot detect whether there are some mistakes or not in the translation. At least, they can check some

important keywords that are used in their texts. However, this will come to the second theme that finding the correct keywords or terms in English is already a problem for them. Therefore, upgrading English competency is a must to do when the lecturers want to have a better quality of research.

#### **CONCLUSION**

English language is very important for the midwifery lecturers, especially when they do research. However, some problems are encountered regarding the text comprehension, correct terms, and correct translation. Therefore, there is a need for the midwifery lecturers to improve their English proficiency.

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# DIFFERENCES IN DEVELOPMENT OF CHILDREN AGES 4-5 YEARS BETWEEN NATURE KINDERGATEN (HALFDAY SCHOOL) WITH ISLAMIC INTEGRATED KINDERGATEN (FULLDAY SCHOOL)

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## ABSTRACT

Background: Kindergarten is a form of early childhood education, formal lines that provide education for children aged four to six years before the completion of basic education. A study of Curriculum Research and Development center of the Ministry of Education in 2003 is the percentage of students failing grade 1 who do not follow kindergaten education reached 11%. Education in kindergaten become increasingly crucial for a child because of his intelligence determined later in the period 0-6 years, otherwise known as the golden years. Various kinds of kindergaten popping up with different variations fullday learning and halfday, At full day a child will interact with teachers and friends. So the responsibility of teachers to replace the role of grindstones, compassion, and the foster parents so great. Due to the lack of fulfillment of child rights will grindstones, love, care will have an impact on children, especially in children's development.

Objective: Know the difference childhood development 4-5 years between Nature kindergaten Harapan Kita (halfday) with Islamic Integrated kindergaten BIAS (full day) in the district of Klaten.

Method: This study is a comparative study with cross sectional approach. The population in this study were all students aged 4-5 years in Nature kindergaten Harapan Kita (halfday) and Islamic Integrated kindergaten BIAS (full day) in Klaten. The sampling technique in this research is the purposive sampling. The instrument of research using observation sheet KPSP (praskrining questionnaire development) and data analysis using paired t-Test Samplest. From the test results analysis Samplest Paired t-Test in getting p value 0,010 ( $p < 0.05$ ),  $t = -2.698$ , meaning no developmental differences between children aged 4-5 years with kindergatenIT halfday kindergaten full day.

Conclusions: The conclusions of this study are no significant differences between the development of children aged 4-5 years between Nature kindergaten Harapan Kita (halfday) with Islamic Integrated kindergaten BIAS (Fullday). Advice for parents role of parents and those closest to is also very important that can provide stimulation in order to progress according to age, so that child development is a major task of parents and teachers in kindergaten only as a facilitator rather than as a substitute for a parent at home.

**Keywords:** development of children aged 4-5 years, halfday school, full day school

## INTRODUCTION

Kindergarten education is a form of pre-school education who are in education track (PP No. 27 of 1990). As an institution of pre-school education, the main task of kindergaten is to prepare children by introducing a wide range of knowledge, attitude, behavior, and intellectual skills in order to adapt to the real learning activities in primary school.

Psychologists describe this age group by age, a time when children learn the basics of social behavior in preparation for adjustment at the time of school entry. This period is also called venturing past, where children learn to master and control the environment, including human and inanimate surroundings. Including how is

their feelings and mechanisms. One way to explore the environment is to ask, so this period is called the age asked. Actions prominent in children of this age are imitating the actions and speech of others so-called age of imitation. Despite this tendency to imitate is strong enough but on the other hand the child showed creativity in play that is also called as the creative age. (Hanum Marinbi 2010; h.10)

Teaching activities determined their learning where the kindergaten state from 07:30 pm to 09:30 pm is extra activities outside of school. While in TKIT (kindergaten islam integrated) varies among others on TKIT with study hours from 07:30 pm to 11:30 pm has extra curricular activities outside except Friday with a return



time of 10.45, for a 07:30 to 13:00 and 07:30 to 15:30 hours (full day school). At full day a child will interact with teachers and friends. So the responsibility of teachers to replace the role of grindstones, compassion, and the foster parents so great. Due to the lack of fulfillment of child rights will grindstones, love, care will have an impact on children, especially in children's development

The concept of learning full day of school in the park childhood islam integrated is that her children remain supervised and monitored, a model of integrated education allows students gain a comprehensive understanding and how to practice the teachings of Islam in daily life as well as offering new models of learning, which is a model mentoring and care so that the process is effective.

Meanwhile, halfday kindergarten concept is an integrated, thematic (integrated learning), learning fun (Fun learning), playful learning (Learning by Doing), learning from the experience of learning (learning by Experience). Content of the curriculum was conceived and developed to the full potential of children related to the value of art, beauty and harmony that leads to happiness in the lives of children in accordance with local cultural roots.

Based on a survey conducted by researchers in February 2015 in nature kindergarten Harapan Kita and Islamic Integrated BIAS there are 44 students from Nature kindergarten Harapan Kita, BIAS 22 pupils and 22 pupils aged 4-5 year with the transition from preschool to the golden period. Of the 44 children aged 4-5 years have taken 10 children from Harapan Kita has a corresponding development of 8 children and 2 children dubious, as well as 10 children from progressing according BIAS 7 children, 2 children and 1 child dubious and deviation.

## RESEARCH METHODS

This research includes comparative research study using a comparative study done by comparing the similarities or differences as a phenomenon to find what factors, or circumstances of how that led to a particular event. (Notoatmodjo, p, 47). By using cross sectional design. In the cross-sectional design of the study design with measurement or observation at the same time (one time) between the factor / exposure to the disease. (A. Aziz alimul, p; 56)

The sample was 44 children aged 4-5 years in nature kindergarten Harapan Kita 22 pupils and BIAS 22 pupils. Children Aged 4-5 years in kindergarten halfday and kindergarten fullday, exclusion criterion in this study are Being absent when the data retrieval.

The data used in this study are primary data obtained from responses through direct observation. Data were collected through observation is a method of measuring the data to obtain primary data, that is by direct observation carefully, using the senses (sensory eyes, ears, nose, hands, and mind). (Mustafa Zainul, 2009; h.94)

Measuring instrument data used in this study is the observation sheet in the form of a checklist is a list of men "checks", which contains the name of the subject and some of the symptoms as well as more targeted observations identity (Notoatmodjo 2010; h.137). Instrument used in this research is KPSP (pre-screening questionnaire development) and observation.

## RESULT AND DISCUSSION

Based on the results of research conducted in Nature kindergarten and Integrated Islamic kindergarten in May 2015 obtained 44 children aged 4-5 years.

In this study, divided into two groups of halfday (with study hours 5.5 hours) and full day group (with study hours to 7.5 hours).

**Table 1 Characteristics Respondents by Gender Children**

Gender	n	%
Boy	25	56,8
Girl	19	43,2
Total	44	100

**Table 2 Characteristics of Respondents by Age Children**

Age	n	%
48 Month	1	2,3
54 Month	14	31,8
60 Month	29	65,9
Total	44	100

**Table 3 Frequency Distribution Characteristics of Respondents by Type of Kindergarten**

Type Kindergarten	n	%
Nature Kindergarten Harapan Kita (halfdayschool)	22	50
Islamic Integrated Kindergarten BIAS(fulldayschool)	22	50
<b>Total</b>	<b>44</b>	<b>100</b>

**Tabel 4 Frequency Distribution The Children's development of Nature Kindergarten**

Child's Development	n	%
Coresponding	18	40,9
Dubious	4	9,1
Deviations	0	0
<b>Total</b>	<b>22</b>	<b>50</b>

**Tabel 5 Frequency Distribution The Children's development of Islamic Integrated Kindergarten**

Child's Development	n	Percentage
Coresponding	15	34,1
Dubious	7	15,9
Deviations	0	0
<b>Total</b>	<b>22</b>	<b>50</b>

**Table 6 Test Results Development of Children Ages 4-5 Years Between Nature (halfday) with Islamic Integrated Kindergarten BIAS (fullday)**

Child's Development	Type Kindergarten				P	t-test		
	Halfday		Full day					
	n	%	n	%				
Coresponding	18	40,9	15	34,1	33	72	0,010	-2,698
Dubious	4	9,1	7	15,9	11	25		
Deviations	0	0	0	0	0	0		
<b>Total</b>	<b>22</b>	<b>50</b>	<b>22</b>	<b>50</b>	<b>44</b>	<b>100</b>		

Child Development toddler on age 4 years, rough movement: standing one food more than 2 seconds without the handle, jumping with 2 food

together. Fine movement : drawing circles example without help, developing 8 cube without drop it. Language: without mentioning the full name in the help, about myself and dry wash. Social / Independence: persimmon wearing T-shirts, dresses without help.

On age 5 years, rough movement: walk straight, stand with one food for 11 second. Fine movement: draw a rectangle. Communication / language: to understand the speech using 7 words or more. Know the color. Social / Independence follow the rules of the game, dress yourself without assisted (MOH 2010 ; H 44-45).

The success of task progress also influenced by factors quality growth and development children between lying factors namely internal sense or nation, family, age, genetic abnormalities of chromosomes, and of the factors outer or external namely factors prenatal, factors of labor, factors of postpartum (MOH 2010; H. 5-7). Children's growth also can be influenced by Biomedical Physical, Emotional Needs ASI / affection, the need for mental stimulation (Hanum Marimbi 2010; h.72).

Based on the findings of the child development research seen from the 44 respondents in Nature Kindergarten Harapan Kita (halfday). There are doubts child development of 4 Kids (9.1%) and 18 children (40.9) has a matching developments. And Children who in Integrated Islamic Bina Anak Soleh (full day) doubts development as much as 7 children (15.9%) and 15 children (34.1%) children has a matching development. Results showed that there were difference 4-5 years childhood development between Nature Kindergarten Harapan Kita (halfday) with Integrated Islamic Bina Anak Soleh (full day) with values  $t = -2698$ ,  $p = 0.010$  ( $p < 0.05$ ).

The big difference in the development of children namely social interaction and communication with the family on a full day less comparing with halfday only until twelve o'clock in kindergarten. This is because social interaction with their surroundings and patterns parents play an important role in child development, and also needs to be child's play fulfilling. Many psychologists give their views on the play, Karl Groos argues that play is the process of preparing themselves to assume the role as an adult. Lazarus stated that the play will rebuild the lost energy so they refreshed themselves. Schiller and Spender states that play is the vehicle to use the excess energy so that the

child regardless of the pressure (Anita Yus, 2011; h.32-4).

Teaching activities determined their learning where the kindergarten state from 07:30 to 09:30 hours extra activities outside of school. While in islam integrated kindergarten varies among others with study hours from 07:30 to 11:30 hours extra curricular activities outside except Friday with a return time of 10.45, for a 07:30 to 13:00 and 07:30 to 15:30 hours (full day school). At full day a child will interact with teachers and friends. So the responsibility of teachers to replace the role of grindstones, compassion, and the foster parents so great. Due to the lack of fulfillment of child rights will grindstones, love, care will have an impact on children, especially in children's development (Dep P & K in 2010).

Halfday kindergarten concept is an integrated, thematic (integrated learning), learning fun (Fun learning), playful learning (Learning by Doing), learning from the experience of learning (learning by Experience) . Content curriculum was conceived and developed to the full potential of children associated with the value of art, beauty and harmony that leads to happiness in the lives of children in accordance with local cultural roots.

Research University of Indonesia Septianawi social development and TKIT (Islamic Integrated kindergarten) state (2003) have shown that children who spend more time consumed to learn "formal" more clever in kindergarten and grade 1,2,3. After that, he becomes more intelligent the higher class. In contrast, children who play needs are met, a growing with higher mental skills, so that it becomes more independence. It proves that playing as a child's needs and it is important for further developments.

Based on the above discussion the result of research that there are differences in the development of children aged 4-5 years between kindergarten Nature Harapan Kita (halfday) with pious child TKIT BIAS (full day) circumstances that make a difference in this research that the basic needs of children will be the pattern of family and environmental foster at less than Fulldayschool. While Halfday because more time interacting with their surroundings than Fullday who spend more time in the school environment. It also affects the pattern foster of the family because of the time at school more than at home chatting with the family, while the

development of the child itself can also be influenced by PARENTING or physical biomedical, ASIH or emotional needs / affection, ASAH, or the need for mental stimulation ( Hanum Marimbi 2010; h.72).

## CONCLUSION

There were significant differences between the development of children aged 4-5 years between Nature kindergarten Harapan Kita (halfday) with Islamic Integrated kindergarten BIAS (Fullday) is the development of kindergarten children Halfday better than the fullday with  $t = -2.698$  and  $p = 0.010$  ( $p < 0, 05$ )

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# CHARACTERISTICS OF MOTHER AND EFFECT OF PRENATAL SERVICES TREATMENT OF OCCURRENCE OF LOW BIRTH WEIGHT BABIES

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## ABSTRACT

Babies born with low birth weight (LBW) babies are born with a body weight  $\leq$  2500 grams. The cause of LBW are age, birth spacing, education, antenatal care. This study aimed to analyze the influence of maternal characteristics (education, maternal age, gestational age, parity and spacing between births) and antenatal care (ANC) (number of visits and inspection of components 7T) on the incidence of LBW in Primary Maternity Clinic Berta.

This study was an observational study with cross sectional design. The population is all the mothers who gave birth at the Maternity Clinic Primary Berta as many as 172 people. A sample of 153 people with simple random sampling technique. Data were analyzed by Chi Square and Multiple Logistic regression analysis (logistic regression).

The results showed that the incidence of low birth weight by 11.1%. Multiple logistic regression results expressed spacing between births ( $p = 0.027$ ) and the number of visits ( $p = 0.042$ ) effect on LBW. Exp (B) spacing between births by 3386, so that it can be concluded that the birth spacing pregnant women  $<24$  months which may be 3 times

LBW infants have been greater and the value of Exp (B) ANC amounted to 8.496, so it can be concluded that pregnant women who were ANC is not good to have the possibility of 8.496 times more likely to have low birth weight babies.

For Employees in Primary Maternity Clinic Berta provides easy access to ANC and reproductive health counseling for pregnant women about the health of pregnant women, the importance of checking the ANC during pregnancy and the importance of long-term use of contraceptives for birth spacing.

**Keywords:** Birth spacing, visited the ANC, LBW

## INTRODUCTION

Health is a basic and natural potential of each individual is indispensable in early life and human growth. Someone from inside the womb until the age of growth or development in the conditions and the unhealthy environment, will result in low quality of human resources (Maulana 2009).

According to WHO (2009) found in the neonatal mortality rate by 37%. Neonatal mortality rate by 75% occurred during the first week of life, and 25% to 45% occurrence of neonatal during the first 24 hours. The main causes of infant mortality are premature and low birth weight babies. It causes almost 80% of deaths occur at an early age.

Based on the results Riskesdas 2010 found that the area of North Sumatra incidence of low birth weight babies as much as 8.2%. In Indonesia, every year there are 4.608 million live births. Of that number as many as 100 454

(21.80 per cent) died before the age of one month (neonatal) that means 275 neonatal deaths each day or 184 early neonatal deaths each day, or every eight hours early neonatal babies die every day. The infant mortality rate is high, not only in the early neonatal course, the infant mortality rate of less than one year old is still high (Komalasari, K. 2003). LBW premature joint is a cause of neonatal mortality is high (Balitbangkes, 2008).

The fall LBW is one of the targets of MDG 2015 didalamnya there are several objectives, namely overcoming poverty and hunger, achieving universal primary education, promote gender equality and empower women, reduce child mortality, improve maternal health, combat HIV / AIDS, malaria, and other infectious diseases, ensuring environmental sustainability and develop a global partnership for development.



Birth spacing is the time since the previous birth to happen next birth. The distance is short can cause

Birth spacing is the time since the previous birth to happen next birth. The distance is short can cause pregnancy complications. When the distance between the birth of a previous child less than 2 years, uterus and maternal health has not recovered properly. Mothers who have labor within less than 18 months will have a baby with low birth weight 2.77 times greater than the birth mother who has a distance of more than 18 months (Rosemary, 1997 in Suriani, 2010).

Antenatal Care (ANC) is an examination of pregnancy to optimize physical mental health of pregnant women so as to face childbirth, postpartum stage, preparation of breastfeeding and the return of normal reproductive health.

Based on the initial survey found the incidence of neonatal death for LBW as many as 20 cases (Profile Tamiang Health Service, 2013). While in the District Vocational Young found the incidence of low birth weight babies are most at Desa Bukit Rata as many as 17 cases of LBW from January to April 2013. The incidence of low birth weight experienced by 4 mothers aged 30 years, 4 mother was 26 years old, 2 year old mother 27 years, 2 25-year-old mother, two 24-year-old mother and each mother aged 21, 28 and 31 years old. Results of interviews with mothers who gave birth to low birth weight babies have a status of married young age, low educational background so that family income was minimal. In addition, during pregnancy many women who do not perform pregnancy tests are complete. Based on the description above, the writer interested in the topic of the influence of maternal characteristics and antenatal care (ANC) on the incidence of LBW.

## RESEARCH METHODS

The research is descriptive and the research design used is pendekatan Cross Sectional with data collection at once at a time (time point) were carried out at the Clinic Primary Berta 2015. When the study started from January 2015 through to June 2015.

Data collection is done by researcher with the form of questionnaire was used as instrument and first give a brief explanation of the purpose and objective of the questionnaire sheet (sheet

statement). If respondents had understood, a questionnaire will be given, after the questionnaires filled out by respondents then researchers collected questionnaires returned and if there is a complete lack of researchers can finish it right.

The data analysis of primary research methods Descriptive, by looking at the percentage of data that has been collected and presented in a frequency distribution table.

The sample is part of the population that is representative of the population (Irchan, 2009). In this study used a sample of 30 people where sampling technique by using the technique Total Population where the entire population is being sampled.

## RESULT AND DISCUSSION

**Table 1** Distribution Frequency Number of Visits

Number of visits	n	%
complete	51	33,3
incomplete	102	66,7
<b>Total</b>	<b>153</b>	<b>100</b>

The results of the measurement of the number of ANC mothers found that the number of complete examination as many as 51 people (33.3%) and incomplete checks as many as 102 people (66.7%)

**Table 2:** Distribution Component Inspection 7T ANC Mom Clinic Primary Berta 2015

Component Inspection 7T	n	%
Complete	51	33,3
Incomplete	102	66,7
<b>Jumlah</b>	<b>153</b>	<b>100</b>

The measurement results 7T ANC component inspection found that the component inspection mother 7T complete as many as 51 people (33.3%) and components 7T incomplete examination of 102 votes (66.7%)

**Table 3:** Frequency Distribution Services Clinic Primary Capital ANC Berta 2015

Service ANC	n	%
Good	51	33,3
Not Good	102	66,7
<b>Total</b>	<b>153</b>	<b>100</b>

The measurement results ANC examination found that the examination of the ANC mother both were 51 people (33.3%) and the examination is not good as many as 102 people (66.7%).

**Table 4: Distribution of the Primary Clinic Berta LBW in 2015**

LBW	n	%
No	136	88,9
Yes	17	11,1
<b>Total</b>	<b>153</b>	<b>100</b>

Measurements found 11.1% of LBW babies have low birth weight and 88.9% were LBW

**Table 5: Age relations with LBW**

Age	LBW				P
	No		Yes		
	n	%	n	%	
0-35	130	88,4	17	11,6	147
20 & >35	6	100	-	-	6 1,000

Chi-square test results show the value of  $p = 1.000 > \alpha = 0.05$  it can be concluded that there is no relationship between age and the incidence of low birth weight. Table cross between age and low birth weight showed that of the 147 mothers aged 20-35 years, there were 17 infants (100.0%) with LBW. Meanwhile, the mother of 6 aged <20 and > 35 years was not found LBW.

**Table 7: Education relationship with LBW**

Education	LBW				n	P
	No		Yes			
	n	%	n	%		
High	99	90	11	10	110	0,568
Low	37	86	6	14	43	

Table cross between education and LBW showed that of the 110 mothers who have secondary level, there were 11 infants (10.0%) who had low birth weight. Meanwhile, of the 43 women who had low levels of education, there are 6 infants (14.0%) who had low birth weight. Results obtained chi square test  $p = 0,568 >$

$\alpha=0,05$ , thus there is no relationship between education and low birth weight

**Table 8: Parity relationship with LBW**

Parity	LBW				N	P
	No		Yes			
	n	%	n	%		
≤ 2	58	93,5	4	6,5	62	0,130
> 2	78	85,7	13	14,3	91	

Chi-square test results show the value of  $p = 0.130 < \alpha = 0.05$  it can be concluded that there is no relationship between parity with LBW. Table cross between parity with LBW showed that out of 62 mothers who parity ≤ 2 children, there are four infants (6.5%) were megalami LBW. Meanwhile, of the 91 mothers who parity > 2 children, there were 13 infants (14.3%) who had low birth weight.

**Table 9: Birth spacing 9 Relations with LBW**

Distance between births (month)	LBW				Total	P
	No		Yes			
	n	%	n	%		
≥ 24	93,8	6	5,2	97	100	0,011
< 24	80,4	11	19,6	56	100	

Table cross between spacing between births with low birth weight showed that out of 97 mothers distance between birth ≥ 24 months, there are 6 infants (6.2%) who had low birth weight. Meanwhile, from 56 the distance between birth <24 months there were 11 infants (19.6%) who had low birth weight. Obtained Results chi square test  $p = 0.011 > \alpha = 0:05$ , Thus there is a relationship between the interval between pregnancies with LBW.

**Table 10 ANC with LBW Relations Services**

Service ANC	LBW				n	P
	No		Yes			
	n	%	n	%		
Good	50	98	1	2	51	0,011
Not Good	86	84,3	16	15,7	102	

Chi-square test results show the value of  $p = 0.011 < \alpha = 0.05$  it can be concluded that there

is a relationship between the ANC with LBW. Table cross between ANC with LBW showed that of the 51 mothers ANC was good, there was one infant (2.0%) who had low birth weight. Meanwhile, of the 102 mothers ANC is not good, there are 16 infants (15.7%) who had low birth weight.

**Table 11: Final Results Test Multiple Logistic Regression**

Variabel	B	Sig.	Exp B
spacing between births	1,220	0,027	3,386
Services ANC	2,140	0,042	8,496
Constant	-4,436	0,000	0,012

Logistic regression analysis results also showed that the distance between birth variables with  $p(0.027) < 0,05$  effect on LBW. Then a variable number of visits by  $p(0.042) < 0,05$  effect on the incidence of LBW .. The results of the analysis of multiple logistic regression test showed that the most dominant variable affecting LBW is variable ANC services that the regression coefficient B 2.140. Based on the results of logistic regression analysis, the variable spacing between births obtained value Exp (B) of 3.386, so it can be concluded that the birth spacing pregnant women <24 months are possibly three times more likely to experience low birth weight babies, while

ANC variable values obtained Exp (B) of 8.496, so it can be concluded that pregnant women who either do not have the service ANCnya 8.496 times greater likelihood to experience low birth weight babies. Based on the survey results revealed that from variable spacing between births and the number of visits, stated that it has an influence on the incidence of LBW in the Village District of SMK Bukit Rata Muda In 2013, the percentage correct value = 88.9% means that wine between births and ANC explain the variation of events LBW of 88.9%, the remaining 11.1% influenced by other variables not included in this study variables.

Mother, who experienced Infant Low Birth Weight (LBW) of 11.1%, while women who did not experience the LBW of 88.9%. LBW is possible because the mother did not do a complete ANC. ANC is very important to

pregnant women because of various risks and complications can be immediately known as early as possible so it can be reduced or eliminated, including the risk of low birth weight. Economic status in the village of Bukit Rata average sangant varied ranging from middle and upper economic status and lower middle, the characteristics of families with LBW majority of middle and lower. LBW also indirectly caused by social economic status is low, low socio-economic circumstances affecting maternal nutritional intake. No adequate nutritional intake will affect the nutritional status of pregnant women, poor nutritional status yag be improved its risk of LBW.

Mother gave birth at the Clinic Primary Berta In 2015 the average distance between birth  $\geq 24$  months amounted to 63.4%, this suggests that mothers there already using family planning as an effort to delay having children. Spacing between births for 2 years seen the shortest time to achieve optimal health status of the mother before the next pregnancy. If the distance birth less than two years the mother will face the risk of bleeding before and after childbirth as well as higher labor with complications. Moreover, the baby will face the risk of morbidity and mortality is higher (WHO, 2007).

Results obtained chi square test  $p\text{-value} = 0.011 < \alpha = 0.05$ , thus there is a relationship between birth spacing with LBW. The results are consistent with research Damayanti (2009) that there was a significant association between birth spacing with LBW. Multiple logistic regression test showed variable spacing between births showed no effect on the incidence of LBW with  $p = (0.027) < \alpha (0.05)$ .

The results are consistent with research Trihardiani (2011) spacing effect on LBW. Obtained the same results possible because the characteristics of the respondent about the same as the incidents experienced by many LBW mothers distance between his land <24 months.

Mother gave birth at the Clinic Primary Berta in 2015 that birth spacing  $\geq 24$  months who suffered LBW by 6.2%, while the distance of his birth mother <24 months who suffered LBW of 19.6%. From these results it can be concluded that the incidence of low birth weight experienced by many mothers distance between birth <24 months. This is because a

mother is not enough time to recover her body after giving birth before, so the risk of disruption of the reproductive system that will affect birth weight.

The risk of pregnancy spacing is short for the mother alone increases the risk of acute anemia and create a lack of adequate maternal nutrition, especially iron, lower fetal growth, increasing stress and preterm birth and low birth weight Pregnant women exposed to acute anemia will increase the risk of hemorrhage, complications of pregnancy, baby born prematurely, the risk of bleeding during childbirth and that the worst risks of miscarriage.

One of the causes of anemia in pregnant women who may be at risk of low birth weight is the spacing between births. This is due to nutritional deficiencies that constitute the biological mechanisms and recovery capabilities hormonal factors. Repeated pregnancies in a short time will deplete iron stores mother, finally terjadialah anemia. Therefore, it takes time to restore the condition of the mother about two years. it is supported from Pusdiknakes statement (2003) that mothers who experience iron deficiency in early pregnancy require about 2 years to replenish the iron stores of food sources so that an iron supplement recommended as a routine basis

The occurrence of closely spaced births in mothers in the Primary Clinic Berta 2015 from the interview that did not use contraception after giving birth and want to quickly have a child to accompany his brother. Therefore, long-term use of contraceptives should be socialized. Birth spacing adjacent not only affects the health of the mother and fetus but also triggered in children pengabaiaan previous (first) physical and psychological that can cause jealousy by the lack of sharing of affection and her parents.

Mother gave birth at the Clinic Primary Berta In 2015 majority ANC incomplete service that is equal to 66.7%. Incompleteness antenatal care due to access to service location where the service is quite remote, and pregnant women do not know information about the K1, K2 and K3 and when the implementation of these services so that most mothers do checks only the trimester-I and trimester-III, when approaching time birth. This together with a statement YUSTINA (2007) which states that

access to information relating to the use of health services provided.

Results obtained chi square test p-value =  $0.011 < \alpha = 0.05$ , thus there is a relationship between the ANC with LBW. The results are consistent with research Ernawati Fitriah (2012) found no significant relationship between the ANC with LBW. Multiple logistic regression test showed variable spacing between births showed no effect on the incidence of LBW with  $p = (0.042) < \alpha (0.05)$ . The results are consistent with research Khatun and Rahman S. M. (2008) mentioned that antenatal care has a very strong influence on the incidence of low birth weight in infants with OR = 29.4 (95% CI 12.61 to 68.48). Pregnant women who do visit ANC less than 4 times more likely to give birth to babies with low birth weight of 29.4 times compared with pregnant women who visit ANC 4 times or more during pregnancy.

Mother gave birth at the Clinic Primary Berta 2015 during pregnancy do ANC to complete the experience LBW by 2.0%, while the mother during pregnancy do not complete the ANC to undergo LBW by 15.7%. From these results it can be concluded that the incidence of low birth weight experienced by mothers during pregnancy tida perform complete ANC. It is caused by abnormalities in the mother during pregnancy and the fetus are not detected early and ditanggulang result of not monitoring or antenatal care regularly at least four times during pregnancy.

At each visit ANC, the officer collecting and analyzing data about the condition of the mother through history and physical examination for diagnosis of pregnancy as well as whether there is any problem or complication. One purpose of this visit is to recognize and deal with the diseases that may be encountered in pregnancy such as iron deficiency, KEK, or the nutritional status of pregnant women is bad that can increase the risk of low birth weight

Based on logistic regression test, it is known that the ANC effect on LBW with OR = 8.496 means that pregnant women with ANC incomplete have the chance 8.496 times BBLR compared with pregnant women who ANC complete and the most dominant factor affecting the incidence of low birth weight in research this is service. According to Hanafi (2006) in Suriani (2010) also stated that antenatal care aims at maintaining the health of

the physical / mental mothers and babies by providing education on nutrition, personal goals, and labor, early detection of abnormalities found and immediate management of medical complications, surgical, or obstetric during pregnancy and mitigate them. It also aims to prepare pregnant women, whether physical, psychological, and social in the face of complications.

## CONCLUSION

There is a 11.1% occurrence of LBW in the Primary Clinic Berta In 2015 it showed LBW in the village of Bukit Rata still high

2. There is a relationship between maternal characteristics (interval between births) and the ANC with LBW

3. The influences of maternal characteristics (interval between births) and the ANC against LBW greater the distance between the birth and the more complete the ANC will lower the risk of LBW in the Primary Clinic Berta 2015.

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## PERCEPTION OF PREGNANT WOMEN TO HIV / AIDS IN CLINICAL VCT "SOBAT"

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### ABSTRACT

Now is going feminization of HIV / AIDS it is feared will transmit the virus to her unborn child nevertheless still few pregnant women who went to the VCT clinic to find out their HIV status. This study aimed to get an idea of the perception of pregnant women against HIV / AIDS in the VCT clinic "SOBAT" of Prof. Dr. WZ Johannes Hospital. This using qualitative research methods and cross sectional study design (cross-sectional) the object of this study were pregnant women tested for HIV in VCT Clinic "SOBAT" of Prof. Dr. WZ Johannes Kupang as much as four pregnant women and triangulation with VCT clinic manager "SOBAT" The data collected through interviews then classified according to a views their source and analyzed and presented in narrative form. The results were Obtained Knowledge of HIV / AIDS was mostly good but the perception of the risk of transmission of HIV / AIDS is still largely undecided. In conclusion though pregnant women have knowledge about HIV / AIDS was good but they still doubt the perception of contracting the disease.

**Keyword: Pregnant women, HIV /AIDS.**

### INTRODUCTION

HIV is the virus that attacks the human immune system, causing *Acquired Immune Deficiency Syndrome* (AIDS) is a syndrome of decreased immunity. If a person attacked by this virus it will be susceptible to opportunistic infections. The HIV virus is transmitted through direct contact between the skin layer (mucous membrane) or the bloodstream with a bodily fluid containing HIV, such as blood, semen, vaginal fluid, preseminal fluid and breast milk. Transmission can occur through sexual intercourse (vaginal, anal or oral), blood transfusion, contaminated hypodermic needles, between mother and baby during pregnancy, childbirth or breastfeeding as well as other forms of contact with body fluids, such as tattoos or piercings, (Imron 2010).

Expressing the WHO in 2007 a 2.7 million new HIV infections and 2 million AIDS deaths. In Asia there are 4.9 million people infected with HIV, 440 thousand of them were new infections and has caused the deaths of 300 thousand people in 2007.

(NAC, 2010). According to data from the Ministry of Health until June 30, 2010, the cumulative number of reported AIDS cases is 21 770 cases and the number of HIV cases is 47 157 cases were reported from 32 provinces and 300 districts / cities. (Kompas, 2010) Modes of transmission of AIDS cases the cumulative reported through heterosexual 49.3%, 40.4% IDU, Men Sex Men 3.3%, perinatal 2.7%. The highest proportion of AIDS cases reported in the age group 20-29 years at 48.1%. The proportion of AIDS cases reported to have died was 19.0%. The proportion of female AIDS in Indonesia has increased from 21% in 2006 to 25% in 2009. This indicates feminization of the HIV epidemic is happening in Indonesia. The cumulative cases of AIDS in women Indonesia is based on the type of work until December 31, 2009 are: housewife (1970 people), sex workers (604), power non-professionals, including employees of non-formal, laborers and unskilled laborers (366 people), self-employed (323), farmers / farmer / fisherman (117), civil servants (71), non-medical professionals (69), members of the Armed Forces / Police (5 people). The tendency of the HIV epidemic in Indonesia in

the future, namely an increase in the number of new infections HIV in women, so it will have an impact on the increasing number of infections in children and increased potential for new infections to sexual partners of each key population. (KPA 2010)

According to data from the Ministry of Health, every year there are 9,000 HIV positive pregnant women who gave birth in Indonesia. Although babies born to HIV positive mothers will not necessarily be infected with HIV as well, but the risk reaches 25-45%. So if no precautions, there will be 3,000 babies born to HIV positive feared every year in Indonesia. Baby's risk of contracting HIV can be reduced to be two per cent through the program PMTC, namely taking ARV prophylaxis during pregnancy and postpartum, cesarean delivery and provide formula to infants who are born. (Kompas, 2010)

Since 2007, prevention of HIV transmission has been carried out in Kota Kupang to open several clinics VCT (Voluntary clinical Testing) in several Hospitals and clinics. (KPA 2010) Kota Kupang has three active VCT clinics are in RSU WZ Johannes Kupang, RST. Wirasakti and RS Bhayangkara. Three hospitals in coordination with the Provincial Health Department and also Komisi Penanggulangan AIDS Propinsi NTT.

Data from Clinical Hospital VCT pal Prof. DR, WZ Johannes Kupang during September 2005 to September 2012 was visited by 4978 people. Of the total of detected HIV were 315 people (6.32 percent), while on the distribution of HIV-positive patients is based on work that is not working as many as 114 people (36 percent), a driver for 72 people (23 percent), including maternal Housewife pregnant many as 65 people (21 percent), private employees as many as 41 people (13 percent) and PNS many as 18 people (6 percent) .From such data however, the number of pregnant women who examined their HIV VCT clinic is still very minimal.

Though some literature suggests that 85 percent of pregnant women who are HIV positive to come from this suami.Hal need attention because if the mother or the wife became pregnant, then 90% of the virus (HIV) will be transmitted to the baby. But this can be prevented if the mother's HIV status can be known early so that it can follow a program of prevention of HIV transmission from mother to child. But given the lack of women, especially pregnant women who check their HIV status to the VCT clinic, it is important to know how the perception of pregnant women. The purpose of this study to determine how perceptions of HIV positive pregnant women against HIV / AIDS.

AIDS stands for *Acquired Immuno Deficiency Syndrome (syndrome acquired immune defects)*, which is a collection of symptoms of diseases caused by the immune system by a virus called HIV. (Nassorudin, 2007) *Human Immunodeficiency Virus (HIV)* is a type of *lentivirus* including one of a kind family of retroviruses. HIV can cause chronic infection. It also causes diseases in animals but not a neoplasm. It has a unique enzyme reverse transcriptase. The enzyme is a descendant of the RNA and DNA that have the ability to enter into the cell *host* chromosome. These viruses survive in cells for years and can not be eradicated from the cells *host* with antiviral drugs. HIV is a virus that attacks the human immune system and then cause AIDS. The HIV virus attacks one type of white blood cells to immune function. The HIV virus is found in blood, vaginal fluid, semen and breast milk. (Suyono, Yeni and Iskandar, 2006)

## METHODS

This research is *explanatory research* using qualitative methods and study design *cross sectional* (cross-sectional study), that the study variables are measured or collected at the same time. This research was conducted at the Clinic VCT "SOBAT" Prof. DR. WZ Johannes Kupang Hospital of the Month of

September to December 2014. The population in this study were pregnant women who test VCT in VCT Clinic "SOBAT" Hospital Prof. DR. WZ Johannes Kupang numbered 18 people. The object of this study were pregnant women tested for HIV in "SOBAT" VCT Clinic Prof. Dr. WZ Johannes Kupang Hospital sampled in this study is 4 pregnant women. By doing triangulation with VCT clinic "SOBAT" Prof DR. WZ Johannes Kupang Hospital. Data were collected through interviews on the object of research and informants triangulation. Then the data already collected was classified according to the source and analyzed and presented in narrative form.

## RESULTS AND DISCUSSION

### Characteristics Informants

Based on the results obtained by the informant entirely within a healthy reproductive age range is 23-34 years of age, all of the research object with at least one high school and have a job Housewife, three of the four informants is currently pregnant with her first child while the other one when the research was pregnant with a second child. The entire informants in this study had a long of different ARVs including one month (1 informant and the informant 3), 16 months (informant 2) and 3 years and 11 months (informant 4). Duration of taking ARVs at this informant showed they know their HIV status and exposure to information about HIV / AIDS as they get.

### Knowledge Of pregnant Women To HIV / AIDS

Knowledge is the result of the idea, and this occurred after people perform sensing on a specific object. Sensing through human senses, namely sight, hearing, smell, taste and touch. Knowledge or cognitive domain is very important in shaping a person's actions. (Notoadmodjo, 2007)

In the research that has been done obtained knowledge of the informant about HIV /

AIDS can be pretty good because two of the four informants have been exposed to information from various sources, among others: the husband, health workers or counselors and NGOs are assisting. But there is still a revelation that mistakenly associated with HIV and AIDS as the second question in the knowledge that asks the question "What is a mother to know about AIDS?" Turns out there who replied that the conditions of AIDS the same with HIV as stated in the informant 1 is:

"Sama dengan HIV .."(informant 1)

The above statement is still wrong about AIDS, where AIDS is a group of symptoms caused by the body when the body is decreased while HIV is the virus that causes decreased immunity *tuguh*, the difference is also due to the revelation of new informants 1 1 months of taking ARVs or know status on HIV so that information related to HIV he acquired still very limited.

But overall the informant had a fairly good knowledge of HIV and the prevention of HIV transmission from mother to child where all informants stated that the mode of transmission of HIV from mother to child ARV is through drinking regular, faithful partner and have sex with the bertanggungjawab. Tetapi this revelation is still lacking for the prevention of HIV transmission from mother to child HIV status because besides knowing a mother still need to drink ARV, deliveries are Sectio Caesarea and baby drinking milk formula standardized AFAASS.

This shows they still lack the information they find associated PMTCT (Prevention of HIV Transmission from Mother to Child) so it is necessary the promotion and dissemination, and advocacy *terakait* implementation of PMTCT is to the stakeholders and the medical personnel and the community.

### Perception Of Mother Pregnant To HIV / AIDS

Perception is something or express an understanding of processed products in thinking, perception means related to external factors which responded through sensory perception, memory and mental power. Perception can be defined as the intellect and understanding of the power of individuals to various stimuli coming from the outside. Power interpretation and thinking within the brain and processed in a way in response to various stimuli. (Green, 1991)

Perception is one aspect that is very influential in the formation and behavior change. Sensing an introduction to the process of perception. Perception is the observation that a combination of vision, hearing, smell and past experience. A similar object may be perceived differently by some people. Meanwhile, according to the perception Mantra is an individual view to its environment as subjective picture of someone internal to the outside world. So one interpretation of the same stimulus or stimuli perceived differently by some individuals. Differences in perceptions of the same stimuli because the perception is the result of a process of individual observations derived from the cognitive component that is influenced by the experience of learning, knowledge, and education and social culture that flourished in the local community.

The findings of the researchers obtained the perception of vulnerability of pregnant women to HIV / AIDS claimed not convinced that the husband's work is often out of town at risk of contracting HIV, in doubt that the use of needles in tattoo permanent can transmit HIV, they also do not believe that they can get HIV even though he felt fine and they also had doubts if possible can be infected with HIV if exposed to sexually transmitted infections. Besides all the respondents also said that there is a possibility of contracting HIV in pregnant women even if pregnant women do regular inspection and taking vitamins on a regular basis, as stated in the statements of informants below:

" *Tetap bisa saja tertular bu, status HIV kita kan hanya bisa diketahui dari VCT bu..*"(informant 2)

Based on the above statement obtained a description of a mother's perception that a still have the possibility of contracting HIV even though he does antenatal care regularly. The statement was made by informant because his experience has been over 16 months of taking ARV and observe although he behaves healthy but there remains the possibility of contracting HIV.

This is consistent with the theory that a person's perception is the result of the processing power of thought, meaning that perception with regard to the factors external Factors which responded through sensory perception, memory and mental power. This perception then affects the formation and change a person's behavior to a problem.

## CONCLUSION

1. Characteristics of informants based on age, the majority of the population is aged healthy reproduction sengan level of high school education, the work of most housewives.
2. Knowledge informants is largely good, this could be caused because the informants have been exposed to information about HIV / AIDS when antenatal and supported by educational level as well as a variety of other sources of information.
3. The perception of the informant about the risk of transmission of HIV / AIDS is still largely hesitant because of the ability of individual perceptions are different from each other.

## ACKNOWLEDGMENT

Based on the above conclusions, the authors recommend that health workers can provide appropriate information about HIV / AIDS in pregnant women, and did not leave a negative



stigma against people living with HIV so it is not likely to cause negative perceptions of PLHA. This study is a beginner, to the author expects that other researchers can continue this research a more comprehensive manner so as maternal and child health services, especially for people living with HIV can be maximal.

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# INCIDENCE OF FETAL DISTRESS VIEWED FROM THEIR LABOR OLD PRIMIGRAVIDA

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## ABSTRACT

The incidence of fetal distress can lead to fatal conditions for the fetus and the baby to be born can even lead to death. In Prof. Dr. W. Z Johannes Hospital Kupang the incidence of fetal distress was high at 106 from 1834 deliveries in 2014. This study was to Described the incidence of fetal distress in terms of duration of labor in primigravida. This research was a descriptive with cross sectional design, the secondary data is used the data from the registers of birth in the maternity room Hospital Prof. Dr. W. Z Johannes Kupang, the sample in this study was laboratory data history of infants with asphyxia and fetal distress as many as 41 people mother. so it can be concluded that the duration of labor may Contribute to the incidence of fetal distress, especially if the first stage lasts more than 12 hours and when the two lasted more than two hours.

**Keywords: fetal distress, duration of labor**

## INTRODUCTION

*Fetal Distress* is a condition in which the *fetus* does not receive enough oxygen to *hypoxic*, characterized by heart rate *fetal* less than 100 beats per minute or more than 180 times per minute and *mekonial* the *presentation*. head One of the reasons for *labor* prolonged (Rukiyah, 2012).

*Prolonged obstructed labor* that occurs more than 14 hours in *primigravida* and more than 9 hours on *multigravida* without birth, cervical dilation in the right line alert on *partograf* and fetal distress. Some causes of *labor* prolonged due to his inadequate, factors *fetal* and factors of the birth canal (Practical Handbook Pregnancy and Neontal, 2010). Delivery time result in the mother's bloodstream through *placenta* is there reduced so that the flow of oxygen to *the fetus* is reduced resulting in *fetal* distress. *distress Fetal* can be seen when the fetal heart rate less than 100 beats per minute or more than 180 times per minute and *mekonial* the head presentation. If not treated

immediately, the baby will be *asphyxia* which can lead to death of the newborn. (Rukiyah, 2012).

The results of the survey in the delivery room pre Hospital Prof. Dr. W. Z Johannes

Kupang in 2013, of the total deliveries in 1834, there are 102 people (5.6%) mothers *primigravida* with *labor* their babies prolonged and fetal distress in 57 people (3.1%) (Register of births in the maternity ward period January to December 2013). Efforts have been made in hospitals Prof. Dr. WZ Johannes Kupang was made trained all midwives to did Normal Delivery (APN) and Services Obstetrics Neonatal Emergency Basis (PONED) and is expected midwives can perform delivery assistance according to the standard, pay attention to the position of the mother during labor and perform early detection of fetal distress and a long labor through monitoring by using *partograf*. Based on the above background, the authors are interested to carry out further research titled "Overview incidence distress *offetal* in terms of duration of labor in *primiparous* in hospitals Prof. Dr. W. Z Johannes Kupang. "General Purpose Knowing the incidence distress picture *offetal* in terms of duration of labor in *primipara* in Delivery Room Prof. Dr. WZ Johannes Kupang

*Fetal Distress* is heart rate *fetal* less than 100 beats per minute or more than 180 times per minute and the amniotic fluid is green viscous, (Nugroho, 2010). *Fetal Distress* is the reaction of *the fetus* on the conditions in

which there is insufficient oxygen, (JNPK-KR, 2008). *Fetal Distress* is a condition in which the *fetus* does not receive enough oxygen to *hypoxic*, (Rukiyah, 2012). *Fetal Distress* is heart rate *fetal* less than 100 beats per minute or more than 180 times per minute and the amniotic fluid is green viscous, (Nugroho, 2010).

*Fetal Distress* is the reaction of the *fetus* to the condition in which there is insufficient oxygen, (JNPK-KR 2008 ). *Fetal Distress* is a condition in which the *fetus* does not receive enough oxygen to *hypoxic*, (Rukiyah, 2012). *Fetal Distress* can be determined by the frequency of heart sounds *fetal* less than 100 times per minute or more than 180 times per minute, reduced movements *fetal fetus* (normal moves more than 10 times per day) and the presence of amniotic fluid is mixed with meconium or green on the head presentation, (JNPK-KR, 2008).the diagnosis of *fetal distress* during labor is based on abnormal fetal heart rate and more definite when accompanied green amniotic fluid and viscous, (Nugroho, 2010).the Difference duration of labor for *primigravidae* and *multigravida*. For *primigravida* stage I: 12 hours and the second stage: 2 hours, while for *multigravida* the first stage: 8 hours and the second stage: 1 hour, so long first stage of labor and II to *primigravid* is 14 hours and to *multigravida* is 9 hours (Rukiyah, 2012).

## RESEARCH METHODS

This research is a descriptive study using *cross sectional design* (Nursalam, 2008) using documentation study. Research conducted at the Delivery Room Prof. DR. W. Z. Johannes Kupang Hospital and timing of research conducted in January 2015. Populasi in this study were all *primigravida* with *labor* prolonged whose babies suffered *distress fetal* in maternity room Prof. Dr. WZ Johannes Kupang Hospital period January to December 2013 as many as 57 people (register of births in the maternity ward in 2013). The sample in this study is

saturated samples by taking all members of the population *to be sampled* is all over mothers *primipara* with *labor* prolonged whose babies suffered *fetal Distress* in Delivery Room Prof. Dr. WZ Johannes Kupang Hospital as many as 57 people.

This study uses two variables, independent variables and the dependent variable. The independent variable is the duration of labor in *primipara* and the dependent variable is *fetal Distress*. Data collected the secondary data is data that is retrieved from the status of maternal and registers of births in maternity room Prof. Dr. WZ Johannes Kupang Hospital. Data collection tools in this study was a questionnaire containing the duration of labor and fetal distress.

Analysis of the data in this study using analysis, *univariate* namely analysis performed on each variable. Research results so as to produce a frequency distribution table (Nursalam, 2008) The results of the study are categorized using the following scale: (Arikunto, 2010).

- a) 0% = none
- b) 1-25% = fraction
- c) 26-49% =nearly half
- d) 50% = half
- e) 51-75% = mostly
- f) 76-99% = almost entirely
- g) 100% = entirely

## RESULTS AND DISCUSSION

The duration of labor with the incidence of fetal distress

First stage > 12 Hours	Second Stage ≤ 2	Second Stage >2 hours
Fetal Norma distres s	Fetal Norma distres s	Fetal norma distres s
41 0	8 33	24 17

The frequency distribution of duration of labor when First Stage > 12 hours with the incidence of fetal distress. The table above

shows that the first stage of labor longer > 12 hours throughout the baby suffered fetal distress by 100% .Janin and mothers with duration in second stage of labor  $\leq$  2 hours 80.5% infants had fetal Distress.meanwhile Mother wh have duration of second stage of labor > 2 hours as much as 58.5% of baby had suffered fetal distress. This study was supported by research Wangge, (2009) in the delivery room hospital of Ende showed that mothers who experienced prolonged labor due to abnormalities of his, abnormal birth canal and fetal abnormalities having a baby with asphyxia.

According to Rukiyah, (2012) during the delivery takes effort straining causes mother hold his breath so that the process *inspiration* and *of expiration* mother will cease to cause the flow of oxygen from the mother to *the placenta* is reduced and the fetus is deprived of oxygen, causing *hypoxia* and *fetal distress*. According to Hidayat, (20012) says that labor which lasted longer cause maternal exhaustion , If the mother is exhausted then the blood supply to the uterus is reduced so that the baby does not get enough oxygen and fetal distress. According to the MOH, (2008) says that labor lasting more than 12 hours in primipara called prolonged labor. These conditions cause complications where the fetus does not receive enough oxygen to hypoxic signs DJJ less than 100x / min or more than 180x / min or mekonial on head presentation.

## CONCLUSION

Based on the results of this study concluded that the duration of labor may contribute the incidence of fetal distress, especially if the first stage lasts more than 12 hours and when the two lasted more than two hours. To the researchers suggest that the observation of labor may be made with care and health personnel can quickly take a decision to act when it found signs of fetal distress risk. This research is descriptive and

still needs to be continued into the exploratory research and eksplanitif deeper.

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# POSTPARTUM MOTHERS' BEHAVIOR ON UMBILICAL CORD CARE OF NEWBORNS IN PUSKESMAS KAMPUNG BUGIS TANJUNGPINANG CITY 2016

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## ABSTRACT

An umbilical cord care nursing actions aimed at taking care of the umbilical cord of the newborns to keep them dry and prevent umbilical cord infection. In 2014, there were 84 reported cases of neonatal tetanus from 15 provinces with 54 diet cases. CFR neonatal tetanus in 2014 amounted to 64,3%, increasing compared to the year 2013, which amounted to 58,3%. This research wants to describe the of postpartum maternal behavior about cord care, the material used in cord care, and postpartum behaviors that are not sterile. The method of this study is descriptive, making use of cross sectional design. Subject of the study are 30 postpartum mothers and the sampling technique used is sampling analysis data as a percentage. The results are that 23 people (76,7%) were not doing umbilical cord care according to standard while as many as 7 people (23,3%) did cord as per standard; those using non-standard materials are as many as 21 people (70%), while the corresponding standard 9 people (30%), and as a result of the behavior of postpartum mothers do care that is not sterile so that the risk of infection 16 (53,3%) are not at risk of 14 people (46,7%). Conclusion the results of the 30 respondents mostly postpartum behavior cord care way that is not according to standard as many as 23 people (76,7%).

**Keyword : Behavior, cord care, newborn.**

## INTRODUCTION

Attempts to maintain child and baby health aim to prepare the healthier, smart and quality future generation as well as to decrease child and baby mortality rate. These attempts are conducted for fetuses, newborns, and children up to 18 years old to decrease Infant Mortality Rate (Ministry of Health of Republic of Indonesia, 2014).

Based on Demographic Health Survey 2007, Neonatal Mortality Rate reached 20 per 1000 birth, decreasing to be 19 per 1000 birth in 2012. The attempts to decrease neonatal mortality rate is important to be done because neonatal period is crucial for baby's life, with neonatal mortality rate reaches 50% in the first weeks and months. Seen from infant development and growth, neonatal period is the most critical one.

Based on Basic Health Research 2007, 78.5% of neonatal mortality occurred in the period of 0-6 days. Meanwhile, based on

Basic Health Research 2013, umbilical cord care with nothing to give increased from 11.6% in 2010 to 24.1% in 2013; on the other hand, umbilical cord care with antiseptic decreased from 78.9 in 2010 to 68.9 in 2013. Especially in Kepulauan Riau Province, the umbilical cord care with nothing to give is 17.1%, with antiseptic 79.3%, powder medicine 1.0%, and traditional medicine 2.6%.

## RESEARCH METHODS

Methods to solve the problem of infant mortality rate due to umbilical cord infection, as stated by Minister of Health, is to provide quality, cost-effective maternal and neonatal services through three keys; one of these is to introduce the right umbilical cord care to the community (Ari Andrianti, 2015).

Based on the data obtained from The Office of Health of Tanjungpinang City, the number of the incidence of umbilical cord infection



in 2006 is 1 case of tetanus neonatorum, whereas the data from Puskesmas Kampung Bugis during 2013-2016 shows the cases of unclean umbilical cord in each year followed by the risk of umbilical cord infection, thus the writer is interested in conducting a research on the behavior of the postpartum mothers related to the action of maintaining umbilical cord, particularly those of the newborn babies.

## RESULT AND DISCUSSION

**Tabel 4.1. Respondent Characteristics Based on Age Group**

Criteria Years	n	%
< 20	1	3,3
20 – 35	27	90
> 35	2	6,7
<b>Total</b>	<b>30</b>	<b>100</b>

**Tabel 4.2. Respondent Characteristics Based on Education Level**

Criteria	n	%
Primary School	16	53,4
Junior High School	4	13,3
Senior High School	9	30
College	1	3,3
<b>Total</b>	<b>30</b>	<b>100</b>

**Tabel 4.3 Respondent Characteristics Based on the Number of Children**

Criteria	n	%
Primipara	10	33,3
Multipara	20	66,7
<b>Total</b>	<b>30</b>	<b>100</b>

**Tabel 4.4 Respondent Characteristics Based on Occupation**

Criteria	n	%
Housewives	29	96,7
Honorary Worker	1	3,3
<b>Total</b>	<b>30</b>	<b>100</b>

Among 30 respondents, 29 people commonly work as Housewives (96.7%0 and 1 respondents work as Honorary Worker.

**Tabel 4.5 Respondent General Behavior of Parturient Mothers on The Method of Maintaining Umbilical Cord Health**

Criteria	n	%
In Accordance with the Standard	7	23,3
Not in Accordance with the Standard	23	76,7
<b>Total</b>	<b>30</b>	<b>100</b>

**Tabel 4. Respondent Behavior of Parturient Mothers on The Materials in Maintaining Umbilical Cord Health**

Criteria	n	%
Appropriate	9	30
Inappropriate	21	70
<b>Total</b>	<b>30</b>	<b>100</b>

**Tabel 4.7 Respondent Behavior of Parturient Mothers on The Impacts of Not Uterile Umbilical Cord Health Maintenance**

Kriteria	Frekuensi	Percentage
Tidak berisiko	14	46,7
Infeksi Resiko	16	53,3
<b>Total</b>	<b>30</b>	<b>100</b>

Table 4.7, showed 30 respondents filling up the questionnaires, 16 people (53.3 %) confirm the impact of unsterile umbilical cord maintenance on the risk of infection, meanwhile 14 people or 46.7% of them are not risked of infection.

Based on table 4.5, the respondents with the inappropriate behavior of umbilical cord

maintenance can be identified in the question no. 8, in which among 23 respondents (76.7%), 19 people (82.6%) answer with "use diaper to cover the umbilical cord". This is in accordance with the theory of Riksani (2012), which states that one method of sterile umbilical cord maintenance is by folding the diaper below the umbilical cord that it does not cover the umbilical cord and that the umbilical cord would rather not be closely covered since it will make the umbilical cord damp, which increases the risk of the emergence of bacteria and germs.

This finding is supported by the data of the educational level of the respondents answering the questions on the inappropriate umbilical cord maintenance. Among 23 respondents, 15 people (50%) graduated from Primary School. This low education makes the respondents find difficulty in understanding and receive well the information from the health personnel.

Meanwhile, the respondents with appropriate umbilical cord maintenance can be seen in respondents' answer from 7 people (23,3%) and 7 people (100%). The appropriate umbilical cord maintenance is by washing hand first before touching the umbilical cord when bathing the babies and trying not to pull the umbilical cord, loosely wrapping the umbilical cord with sterile bandage and letting the umbilical cord open (wrapped with bandage) and not using antiseptics or alcohol.

Based on the education level, among 21 respondents (70%), 12 of them (57%) are elementary school graduate. Therefore, it is no wonder that they do not really understand about the material that should be used to take care of umbilical cord.

Meanwhile there are 9 respondents (30%) related to the standard material to take care of umbilical cord. All of them answered that they did not use non-standard material such as Betadine, alcohol, Viva powder, turmeric and traditional oil in taking care of umbilical

cord. This fact is related to the theory of Riksani, 2012. Principally, the material used to take care of umbilical cord is dried and clean gauze, to avoid infection in umbilical cord caused by the material used. Non-sterile care of umbilical cord can cause the babies get illness such as neonatal tetanus and omphalitis.

## CONCLUSION

1. Many respondents use non-standard way take care of umbilical cord: 23 respondents (76.7%).
2. Many respondents use non-standard material to take care of umbilical cord: 21 respondents (70%).
3. Some postpartum mothers use non-sterile care to baby's umbilical cord that increases risk of umbilical cord infection: 16 respondents (53.3%).

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# DETERMINANT BEHAVIOUR OF CHILDBEARING AGE WOMAN IN EARLY DETECTION OF CERVIX CANCER WITH IVA METHOD AT THE AREA OF TANJUNGPURA PUBLIC HEALTH CENTER KARAWANG REGENCY

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## ABSTRACT

Cancer is one of the leading causes of death worldwide. In 2012, about 8.2 million deaths caused by cancer. Cervical cancer and breast cancer is a disease with the highest prevalence in Indonesia in 2013, which amounted to 0.8 % of cervical cancer and breast cancer by 0.5 % (MOH, 2012). The purpose of this study was to examine and explain the behavior of WUS in the early detection of cervical cancer with IVA method in the area of the district health center Kawarang Tanjungpura 2014 Design This study uses a quantitative approach, with a cross-sectional study design. The number of samples of 143 women of childbearing age. Sampling technique with accidental sampling. Analysis of research data using univariate, bivariate (*chi-square*) and multivariate (*logistic regression*). The results showed that the largest proportion of respondents was 61.5% WUS ever do a test IVA. Variables related to the behavior of women of childbearing age for early detection of cervical cancer, namely knowledge, distance to services, support the husband, the support and the support of a cadre of health workers with a *p value* <0.05. As for the dominant variable is the support of her husband, with 52,594 OR WUS means that the husband has an opportunity to get support early detection of cervical cancer by 52,594 times higher than WUS husband who does not get support after the controlled variable knowledge. In order to further improve the Health Center's health education activities about early detection methods IVA cervical cancer by health workers to WUS and husband through counseling in the event recitation of men and other activities, or invited to join IVA inspection.

**Keywords:** Behavior, WUS, Early detection of cervical cancer

## INTRODUCTION

WHO in 2015 said that cancer was the second death causing in the world after cardiovascular (Ministry of Health, 2006). Mean while, in Indonesia according to SKRT in 2001, cancer was in the 5th position after cardiovascular disease, infection, breathing and digesting (Ministry of Health, 2007).

The cancer type which often attacks women is breast cancer and cervix cancer. WHO research in 2005 showed that there were more than 500.000 new cases and 260.000 death cases caused by cervix cancer, 90% occurred in developing country. In Indonesia cervix cancer is malignant which is found in many women and it is the leading cause of women death in the last three decades. It is estimated, the incident of

this disease is 100 per 100.000 people (Nuranna, Laila *et all*, 2008).

According to IARC data in 2005, in every minute in the world, there is one new case of cervix cancer and every two minutes, there is 1 death case, meanwhile, in Indonesia, everyday, there are 40 new cases and there are 20 death cases in everyday (Nurranna, Laila *et all*, 2008).

Nowdays, it is known some skringing methods and early detection of cervix cancer, which is called pap smear, IVA, magnification IVA with gineskopi, kolposkopi, servikografi and HPV test (Wilgin, Christin *et all*, 2011 in Yuliwati, 2012). But the suitable method with condition in developing country

including Indonesia is IVA method because the technique is simple and easy, low cost and high level of sensitivity, fast and quite accurate to find the abnormality in cell (Dysplasra) abnormality level or before precancer.

In Karawang regency, cervix cancer case found in 2011 was 0,3% from whole childbearing age women. The decreasing program of cervix cancer in Karawang Regency has been running since 2007. This program has reduced the case by 21,6% from whole childbearing age women which the target is 80%. Based on the report from the visiting service IVA at public health center of Tanjungpura at the end of 2013, from 5.178 targets checked by IVA, there are 330 women (15,7%) with IVA (+) 6 cases (profile of Tanjungpura public health center 2013).

Based the background above, the writer is interested to do research about “The Behaviour of Childbearing Age Women in Early Detection of Cervix Cancer with IVA Method at the Area of Tanjungpura Public Health Center Karawang Regency in 2014”.

## RESEARCH METHODS

The type of research is analistical descriptive with cross sectional approaching. The population of this research is childbearing age women who are married aged from 30 to 50 years living at the area of Tanjungpura Public Health Center Karawang Regency. The number of women are 5178 women.

It is said that the number of samples gained in this research are 129,86 or rounded to 130 respondents, and for handling dropout respondents, 10% is increased. So the number of samples in this research are 143 childbearing age women.

The technique of taking samples is sampling accidental (Notoatmodjo

2010). This research uses primer data. The instrument or tool used for this research is questioner. The data process including editing, coding, tabulating. The data analyses done are Univariat, Bivariat and Multivariat.

## RESULT AND DISCUSSION

**Table 1 WUS behaviour related IVA test experience**

WUS behaviour	n	%
Ever	88	61,5
Never	55	38,5
<b>Total</b>	<b>143</b>	<b>100</b>

Based on the table 1 from 143 respondents. 61,5% WUS behaviour has done IVA test and 38,5% WUS behaviour has never done IVA Test. Table 1 shows that from 143 respondents 61,5% WUS behaviour has checked IVA test, meanwhile WUS who has never done IVA test is 38,5%. Based on the research result gained that 61,5% WUS behaviour has done IVA test, and 38,5% WUS behaviour has never done IVA test. This result is still low if it is compared to the target of health government office of Karawang Regency which the target is 80%.

But the result of this research is higher compared to the achievement of Tanjungpura Public Health in 2013 which is 15,7%. Table 2 shows that WUS. With higher knowledge level has done early detection of cervix cancer by 83,8%, meanwhile WUS with low knowledge there is only 33,3% who has done early detection of cervix cancer.

**Table 2 The relationship WUS Knowledge and screening behaviour**

Know-ledge	WUS Behaviour		P value	OR (95 % CI)
	Ever	Never		
High	67 (83,8%)	13	0,000	10,308 (4,669-22,757)
Low	21 (33,3%)	42 (66,7%)		



Total	88 (61,5%)	55 (38,5%)
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The result of statistical test gained that P value < 0,05, means that there is significant difference from WUS with high knowledge and WUS with low knowledge. The further analysis result is gained that OR = 10,308 means that WUS with high knowledge has a chance 10,308 higher to do early detection compared to low knowledge WUS.

That result is supported by Artiningsih research (2011) which said that there is important relationship between childbearing women knowledge and behaviourism of IVA test check with significant value or P value =0,000

**Table 3 The relationship between distance of service and screening behaviour**

Service distance	WUS Behaviour		p value	OR (95 % CI)
	Ever	Never		
Close	86 (64,7%)	47 (35,3%)	0,014	7,319 (1,493-35,882)
Far	2 (20,0%)	8 (80,0%)		
Total	88 (61,5%)	5 (38,5%)		

Table 3 shows that WUS with near service has done more early detection of cervix cancer by 64,7%, meanwhile WUS with far service has only 20% done early detection of cervix cancer. The result of statistical test is gained P value < 0,005. It means that there is significant difference between WUS with near service and far service. Further analysis gained OR = 7,319 it means that WUS with near distance has more chance to do early detection 7,319 higher compared to WUS with far distance.

According to Green (1980) in Notoatmodjo (2005), easy access and usable service of health have relationship with some determination

factors which one of them is the distance of shelter to the health service facility.

The result of this research according to Rahmawati (2010) shows that there is useful relationship between the easy access or reachable distance to the place of checking IVA service (Public Health Center). The distance time needed by WUS to reach Public Health Center/service place is connected to time needed by WUS to reach health service facility

**Table 4 The relationship between the support of husband to WUS screening behaviour**

Husband Support	WUS behaviour		p value	OR (95 % CI)
	Ever	Never		
Support	84 (80,8%)	20 (19,2%)	0,000	36,750 (11,711-115,328)
No Support	4 (10,3%)	35 (89,7%)		
Total	88 (61,5%)	55 (38,5%)		

Table 4 the relationship between husband support with WUS behaviour shows that WUS with husband support has done more early detection of cervix cancer by 80,8%, meanwhile WUS without husband support has only 10,3% who has done early detection of cervix cancer. The result of statistical test gained P value < 0,05, means that there is significant difference between WUS with husband support and WUS without husband support. The further analysis result gained OR = 36,750 means that WUS with husband support has a chance to do early detection 36,750 higher compared to WUS without husband support.

The function of husband role certainly is influenced by demanding goal and need in husband 's family as a leader in family who must be ready and responsible. Motivation and support are some efforts to provide certain condition so that individual wants to take actions to reach the goals. One of the influencing motivation is activity

(program) which appears because of the support in one self for others based on the existence of routine activity (program) with certain goal (Firzanah, 2003)

Table 5 Shows that WUS with support of health personnels has done more early detection of cervix cancer by 70,1%, while WUS without support of health personnels only 48,2% who does early detection of cervix cancer. The result of statistic examination is p value < 0,05, meaning that there is a significant difference between WUS supported by health personnels. The result of further analysis is OR=2,520 means WUS supported by health personnels has opportunity to do early detection 2,520 times higher than WUS without health personnels support.

Health officer as one of the influencing people and considered important by community has significant role in doing health behaviour on community (Rohmawati, 2010).

The result of this research is in accordance with research of Murtini (2012) that paramedic and medic behaviour have significant correlation with scope of IVA. The more active behaviour of paramedic and medic, the higher scope of IVA (Wawan and Dewi, 2010).

It is suitable with Green Theory (1980) in Notoatmodjo (2005), that to do health behaviour/action of someone needs model of society figure. It is expected that health cadres give a good model to society namely by doing IVA check firstly, so that society will follow it later on.

Result of this research is suitable with Yuliawati's research (2012) that says there is a significant correlation between cadre support with IVA behaviour and value OR 1,867 that means WUS supported well by cadre has chance

1,867 bigger to IVA check compared to less support.

From the result of analysis shows there are two variables which have P value >0,05, those are service distance and health personnels, so that further modeling of health personnels support variable which has the largest p value is issued from the model.

**Table 4: Last Model**

Variabel	p value	O R	95% CI
Knowledge	0.000	15,183	4,765 – 48,378
Husband Support	0.000	52,594	12,970 – 213,277

Final result of multivariat is found that variable which has dominant relationship with WUS (Childbearing Age Woman) behaviour of early cervix cancer detection with IVA method is husband support with OR by 52,594 it means WUS supported by husband has chance to carry out early detection of cervix cancer by 52,594 times higher than WUS who is not supported by husband support after being controlled by knowledge variable.

Table 7 Result of multivariat analysis is found that the dominant variable related to WUS early detection of cervix cancer with IVA method is husband support to give explanation and support to the wife to implement healthy behaviour. Success and continuation of healthy behaviour that needs support of family badly. (Supartiningsih, 2003).

Result of this research is in accordance with Wahyuni's (2013) which states that factor that mostly influence behaviour of early cervix cancer detection is husband's support with P value = 0,010 and OR = 3,050. It can be concluded that husband's support 3,05 times influence behaviour in early cervix cancer detection after it is controlled by knowledge variable,

attitude and friend's support. Husband's support becomes determinant factor because spouse's support will give strength towards motivation to do early detection of cervix cancer.

## CONCLUSION

Based on the result and analysis in the previous chapters, so the researcher concludes: Variable which is dominant related to behaviour of childbearing age woman on early detection of cervix cancer with IVA method is husband's support, with OR 52,594 means childbearing age woman who gets husband's support has a chance to do early detection of cervix cancer for 52,594 times higher than childbearing age who doesn't get husband's support after it is controlled by knowledge variable.

Big respondent proportion is 61,5% childbearing age woman who has done examination of IVA test, the result is still low that the target in Karawang Regency is 80 %, but the result is higher than the result of Tanjungpura PHC in 2013, it was only 15,7%.

Variables which related to IVA behaviour are knowledge, health service distance, husband's support, health personnel support, and health cadre support with P value < 0,05.

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# THE MAKING OF A CLINICAL LEARNING/TEACHING AID FOR CONTRACEPTIVE IMPLANT INSTALLMENT: A LOW-COST MODEL

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## ABSTRACT

I made a product for clinical learning of contraceptive implant installment through a series of research and development (R&D) processes that included research, development, testing, and validation. I invited four senior midwives in Pekanbaru, Riau, to assess my product as well as to validate it so that it could be used properly as a teaching/learning aid for the clinical learning of contraceptive implant installment. I conducted this research from 3 May to 9 December 2014. From all process of research and development, my product was made. I am planning to conduct the next research involving enough number of samples in the near future.

**Keywords:** low cost, contraceptive implant, R&D

## INTRODUCTION

Simulation-based learning in clinical education is very important. Simulation can provide safe and effective learning environments for students.<sup>1</sup> In this context, simulated learning environments provide students with greater and safer opportunities for gaining clinical skills and experience.<sup>2</sup> Simulation in the clinical learning must be able to imitate or represent the real situation or fidelity. In fact, healthcare simulations must have these following goals that deal with education, assessment, research and health system integration in facilitating patient safety.<sup>3</sup>

Measurement of performance outcomes from the simulation-based clinical skill training is part of the vital role and process in educational evaluation. The positive outcomes on the impacts of simulation-based tools for supporting various functions in clinical skill training have been studied.<sup>4</sup> The use of clinical learning simulators can avoid

discomfort, such as anxiety and fear, to both the learners and the patients compared to when learning is done to the real patients.<sup>5</sup>

One of clinical teaching and learning aids is mannequins. However, the simulators required for the safe clinical learning are

those with high-fidelity that can resemble the real situation and condition of the clinical procedure being learned. Thus, increasing attention has been paid to the development of high-fidelity clinical simulation.<sup>6</sup> Real impression as if 'brought to life' must be present in the mannequins or simulator, aiming that the clinical learners can figure out the real setting of the clinical procedure. Therefore, learners can learn in an environment as if they performed the procedure to the real patient.

One of clinical learning courses given to midwifery students is the procedure to install contraceptive implant. Contraceptive implants are small rods about the size of a matchstick which are put under the skin in the inside of arm. Women can feel them under the skin. They slowly release a hormone called progesterone. So far, the learning of contraceptive implant installment have not been done with effective and efficient learning/teaching aid. This current study was conducted to illustrate the making of a simulator of contraceptive implant with low-cost materials to make the product.

## RESEARCH METHODS

I performed a Research and Development (R&D)<sup>7</sup> in making a simulator of contraceptive implant installment. In the making, I put some consideration of efficiency, among others, 1) cheap



production cost, 2) affordable materials, and 3) fidelity for realistic model. I underwent three stages in the making of the model, namely:

- 1) *research* that included observation and discovery of idea,
- 2) *development* that included model design and development,
- 3) *testing* that included trial and evaluation, and
- 4) *validation* that included improvement based on the evaluation.

My study was conducted from 3 May to 9 December 2014 in Pekanbaru, Riau. My respondents consisted of four senior midwives in Pekanbaru, Riau. They helped me assess and validate my product so that it could be used in the learning/teaching process of contraceptive implant installment.

#### **THE COURSE OF THE MAKING OF THE MODEL**

##### **A. Stage One: Research on the model going to be made**

###### **a) Observation**

This stage involved two steps, i.e., observation and discovery of idea. I had observed that there was no cheap and realistic teaching aid for contraceptive implant installment learning.

###### **b) Discovery of idea**

From the observation, I got an idea to make a realistic model of realistic teaching aid for contraceptive implant installment learning. Next, I made an abstract scheme on the model I wanted to create.

##### **B. Stage Two: Model development**

###### **a) Model design**

From the abstract scheme, I began to design and make a simple sketch from paper. This sketch allowed me to determine the existing shortcomings, so that improvements could be made. The first sketch-based modeling resulted in a product that would then go into the development stage.

###### **b) Product development**

I prepared all the materials needed and sewed them by hand manually. It did not take a long time to make the design into a fixed one.

##### **C. Testing**

###### **a) Trial**

I demonstrated my product in front of four senior midwives to find out whether the product could be used as a teaching tool of contraceptive implant installment learning.

###### **b) Evaluation**

After the demonstration of the product, the senior midwives provided an evaluation in the form of comments, as shown below:

*“Hmmm..... It is good; however, please pick the color that resembles our skin”* (M.1)

*“Yes. The color that is like our skin.”* (M.2)

*“It is very good, indeed. But yes, the color”.* (M.3)

*“It is easy to use and learners will not be afraid if they use it because it is not easily torn”.* (M.4)

From the results of the evaluation, I made improvements as necessary to get a better product. Then, I showed the results of these improvements to the senior midwives to get the product validation.

##### **D. Validation**

I showed the product that I had revised to the senior midwives. They commented on the latest product that had been revised based on their evaluation. All of them agreed that my product was indeed perfect for the clinical learning of contraceptive implant installment:

*“I believe this is a very good product. It is very realistic and I can use it very easily. See, because it is from cloth, it is not easily broken.”* (M.1)

*“Yes, this is the product I imagine and this is now it that I can use. You make it so simple but it is right to the target”.* (M.2)

*“We don’t need expensive model when we can make it cheap. And you made it it is very simple of course and learners can easily use*

it. Yes, you have succeeded on making this teaching aid.” (M.3)

“What I can say more. This is already a good product. Simple, efficient..... yes. A good product, indeed.” (M.4)

## RESULTS AND DISCUSSION

From a series of stages in the R & D that had been implemented to create a teaching aid of contraceptive implant installment, the final product is shown in Figure 1. The product that had been validated by the senior midwives was ready to be tested on a larger scale, to determine its benefits, in terms of its effectiveness and efficiency.



FIGURE 1. FINAL PRODUCT

## DISCUSSION

My product is a low-cost product but with a high-quality outcome. Therefore, my product can be categorized into an efficient product since it gives many benefits but only spends little cost. As economists propose that a clinical model produced in terms of efficiency must provide the maximum outcomes as it can function maximally and must avoid inefficiency such as the benefits of the product that is less than the cost spent.<sup>8</sup>

Since it is made from fabric/cloth, my product can be used repeatedly until it is torn out. Therefore, despite its very little cost in the production, this product can give many advantages when being used as a teaching/training tool for midwifery/medical students or midwives/general physicians. This product can be said to be effective and efficient as it reduces the production cost but improves learning outcomes.

## CONCLUSION

Despite its low-cost, my product can give benefits when being used as a

teaching/training aid for the clinical learning of contraceptive implant installment. This product has opportunity to be developed further with materials that resemble human skin so that repair can be felt as if it is done to the real human skin.

This product needs further research with enough number of samples. Therefore, in the near future, I will conduct the next research concerning the effectiveness of this product when using samples of both students in classes or practicing midwives and general practitioners in training.

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# The Effect of a Mentoring Mothers Education on Cadres Knowledge of Oxytocin Massage and Exclusive Breastfeeding: an Intervention Study among Cadres in Sumowono PHC Area, Semarang District, Central Java, Indonesia

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## ABSTRACT

Breastmilk in early life was an effective intervention in saving lives of newborns and could prevent deaths of children under five years old. Rate of breastfeed in world was lack. There were many breastmilk of mothers not sufficient. One effort to improve exclusive breastfeeding is oxytocin massage treatment and mentoring nursing mothers by cadres. Before doing the mentoring, cadres need to be trained on oxytocin massage treatment and exclusive breastfeeding.

Aim: This study conducted to evaluate the effect of a mentoring nursing mothers, education on cadres knowledge regarding oxytocin massage on breastmilk production and exclusive breastfeeding.

Study Design: This study utilized the simple pre-post test design. The intervention was short education for cadres about oxytocin massage and exclusive breastfeeding.

Samples: Twenty seven cadres participated in the study using convenience sampling and they were recruited from Sumowono PHC in Semarang District.

Place and Duration of Study: PHC Sumowono Region, Semarang District, between January to August 2016.

Results: It was found that 56,7 % of the participants were high school graduate and the average age was 50 y.o. The most important findings of the study were the following: a) cadres' knowledge was significantly improved after the course (paired-t test, exact  $p < .05$ ), increase by 3.4 points.; b) low level of knowledge regarding oxytocin massage and exclusive breastfeeding in the pre-test phas.

Conclusion: This study proved that short mentoring nursing mothers course could improve cadres' knowledge regarding oxytocin massage and exclusive breast feeding. However, the sustainability of the change needs to be further investigated. The result can be used as the basic policy of lactation management and exclusive breastfeeding promotion education programs in the community.

**Keywords:** mentoring, caders, oxytocin massage, breastfeed, breastmilk

## INTRODUCTION

Breastmilk is a unique product given to human being by nature to fulfill all requirements of the offspring until it is mature enough to take adultfood. Its uniqueness lies inability of mother to produce milk which will vary in quantity, quality, and consistency depending on age of baby, maturity and timing of feed. It has not been possible to achieve this with any other type of milk, even with state-of-the-art modifications using most advanced technology.

Exclusive breastfeeding is one of the efforts to reduce infant mortality rate, less milk production becoming one of factors mother did not breastfeed exclusively (Shankar, 2015).

Breastmilk not only provides easily digestible and specifically needed amounts of nutrients, water, minerals, and vitamins but also several other benefits to both mother and baby. There are some benefits for baby such as (1) Reduces infections through "priming" of baby's immune system, specifically diarrhoea due to E coli, rotavirus, Shigella, campylobacter etc, reduces

incidence of respiratory tract infection, reduces late onset sepsis in low birth weight (LBW) babies, (2) Effect on better neurodevelopment and IQ, (3) Reduces risk of sudden infant death syndrome (4) Provides analgesia for baby during painful procedures, (5) Long-term diseases like type I diabetes mellitus, hypercholesterolaemia, hypertension, obesity and asthma have been found to be less in babies who were exclusively breastfed during first 6 months (Dieterich, Felice, O'Sullivan, & Rasmussen, 2013; F. R. Hauck, Thompson, Tanabe, Moon, & Vennemann, 2011; Horta, de Mola, & Victora, 2015; Ip et al., 2007; Joan L. Luby et al., 2016; Johnston, Landers, Noble, Szucs, & Viehmann, 2012; Stuebe, 2009; Yan, Liu, Zhu, Huang, & Wang, 2014).

On the other side, benefits for mother (1) Reduces postpartum bleeding, (2) Reduces menstrual blood loss, (3) Helps with child spacing attributable to lactational amenorrhea, (4) Reduces obesity, (5) Reduces risk of breast cancer and ovarian cancer, (6) Promotes bonding between mother and baby, (7) Reduces stress response, inflammation, and postpartum depression, (8) Convenience of feeding the baby on demand irrespective of time or place, (9) Economical (Sukhee Ahn et al., 2015).

Since 2001, WHO guidelines have stated that babies should be exclusively breastfed until they are six months old – something most mothers and babies are physically able to do. In the crucial first few months, breastfed children are six times more likely to survive than children who are not breastfed. Yet globally only 36% of infants younger than six months are exclusively breastfed, and in developing countries poor feeding practices – including lack of exclusive breastfeeding until six months and failure to initiate breastfeeding in first hour – contribute to the deaths of 800,000 children under

five years of age each year (Shetty, Priya, 2014).

Coverage of exclusive breastfeeding was targeted by Ministry of Health RI to reach 80%. The target is very difficult to achieve. Studies showed that exclusive breastfeeding rate in Indonesia are very low. The Indonesian Demographic and Health Survey had collected data on infant feeding practice for each of the children born in five years preceding the survey. A great majority of children ever had breastfeeding (96-97%), and more than half started within first day. The median duration of breastfeeding was estimated at 23.9 months. Among infants under 4 months, 53% were exclusively breastfed, and the median duration of exclusive breastfeeding was 1.7 months (Fikawati & Syafiq, 2009).

Based on District Health Office Semarang, exclusive breastfeeding showed in 2011 is 45,09 % which is there are increased number 7,83 % than in 2010 which is 37,26 %, but in fact six months year old babies are not given exclusively breastfed (Astika, 2012). On 2012 there are increasing number 51,7 %, still yet far than governments hope which is 80% babies get exclusive breastfeeding. One of the district that are low exclusively breastfed is Semarang District, which is 37,7% (MOH, 2014).

Oxytocin massage one of treatment help postpartum mothers to improve breastmilk production with early intervention by stimulating oxytocin hormone. Massage therapy of spine in costa 5-6 to scapula would accelerate work on parasympathetic nervous system stimulates posterior pituitary to secrete oxytocin.

Oxytocin massage as lactation management is one thing that needed to support successful breastfeeding so baby can be fed properly. The goal of management is to increase the use of exclusive breastfeeding until the baby is 6 months old, with affection facilities.



Lactation management begins during pregnancy (antenatal), immediately after birth (prenatal) and the postpartum period (post-natal).

Breastmilk in early life was an effective intervention in saving lives of newborns and could prevent 13-15% of 9 million deaths of children under five years old. Rate of breastfed in world was lack, between 20-40%. There were many breastmilk of postpartum mothers not sufficient at one week postpartum and breastfeed blockage incident that required mothers breastcare each month. One effort to improve breastmilk production with early intervention in postpartum mothers by stimulating oxytocin hormone. Efforts to facilitate breastfeeding can be done by massage oxytocin (Resty, 2014). Multiprofessional team must support and encourage exclusive breast feeding in almost all patients, and motivate mother to keep breast feeding for at least 6 months (F. Teixeira et al., 2015). In Indonesia, research last year by Aristiati Susiloretni, from the Semarang Health Polytechnic, and colleagues suggests that if the government were to invest in a robust implementation plan of its new legislation, it might see a radical shift in breastfeeding rates. They found that a holistic approach – one that involved voluntary health workers, traditional birth attendants, Muslim scholars and heads of villages and used advocacy, training, media pro-motion and home visits – increased breastfeeding enormously (Shetty, Priya, 2014).

During this past few years, exclusive breastfeeding failure because of lack knowledge of mothers, mothers education, also her awareness the importance of giving breastfeeding; however it can be intervened by giving cadres mentoring nursing mothers about oxytocin massage and exclusive breastfeeding. Mentoring that should be done need training about cadres mentoring which contain counseling on giving oxytocin massage and exclusive

breastfeeding. Breastfeeding support group can involve cadre by increasing knowledge, skills and training (Jumiyati, 2014). In most of the maternity care hospitals and Pubic Health Centre's, a lactation management centre exists to help mothers with breast feeding problems and to promote, protect and support breast feeding (Jumiyati, 2014). This is proved that the mentoring nursing mothers by cadres is needed. Before doing the mentoring, cadres need to be trained on exclusive breastfeeding and lactation management. The aim in this study conducted to evaluate the effect of a mentoring nursing mothers education on cadres knowledge

regarding oxytocin massage and exclusive breastfeeding in Sumowono PHC Semarang District, East Jawa, Indonesia.

## RESEARCH METHODS

This research is quation experiment with non randomized pre-test – post test design one group only. Means that pre-test is before any treatment to know cadres knowledge about oxytocin massage and exclusive breastfeeding. Then, there are treatments for cadres which is mentoring. Post test to know cadres knowledge about oxytocin massage and exclusive breastfeeding after the mentoring has conducted.

It was conducted in Sumowono Public Health Centre, with the criterias (1) Not yet conducted mentoring by cadres or any health profession in speciality mother and her baby mentoring about oxytocin massage and exclusive breastfeeding, (2) Health counselor breastfed is newly recruited in public health center and there are no support groups for breastfeeding. Twenty seven cadres participated in the study using convenience sampling and purposive sampling as the technique with inclusion criteria such as (1) Cadres from Sumowono PHC in Semarang District, (2) Has been educated elementary

school in minimum, (3) Included in two chosen cadres that represent posyandu.

Closed-questionnaire needs to measure cadres knowledge related with oxytocin massage and exclusive breastfeeding which is filled with his own cadres and book about how to trained cadres in mentoring related with exclusive breastfeeding that are used as a list-to-do when questionnaire made.

Paired t-tests were used to compare data before and after mentoring trained. The measurement are differences of knowledge before and after mentoring on each groups are normal distribution. On how hypothesis concluded thus are used with comparing p value (probability) with  $\alpha$  value on confidence interval 95% ( $\alpha = 0,05$ ). Zero hypothesis ( $H_0$ ) denied or alternative hypothesis ( $H_a$ ) accepted if p value smaller than  $\alpha$  value ( $p < 0,05$ ).

## RESULTS AND DISCUSSION

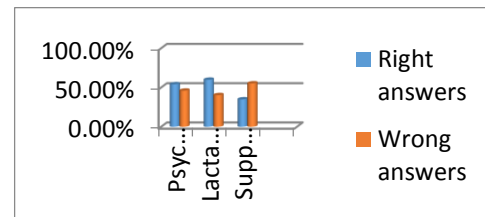
Mean total score cadres knowledge before mentoring nursing mothers education is 9,96 with 5,488 standard deviations. Minimal score is 0 and maximal score is 18, yet still all answers are wrong and there is no cadres has answered all correct. Total distribution score before can be seen in tables 2. Some of cadres with right answer or less or equal 50 % of question are 55,6 % or more than 50 % cadres has not yet well-known about oxytocin massage and exclusive breastfeeding.

### Cadres knowledge after mentoring nursing mothers education

Mean total score cadres knowledge after mentoring nursing mother education is 13,3 with 3,94 standard deviation. Minimal score is 0 and maximal score is 18, yet still all answers are wrong and there is no cadres has answered all correct.

Total distribution score after mentoring nursing mother education can be seen in tables 4. Some of cadres with right answer or less or equal 50 % of question are 70,8% or more than 50 % cadres has well-known about oxytocin massage and exclusive breastfeeding.

### Diagram 1 of cadres knowledge before mentoring nursing mothers education



**Table 1. Distribution score of cadres (before mentoring)**

Variables	Number		Percentage	
Psychology*	R	W**	R**	W**
Confidence	21	6	77.8	22.2
Anxiety	3	24	11.1	88.9
Hurt	4	23	14.8	85.2
Baby loving	23	4	85.2	14.8
Husband support	22	5	81.5	18.5
<b>Oxytocin massage*</b>				
Increased breastfeeding production	20	7	74.1	25.9
Right position of breastfeeding	12	15	44.4	55.6
Prevent scuffed nipple	18	9	66.7	33.3
Duration giving breastfeeding	21	6	77.8	22.2
Definition of bonding	14	13	51.9	48.1
Right attachment	14	13	51.9	48.1
Successful breastfeeding	14	13	51.9	48.1
<b>Knowledge that support breastfeeding*</b>				
Burping baby	7	20	25.9	74.1
Breast massage techniques	12	15	44.4	55.6
Breastfed storage	13	14	58.1	51.9
Breastfed durability in the refrigerator	9	18	33.3	66.7
Breastfed durability in the separate freezer	11	16	40.7	59.3
Breastfed durability in the freezer	7	20	25.9	74.1
Breastfed durability in the room temperature	11	16	40.7	59.3
Type of milker	12	15	44.4	55.6

\*Totals 27 cadres

\*\* R = Number of cadres who are right  
 \*\* W = Number of cadres who are wrong

**Tables 2: total score cadres knowledge before mentoring nursing mothers education**

Cadres knowledge about oxytocin massage and exclusive breastfeeding	n	%
Has right answers less than or equal 50 %	15	55,6
Has right answers more than 50 %	12	44,4
Total	27	100

**Table 3: Distribution score of cadres (After mentoring)**

Variables	Number	Percentage
<b>Psychology*</b>	<b>R**</b>	<b>W**</b>
Confidence	26	1
Anxiety	5	22
Hurt	5	22
Baby loving	25	2
Husband support	26	1
<b>Oxytocin massage*</b>		
Increased breastfeeding production	24	3
Right position of breastfeeding	14	13
Prevent scuffed nipple	24	3
Duration giving breastfeeding	26	3
Definition of bonding	22	5
Right attachment	24	3
Successfull breastfeeding	21	6
<b>Knowledge that support breastfeedin</b>		
Burping baby	17	10
Breast massage techniques	15	12
Breastfed storage	18	9
Breastfed durability in the refrigerator	6	21
Breastfed durability in the separate freezer	20	7
Breastfed durability in the freezer	9	18
Breastfed durability in the room temperature	15	12
Type of milker	21	6

\*Totals 27 cadres

\*\* R = Number of cadres who are right

\*\* W = Number of cadres who are wrong

**Tables 4. Total score of knowledge after mentoring**

Cadres knowledge about oxytocin massage and exclusive breastfeeding	n	%
Has right answers less than or equal 50 %	6	22,2
Has right answers more than 50 %	21	70,8
Total	27	100

## DISCUSSION

From normality test showed that two variables has normal distribution (pre  $p=0,851$  and post  $p=0,694$ ), so it can be parametric test. From difference paired t test showed that there is significance differences beetwen cadres knowledge before and after mentoring ( $p= 0,08$ ). The differences especially on knowledge about mothers confidence.

The cadres are the first to help somebody, to get to the person first so they need training. In the future, it would be good to go to every posyandu and for it to be like a Public Health Center. (Child Fund, 2015).

Before treatment midwife give health education about lactation, exclusive breastfeeding, mother's confidence related to coming out breastmilk at least, baby loving, husband support, how to increase breastmilk, how to prevent from scuffed nipple, duration of exclusive breastfeeding, bonding definition, attachment breastfeeding, success effort of breastfeeding, oxytocin massage techniques, breastmilk storage, breastfed durability in the refrigerator, breastfed durability in separate freezer and not separated freezer, room temperature and type of milker.

Steps of oxytocin massage, open clothes, wear a towel, pour hands with baby oil, massage of spine in costa 5-6 to scapula 2-3 minutes, wipe mother's back with

towel (warm water-cold water alternately). Before mentoring most of cadres knowledge is well about mother's confidence related to come out breastmilk at least, baby loving, husband support, how to increased breastmilk, how to prevent from scuffed nipple, duration of exclusive breastfeeding, bonding definition, attachment breastfeeding and success effort of breastfeeding. Before mentoring most of cadres has less of knowledge about mother's anxiety, mother's hurt influenced to breastmilk, how to breastfed in the right ways, how to burping baby, breast massage techniques, breastmilk storage, breastfed durability in the refrigerator, breastfed durability in separate freezer and not separated freezer, room temperature and type of milker.

After mentoring, most of cadres knowledge well about confidence related to come out breastmilk at least, baby loving, husband support, how to increased breastmilk, how to prevent from scuffed nipple, duration of exclusive breastfeeding, bonding definition, attachment breastfeeding, how to oxytocin massage techniques, how to burping baby, breastmilk storage, success effort of breastfeeding breastfed durability in the refrigerator, breastfed durability in separate freezer and not separated freezer, room temperature and type of milker. After mentoring, most of cadres knowledge well about confidence related to come out breastmilk at least, how to prevent from scuffed nipple, breast massage techniques, breastfed durability in separate freezer and not separated freezer.

There is significance differences between total score cadres knowledge on oxytocin massage before and after mentoring nursing mother education ( $p < 0,05$ ) with enhancement as big as 3,4 point. There is also significance differences ( $p < 0,05$ ) on cadres knowledge about breastmilk such as : confidence related to come out breastmilk at least, bonding definition,

attachment breastfeeding, how to burping baby, breastmilk storage, success effort of breastfeeding, breastfed durability in separate freezer and not separated freezer and type of milker.

In general, there are few things that are less on cadres knowledge about breastmilk ( $>10\%$  cadres not yet known) such as : confidence related to come out breastmilk at least, how to increased breastmilk, how to oxytocin massage, how to prevent from scuffed nipple, how to breastfed in the right ways, bonding definition, attachment breastfeeding, how to burping baby, breastmilk storage, three things in successful breastfeeding, breastfed durability in the refrigerator, breastfed durability in separate freezer and not separated freezer, room temperature and type of milker.

## CONCLUSION

This study proved that short mentoring nursing mothers course could improve cadres' knowledge regarding oxytocin massage and exclusive breast feeding. However, the sustainability of the change needs to be further investigated. The result can be used as the basic policy of lactation management and exclusive breastfeeding promotion education programs in the community

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# WITH EXCLUSIVE BREASTFEEDING HISTORY AND NON-EXCLUSIVE IN KARANGMANGU VILLAGE KRAMATMULYA DISTRICT KUNINGAN REGENCY OF YEAR 2015

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## ABSTRACT

According to preliminary survey in the village Karangmangu Kecamatan Kramatmulya Kabupaten Kuningan of the total sample 10 baby of them 5 baby who are breastfeeding exclusive and 5 the baby non exclusive, the proportion of baby in accordance with the development of age more acquired at baby who are breastfeeding exclusive. The purpose of this study is to find the difference the development of baby aged 6-12 months between who are breastfeeding exclusive and non exclusive in the village Karangmangu Kecamatan Kramatmulya Kabupaten Kuningan.

This research is Deskriptif analytic crosssectional design. The sample in this research were 30 respondents taken by total sampling. The data were collected by interview and observation using KPSP.

The results shows that the average of development infants aged 6-12 months were not given exclusive breastfeeding is lower than the group of infants who were exclusive breastfed. The results of statistical test by using Chi Square gets value ( $P = 0.001$ )  $p$ -value  $< 0.05$  so that it can be concluded  $H_0$  is rejected and  $H_a$  is received it means that there is a connection with the development of exclusive breastfeeding of infants aged 6-12 months. Expected to be particularly the health workers will increase the quality of promoting the health as counseling and information about the importance of exclusive breastfeeding benefits for development infant

**Keywords : Infants Development, Exclusive breastfeeding**

## INTRODUCTION

Global Strategy for Infant and Young Child Feeding (2005) and the WHO / UNICEF (2009), recommends three important things to be done to achieve optimal growth are the first is to give breast milk to the child immediately within 30 minutes after the baby is born, the second is to give only the breast milk (ASI) or exclusive breastfeeding until the child is 6 months old, and the third is to continue breastfeeding until the child is 24 months old.

Recommendations WHO / UNICEF (2009) is in line with the Long Term Development Plan and the National Medium (RPJPMN) health, among others with increased nutritional surveillance, including monitoring of growth, increasing access and quality of health and nutrition services with a primary focus on 1,000 days of life (pregnant mothers until the children aged 2

years), toddlers, teenagers, and the future bride and groom. (Bapenas: 2014)

Exclusive breastfeeding is breastfeeding without other additional food and drink in infants aged zero until six months. WHO / UNICEF in Global Strategy on Infant and Young Child Feeding in 2005, recommends that the exclusive breastfeeding for infants from birth to age 6 months, as the fulfillment of nutritional Appropriate quality due can be increase growth and motor development Fine and rough on babies.

According to the Health Constitution Number 36 (2009: 128) Breastfeeding (ASI) is the rights of children in the health Constituion that is the rights infant to get exclusive breastfeeding for review describes in section 128 of paragraph 1 It reads that, every baby is entitled to get

exclusive breastfeeding from birth for 6 (six) months, unless differences Medical Indications. The section regulating the rights already contained in the Legislation of the Republic Indonesia No. 36 of 2009 about health, in the presence of the Constitution is clear who is born under normal conditions, it means it does not require special handling measures, are entitled to exclusive breastfeeding.

According to Asih (2010) explains that optimal child growth is one of the basis for the formation of human capital of quality starts since the baby in the womb with breastfeeding (ASI). The hope is that in Indonesia that exclusive breastfeeding to six months reaches 80%. However, in reality the implementation problems of exclusive breastfeeding is still alarming. The data from the Indonesian Demographic Health Survey (IDHS) in 2012 shows that mothers who give exclusive breastfeeding for the new infants is reaches 47%.

Meanwhile, according to data Susenas 2010 shows that only 33.6% of infants 0-6 months in Indonesia who are exclusive breastfeeding and 66.4% of infants are not exclusive breastfeeding while in West Java 31.7% of infants exclusive breastfeeding and 68.3% of infants not exclusive breastfeeding. Based on the profile Kuningan District Health Office (2012) note that the scope of exclusive breastfed in Kuningan regency of 40.2% of infants are exclusive breastfeeding and 59.8% of infants are not exclusive breastfeeding. According to Aprilia (2012) low achievement of exclusive breastfeeding is due to the assumption of mothers that babies who give breastfeeding is too early would be healthier for the body fatter.

Marya research results (2008) in Baltimore, Washington found that exclusive breastfeeding infants of normal weight and tend to be obese than non exclusive breastfeeding infants. Results of research Wanatabe (2006) in Vietnam the children who are exclusive breastfeeding better coarse and fine motor development than children who are not exclusive breastfeeding.

According to the initial survey in the Karangmangu village Kramatmulya District Kuningan Regency from the total of 10 sample infants among five infants who are exclusive breastfeeding and 5 infants non-exclusive, the proportion of infants with the development of age appropriate more obtained in infants exclusive breastfeeding that everything is normal there is no delay but in infants who get non exclusive breastfeeding obtained one infant with normal development and 4 infants experience delays.

## RESEARCH METHOD

This research was conducted in the Karangmangu village of the Kramatamulya district Kuningan regency on March June 2015. The research type used in this research is descriptive analytic cross sectional design. The samples in this research were using total sampling technique predetermined inclusion criteria and Exclusion, so that the sample in this research amount to 30 peoples.

Primary data obtained from respondents (mothers of infants aged 6-12 months have directly using a questionnaires. The questionnaires was used to obtain data on breastfeeding to infants whether given with exclusive or non-exclusive.

After the questionnaires is filled, then collected for later development assessment using KPSP sheet in accordance with the respondent's age. Secondary data were obtained from the health center reports, profiles Health Department and other literature studies. After the data are collected, then the subsequent data analysis. Data analysis was performed with the tabulation and hypothesis testing. Ho will be tested with a significance level of 0.05. The statistical test used was the Independent Sample T Test. The data that was processed and presented in a frequency distribution table along with an explanation.

## RESULT AND DISCUSSION

The results showed that the number of infants aged 6 -12 month of 30 infants who were exclusively breastfed as many as 15 (50%) and non exclusive breastfed as many as 15 (50%)

**Table 1 Breastfeeding and Infants Development aged 61-12 months**

**Table 2: The Frequency Distribution of Breastfeeding Infants Aged 6-12 Months**

Breastfeeding	Frequency	Percentage
Exclusive breastfeeding	15	50
Non-Exclusive breastfeeding	15	50
<b>TOTAL</b>	<b>30</b>	<b>100</b>

The results shows that the development in infants aged 6-12 months show that 30 infants who is progressing in accordance with 17 (56,7%), doubtful of 1 (3,3%) and that the irregularities 12 (40 %).

**Table 3: The Frequency Distribution Development In Infants Aged 6-12 Months**

The results shows that the majority of infants who were breastfed exclusively progressing in accordance many as 13 infants (43,3%), the development of the doubts one infant (3,3%) and that the irregularities 1 infant (3,3%). While the frequency of non breastfed exclusive infants progressing in accordance many as 4 infants (13,3%), no doubt the development and developmental disorders as many as 11 infants (36.7%).

The results shows that the average growth in the group of infants aged 6-12 months were not given exclusive breastfeeding is lower than the group of infants who were exclusive breastfeeding. Results of statistical test by using Chi Square got value (P = 0.001) p-value <0.05 so that it can be concluded H0 rejected and Ha received means that there is a connection with

the development of exclusive breastfeeding of infants aged 6-12 months.

## CONCLUSION

Based on the results of a study of 30 infants aged 6-12 months between exclusive breastfeeding and non exclusive in Karangmangu Village Kramatmulya District Kuningan Regency year 2015 " the average growth in the group of infants aged 6-12 months

Breast-feeding	The Development			P
	Corresponding	Doubting	Deviation	
Exclusive breast feeding	13	1	1	0,001
Non-Exclusive breast feeding	4	0	11	
<b>TOTAL</b>	<b>17</b>	<b>1</b>	<b>12</b>	

were not given exclusive breastfeeding is lower than the group of infants who were exclusive breastfeeding. Results of statistical test by using Chi Square got value (P = 0.001) p-value <0.05 so that it can be concluded H0 rejected and Ha received means that there is a connection with the development of exclusive breastfeeding of infants aged 6-12 months.

The development	Frekuensi	%
Corresponding	17	56,7
Doubt	1	3,3
Deviation	12	40
<b>The total</b>	<b>30</b>	<b>100</b>

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# MOTIVATION OF HEALTH PROVIDER AND BEHAVIOR PREGNANT WOMEN IN CONSUMPTION IRON TABLET WITH ANEMIA PREGNANCY IN KEDIRI CITY

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## ABSTRACT

Anemia iron deficiency Iron Deficiency Anemia is one of the main nutritional problem in Indonesia, which accounts for mortality in pregnant women. To overcome these problems the government has been implementing a program providing iron tablets to pregnant women. Distribution coverage of iron tablets 1 and iron tablets 3 in Kediri had already exceeded its target, however the number of maternal & child death caused by anemia were still high. This research was conducted in 9 Puskesmas in Kediri City to determine the relationship of health provider motivation and behavior of pregnant women with anemia of pregnancy. Type of research is descriptive analytic survey using cross section with a sample of 59 pregnant women Trimester III. Data collected with interviews using questionnaires and medical records of patients. Hypotheses using Chi Square test and Multiple Linear Regression. Results showed 69.5% of pregnant women experience mild anemia. Chi-square analysis obtained ( $0,190 > 0,05$ ) there was no connection between the motivation of health workers with anemia of pregnancy) and there is a relationship ( $0,038 < 0,05$ ) between the behavior of pregnant women with anemia of pregnancy. Test Multiple Linear Regression obtained ( $p < 0,05$ ) together there is a significant relationship between health provider motivation and behavior of pregnant women with anemia of pregnancy. Health Provider must give health education about importance of iron tablets, motivate pregnant women always consumption iron tablets every day and motivate how iron tablet is good and right to as prevent the occurrence of anemia in pregnancy.

**Keywords :** Genesis Pregnancy Anemia, Motivation Health Officer, Behavior Pregnancy

## INTRODUCTION

Anemia is a health problem with the highest prevalence in pregnant women because of pregnancy iron needed by the body more than before pregnancy. (Tarwoto, 2007). Anemia in pregnancy is a condition in pregnant women with low hemoglobin levels below 11 g / dl because many women who start pregnancy with less food reserves. (Manuaba, 2007)

Anemia in pregnancy can cause miscarriage, birth prematurely, low birth weight, heart disease, bleeding before and during delivery can even result in death of the mother and fetus. (Capita Selecta, 2001) Anemia of pregnancy is also called "Potential danger to mother and child" (potentially endanger the mother and child), while the factors that influence the occurrence of anemia are malnutrition, malabsorption, losing a lot of blood, chronic diseases, parietas, child-bearing age and social levels are low because that's anemia requires serious attention from all

parties involved in health services at the front line. (Proferawati, 2011)

Based on the WHO incidence of anemia of pregnancy ranged from 20% to 89% while the number of maternal deaths in developing countries are caused by anemia in pregnancy reached 40%. In Indonesia the rate of anemia of pregnancy up to 65% (Community Health, 2009), while in the province of East Java anemia of pregnancy reaches 55% of the target set in the amount of 50%. (Profiles of East Java Health Office, 2010)

In Kediri City The number of pregnant women suffer from anemia as many as 545 pregnant women (13.37%) with mild anemia criteria of 502 pregnant women (12.30%), anemia was 40 pregnant women (1%), and severe anemia with Hemoglobin below 7 g / dl three pregnant women (0.1%). One of the efforts to reduce the prevalence of anemia in pregnant women the government has taken steps to provide oral iron

preparations tablets (Smet, 1994) refers to the efforts of the health minister's decision RI No.1457 / Minister of Health / Decree / X / 2003 on the organization of nutrition the public, other than on the 1st of March 2007 the Ministry of Health of the Republic of Indonesia has launched the Indonesia campaign freely anemia in the period 2006 to 2008 as one of the approaches to the prevention and control of iron deficiency anemia in pregnant women a top priority. (Niven, 2007)

Giving preparations iron tablets to pregnant women is given through Mother and Child Health services during a visit Antenatal Care based on the decision of the Minister of Health RI 828 / Minister of Health / Decree IX / 2008 on minimum standards 7T one of which is the provision of iron tablets (Niven, 2007) at a dose of 60 mg daily for 90 days starting 2nd and 3rd trimester when the absorption efficiency increases and decreases the risk of nausea and vomiting. (Manuaba, 2007)

Distribution coverage besi1 tablet (30 tablets) of 99.09% and besi3 tablet (90 tablets) Kediri amounted to 99.04% (Department of Kediri, 2014) already exceed the target of the prescribed 90% for iron tablets 1 and 80 % for iron tablets 3 means that every pregnant women who visited the health center is already getting iron tablets in accordance with the provisions of the view targets such coverage should be no cases caused by anemia of pregnancy such as hyperemesis, miscarriage, asphyxia newborns, abnormal konginental in infants , infant and maternal mortality. The still high possibility of such cases in because the behavior of pregnant women consume iron tablets that have been given by a health provider.

There are several factors that affect a person's compliance in treatment are factors of health workers, drug factors and patient factors. (Nadhie, 2013) The health care provider or more specifically midwife has an important role in the process of treatment and cure the patient's disease. (Suryani 2009) The role of the officer is referring to the decision of the RI health Menti 900 / Minister of Health / Decree / VII / 2004 on

registrasi and practices in particular midwife. (Wijono, 2011)

The results of the initial survey in 20 pregnant women in the town of Kediri got 10 pregnant women (50%) say health workers sufficient to motivate and two pregnant women (10%) said health provider are less motivating.

As a motivator in the prevention of anemia of pregnancy midwife just giving iron tablets based on the schedule of administration and rarely ask the way and how many iron tablets that have been taken. The preliminary survey results supported the result showed that pregnant women who consume iron tablets most pregnant women who get good motivation of midwives 78.7%. (Garg, 2006)

## RESEARCH METHOD

This research is a survey that is descriptive analytic cross-sectional study. To determine the relationship of health provider motivation and behavior of pregnant women with anemia of pregnancy. The independent variables: motivation of health workers against pregnant women in consuming iron tablets and behavior of pregnant women consume iron tablets. The dependent variable: Genesis Pregnancy Anemia.

The population in this research were 68 pregnant women Trimester III which is the average visit K4 for 1 month in 9 Community health centers Kediri City totaling 68 pregnant women. While the study sample totaled 59 pregnant women taken by konsekutif sampling spread across nine health centers. Collecting data using questionnaires and medical records of nine health centers in Kediri.

Data were analyzed by univariate and bivariate analysis. Univariate analysts to describe each of the independent and dependent variables using frequency distribution. While the bivariate analysis to look at the relationship between both independent and dependent variables. Data analysis using statistical test che square correlation test with a confidence level of 95%. Then viewed the relationship together using multiple linear regression.

## RESULT AND DISCUSSION

**Table 1 Distribution of Respondents by Age**

Age	f	%
Too Young Pregnant < 20 Th	7	11,9
Reproductive Age 20 – 35 Th	43	72,9
Too Old Pregnant > 35 Th	9	15,3
<b>TOTAL</b>	<b>59</b>	<b>100</b>

Tabel.1 majority of respondents are in the reproductive age group (20-35 years) as many as 43 people (72.9%).

**Table 2 Distribution of respondents by Level of education**

Education	f	%
Primary School	9	15,3
High School First	16	27,1
High School	26	44,1
Colleges/Universities	8	13,6
<b>TOTAL</b>	<b>59</b>	<b>100</b>

From Table.2 it can be seen that almost half of the respondents had high school with 26 persons (44.1%).

**Table 3 Distribution of Respondents by Job**

Job	f	%
Housewife	42	71,2
Self	3	5,1
Private	10	16,9
Civil Affairs Officer	4	6,8
<b>TOTAL</b>	<b>59</b>	<b>100</b>

From tabel.3 can be seen that most respondents are Housewife as many as 42 people (71.2%).

**Table 4 Distribution of respondents according number of Pregnancy**

Number of Pregnancy	F	%
Pregnancy	23	39,0
Pregnancy to 2	16	27,1
Pregnancy to 3	15	25,4
Pregnancy to 4	4	6,8
Pregnancy to 5	1	1,7
<b>TOTAL</b>	<b>59</b>	<b>100</b>

From table. 4 can be seen that almost half of respondents pregnancy is the first pregnancy as many as 23 people (39.0%).

**Table 5 Distribution of respondents by Motivation Health Profider**

Motivation Health Profider	f	%
Enough Motivation	21	35,6
Good Motivation	38	64,4
<b>TOTAL</b>	<b>59</b>	<b>100</b>

From table. 5 it can be seen that 38 respondents (64.4%) stated that the motivation of health Profider to the pregnant women consume iron tablets either.

**Table 6 Distribution of respondents based answer to each question Motivation Health provider**

Question	Yes	%	No	%
Motivation				
What Is health provider to give education on the importance of iron tablets to pregnant women?	49	83,1	10	16,9
What is health provider remind pregnant women taking iron tablets remedy?	52	88,1	7	11,9
Does the clerk's Health giving iron tablets to pregnant women early in pregnancy?	42	71,2	17	28,8

From table. 6 can be seen that the motivation of health provideris very good which medical personnel constantly remind pregnant women to take iron tablets (88.1%) and health care professionals to provide education on the importance of iron tablets to pregnant women (83.1%) and health providers give iron tablets in pregnant women early in pregnancy (71.2%).

**Table 7 Distribution of Maternal Behavior In Taking Iron Tablets**

Maternal Behavior	f	%
Behaviour Less	7	11,9
Good Behaviour	52	88,1
TOTAL	59	100

From table. 6 can be seen that 52 pregnant women (88.1%) had good behavior in consuming iron tablets.

**Table. 7 Distribution of respondents based answer to each question**

Question Behavior	Maternal Yes	%	No	%
Did the mother mngkonsumsi iron tablets 90 tablets during pregnancy?	47	79,7	12	20,3
whether since the first trimester pregnant (The mother of taking iron tablets?	44	74,6	15	25,4
Did the mother consume iron tablets with vitamin C as orange juice?	43	72,9	16	27,1
Do mothers avoid drinking tea, coffee and milk that inhibit iron absorption when taking iron tablets?	48	81,4	11	18,6
If iron tablets given by health officials have been exhausted, whether the mother went to one of the health service?	41	69,5	18	30,5
Have you ever been not taking iron tablets because of boredom, forget or an awful smell?	48	81,4	11	18,6

From table. 7 it can be seen that respondents who answered (Yes) taking iron tablets (79.7%) with added vitamin C (72.9%) and avoid drinking tea, coffee and milk that inhibit iron absorption when consumed (81.4%) if the iron tablet runs out then the respondent went to one of the health service (69%) and respondents consume iron tablet 1 time a day (81.4%) and respondents consume iron tablets since the first trimester of pregnancy (74.6%)

**Table. 8 Distribution of respondents according to Genesis Anemia pregnant women.**

Pregnancy Anemia	f	%
Normal ( $\geq 11$ gr %)	10	16,9
Mild Anemia (9- 10 gr %)	41	69,5
Medium Anemia (7-8 gr %)	8	13,5
Weight Anemia ( $< 7$ gr%)	0	0
TOTAL	59	100

From table. 8 it can be seen that 41 respondents (69.5%) had mild anemia and 8 respondents (13.6%) had moderate anemia and 10 respondents (16.6%) did not anemia.

**Table. 9 Distribution Motivation Health profider adherence iron tablet intake with the incidence of anemia in pregnancy.**

Motivation health provider	Genesis Pregnancy Anemia							
	Mediu m Anemia		Mild Anemia		Normal		Total	
	f	%	f	%	f	%	f	%
Sufficient	5	8,5	12	20,3	4	6,8	21	35,6
Enogh	3	5,1	29	49,2	6	10,2	38	64,7
Baik	8	13,6	41	69,5	10	16,9	59	100

p = 0,190

From table. 9 it can be seen that the total of pregnant women pregnant as many as 59 people. Most respondents experienced mild anemia was found in those who received a sufficient motivation of health provider as many as 12 people (20.3%) and got a good motivation of health workers as many as 29 people (49.2%). Only a small proportion of pregnant women who do not have anemia as many as four people (6.8%) received with sufficient motivation and 6 (10.2%) got a good motivation.

Statistical analysis showed that  $p = 0.190$  ( $p > 0.05$ ), in other words  $H_0$  accepted, so there is no relationship between the motivation of health workers against pregnant women consume iron tablet with anemia of pregnancy.

From the research Pregnant women mostly get good motivation of health provider but only a small proportion of pregnant women who do not have anemia of pregnancy. This is due in no small part of health workers who do not give iron tablets to pregnant women early in pregnancy due in early pregnancy (Trimester I) of pregnant women still experience nausea and vomiting when taking iron tablets, in addition to a small part of health workers did not provide information about the importance iron tablets to pregnant women so that if possible side effects taking iron tablets such as bowel movements black and smelled like metal pregnant women cease taking iron tablets and in addition a small part of health workers do not always remind pregnant women to take iron tablets regularly this is because only pregnant women with anemia given no indication of motivation due to the number of queues of patients are.

Anemia of pregnancy is a physiological thing that is always experienced by pregnant women in the third trimester because of a blood thinning although the motivation of health workers on the consumption of iron tablet of pregnant women is very good. For that consume iron tablet regularly is very important for pregnant women.

**Table. 10 Distribution Behavior Pregnant Women with Anemia Genesis Pregnancy**

Behav ior Pregn ant Wome n	Genesis Pregnancy Anemia							
	Mediu m Anemi a		Mild Anemia		Nor mal		Total	
	f	%	F	%	f	%	f	%
Suffi cient	3	5,1	4	6,8	0	0	7	11,9
Good	5	8,5	37	62,7	1 0	6,9	52	88,1
Jumlah	8	13, 6	41	69,5	1 0	6,9	59	100

$p = 0,038$

From table. 10 can be seen that the majority of pregnant women suffer from mild anemia was found in those who received a sufficient motivation of health workers as much as 4 (6.8%) and got a good motivation of health workers as many as 37 people (62.7%). Only a small proportion of pregnant women who do not have anemia as many as 10 people (16.9%) and got a good motivation. Statistical analysis showed that  $p = 0.038$  ( $p < 0.05$ ), in other words  $H_0$  rejected, so there is a connection between the behavior of pregnant women consume iron tablet with anemia of pregnancy.

From the results of research conducted in general can be seen that pregnant women consume iron tablets, but not optimally make efforts to improve the absorption of iron. Eg mother drinking iron tablet is not the drinks / foods containing vitamin C, while vitamin C is very good to be consumed to increase the absorption and in addition almost half of pregnant women if the iron tablets given by health officials have been exhausted, the mother did not go to the health worker.

We conducted interviews found some reason pregnant women pregnant women iron tablets assume an iron tablet and if taken every day will lead to high blood pressure. Iron is a vitamin tablet so big and will cause the baby can not be born normally. For that very motivation of health workers is needed because not all pregnant women know about iron tablets.

**Table. 11 Results Statistics Test Health provider Motivation and Behavior in Pregnant Women consumption iron tablets with Genesis Pregnancy Anemia**

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regressio n	1,763	2	,882	3,05 3	,045 <sup>a</sup>
Residual	16,169	56	,289		
Total	17,932	58			

a. Predictors: (Constant), Maternal Behavior, Motivation Health Provider



Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1,763	2	,882	3,053	,045 <sup>a</sup>
Residual	16,169	56	,289		
Total	17,932	58			

a. Predictors: (Constant), Maternal Behavior, Motivation Health Provider  
b. Dependent Variable: Genesis Pregnancy Anemia

Statistical analysis showed that  $p = 0.045$  ( $p < 0.05$ ), in other words  $H_0$  rejected, so together there is a significant relationship between motivation of health workers to the behavior of pregnant women and pregnant women consume iron tablet with anemia of pregnancy.

The motivation of health provider is a factor that can influence the behavior of a person (patient). Motivation is very useful for patients when patients face a new phenomenon that happened on health motivation is a way of delivering enthusiastically against certain actions of the patient and continually provide positive rewards for patients who have been able oriented in treatment (Niven, 2002).

Health provider must give education health on iron tablets then evaluates the behavior of pregnant women consumption iron tablets in the compliance of pregnant women consume iron tablets will be excellent, and so can suppress or reduce the incidence of anemia in pregnancy. Therefore, support of shared factors not only health care workers but also a factor of social support for very large influence on the practice / attitude of someone, especially pregnant women who are in physiology in addition the nutrition of pregnant women, a history of maternal health, age, number of pregnancies also became one of the factors in the consumption of iron tablets.

## CONCLUSIONS

Amounting to 72.9% of pregnant women have reproductive age, education 44.1% High School 42% worked as a housewife and 71.2% is the first pregnancy. Pregnant women who experience mild anemia amounted to 69.9%. Motivation

Health workers in pregnant women taking iron tablets in 64.4% better. 88.1% of pregnant women have a good behavior in consuming iron tablets.

There is no relationship between the motivation of health workers against pregnant women with anemia of pregnancy  $p = 0.190$  ( $p < 0.05$ ). There is a relationship between the behavior of pregnant women consume iron tablet with anemia of pregnancy  $p = 0.038$  ( $p > 0.05$ ). Altogether no significant correlation  $p = 0.000$  ( $p < 0.05$ ) between the health worker motivation and behavior of pregnant women consume iron tablet with anemia of pregnancy. Based on these results it is advice that can be given is:

1. For Pregnant Women  
In taking iron tablets during pregnancy pregnant women should avoid food or drinks that inhibit iron absorption and immediately to health officials when iron tablets have been exhausted.
2. For Health Officer  
Provide health education on the importance of iron tablets particular emphasis on how drinking and benefits of taking iron tablets as well as an evaluation of the behavior of pregnant women consume iron tablets terutama must always remind pregnant women to take iron tablets.
3. To Health Center Health Office  
Enhancing the role of health workers is not only a role as a motivator but also as a role of educator and counselor, resulting in increased compliance consumption of iron tablets to suppress the cases were caused by anemia of pregnancy.
4. Health Office  
Evaluating and Monitoring distribution giving iron tablets to pregnant women.
5. Health Professions  
Anemia of pregnancy accounted for the highest number for the MMR and IMR required more intensive effort and integrated in the examination Antenatal care especially monitoring the provision of iron tablets

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# THE EFFECT OF EFFLURAGE MASSAGE TECHNIQUES TO DECREASE PAIN IN THE ACTIVE PHASE OF THE FIRST STAGE PRIMIPARA

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## ABSTRACT

Massage at abdomen (effleurage) is a kind of skin stimulation during the birth (partus) process, effective in degrading the pain which is caused by dilatation of cervix, lower uterine segment and corpus uteri distension. This research goal is to know the effect of effleurage massage techniques to decrease pain in the active phase of the first stage primipara at Puskesmas balowerti work region.

This research design is pre-post test with approach of pre of experimental pre`group one group pre-post test design. The population of this research is all active primipara phase of the first in region work of Puskesmas balowerti amount to 6 people by using the consecutive sampling method obtained by 6 responder. This research independent variable is massage effluage and degradation of pain as dependent variable. Its result is analysed by using Wilcoxon test, while the instrument test is using observation sheet.

Result of this research indicate that before given by massage effluage all respondent are having a controlled heavy pain counted by 6 responder (100 %). After given by massage effluage the pain is decrease, the most dominant pain is medium pain counted 4 respondent (66,7%) and light pain counted 2 respondent, the analysis result by using Wilcoxon method show  $P\text{-value } 0,0023 < 0,05$  so  $H_0$  is rejected and  $H_1$  is accepted, meaning that there is any effect of effluage massage to decrease the pain in the active phase of the first stage primipara at the region work of Puskesmas balowerti. Pain at mother of inpartu can be decrease by given touch in form of massage effluage. Mother who have concentration to effluage massage will feel relaxed and comfortable

**Keywords : Massage Effurage, Pain the active phase of the first stage**

## INTRODUCTION

Labor and birth is a normal physiological event. Birth of a baby is a social event, where mothers and families eagerly wait for nine months. When labor begins, the mother's role is very important to its birth proceed, while the role of health personnel (midwife or doctor) is to monitor labor, early detection of complications, apart together with families to provide assistance and support to women to giving birth. Childbirth is the process of opening and thinning of the cervix, and the fetus down into the birth canal. Birth is a process where the fetus and amniotic fluid is forced out through the birth canal (Saifuddin, 2006).

Pain in labor is a manifestation of the contraction (shortening) of the uterus muscle. These contractions cause pain in the waist, abdominal

area and spread towards the thighs. These contractions cause the opening of the cervix (cervical). With the opening of the cervix there will be labor (Judha, 2012)

During the first stage of labor, the pain caused by dilatation of the cervix, lower uterine segment and distention of the uterine corpus. This pain is diverted to dermatome supplied by the same spinal cord segment with the segment that receives nociceptive input from the uterus and cervix. Dermatome is the area of the body supplied by the special spinal nerves, for example dermatome dermatome thoracicus 12 refers to the 12 (T12). Pain is felt as tenderness old at the start of the first stage and limited to dermatome thoracicus 11 (T11) and to 12 (T12). Then in the first stage of labor, pain in dermatome (T11) and (T12) becomes more severe, sharp and spread to dermatome (T10) and lumbar 1 (L1) (Judha, 2012).

Stress or fear as physiologically can cause uterine contractions become noticeably more aches and pains felt. Because when a woman in a state of inpartu experience stress, your body will automatically defentif reaction thus removing the hormone catecholamine hormones stressors and adrenal hormones. This will release catecholamines in high concentrations at delivery. if mothers could not eliminate her fears before spawned a variety of body responses that emerged among others by fighting or running (fiht or flight). As a result of the response of the uterus will be more tense, so the flow of blood and oxygen to the muscles of the uterus is reduced due to narrowed ans shrink arteries. otherwise in a relaxed condition can actually provoke the release of endorphins hormon, thus eliminating the fear that naturally in the body. (Judha, 2012).

Massage or massage of the abdomen (effleurage) is a form of skin stimulation during labor to reduce pain effectively. Effleurage comes from the French. When the records of Dr. Fernand Lamazes translated from French into English, one of the new words are effleurage (Mons Dragon, 2006).

Effleurage is a massage technique in the form of a soft caress slow, and long or not dashed. This technique cause relaxation effect. In labor, effleurage done using soft and lightweight fingertips. Make a mild stroke without strong pressure, but cultivated fingertip not be separated from the skin surface. Effleurage massage can also be done on the back. The main goal is relaxation. Gate Control Theory can be used to measure the effectiveness of this method. Illustration Gate Control Theory of pain fibers that carry pain stimulation smaler to the brain and the sensation traveling slower than the fibers touch wide. When the touch and pain are stimulated simultaneously, the sensation of touch shut the gate in the brain, limiting the amount of pain felt in the brain. Effleurage or massage on a regular invitation abdominal breathing exercises during contraction is used to divert women from the pain during contractions. Similarly, the existence of which has the effect of distraction massage can also increase the formation of endorphins in the control system dasenden.

Massage can make the patient more comfortable for making muscle relax (Moondragon, 2006). Comfortable touch can help to accelerate the labor and decrease the contraction augmentation by using synthetic oxytocin, effectively increase the strength and frequency of contraction (Stager, 2011). Objective efflurage determine the effect of massage techniques on the level of pain reduction in primiparous when one of the active phase.

## RESEARCH METHODS

The experiment was conducted on 14 September to 14 October 2015 Puskesmas Balowerti Kediri. The designs are in use is the pre Experiment using a "one group pre test-post test". Namely with the researchers to identify the effect of massage techniques efflurage on the level of pain reduction in the active phase of the first stage primipara in Puskesmas Balowerti Kediri.

Samples are mothers inpartu active phase of the first primiparas who experiencing labor pain at Puskesmas Balowerti of Kediri it is six respondents. The selected sampling technique is Concecutive sampling that the sample and the amount taken by the samples and data. That mothers aged 20 -35 years old, primipara, pregnant at term (37-41 weeks), without complication.

Data collection procedures, set covers data collection method is based on the research variables, develop instruments. as a tool to collect data is observation sheets, specify the respondent to be studied, the researchers propose to permit researching at Balowerti Puskesmas working area. After receiving permission researchers approached and give informed consent if approved, make observations to the respondents, the analysis of the data used in this study is the Wilcoxon Test.

The research goal is to knowing the effect of massage efflurage technik to decrease of pain on active primaphara phase of the first.

## RESULTS AND DISCUSSION

### Respondent character

1. Respondent character based on age. That all respondents aged 20-35 years with a number of respondents are 6 (100%).
2. Characteristics of Respondents by Pregnancy age. That all responden have a pregnancy age about 37- 40 week, its 6 responden (100%).
3. Characteristics of Respondents by entered the opening. That all over the respondent entered the opening of 4-10 cm ang without complication in labor, which is about 6 respondents (100%)
4. Characteristics of Respondents by Fundus uteri high. That fundus uteri hight 30 – 32 cm, which is 6 responden (100%)
5. Characteristics of Respondents by Height scala. That most of respondent height scale 155 - 160 cm, which is 5 respondent (83%) and 1 responden (17%) height scala 161 – 165 cm.

**Tabel 1: The level of pain before being given Massage Efflurance in primiparous active phase I**

No	Criteria	Frequency	Percent age (%)
1.	Painless	0	0
2.	Mild pain	0	0
3.	Moderate	0	0
4.	pain	6	100
5.	Severe pain	0	0
	controled		0
	Severe pain uncontroled		
		6	100
	Total		

Based on table 1, we know that all respondents had experienced controlled severe pain about 6 respondents (100%).

**Tabel 2: The level of reduction in pain after being given Massage Efflurance in primiparous when one of the active phase**

Criteria	Frequency	Percentage (%)
Painless	0	0
Mild pain	2	33,3
Moderate pain	4	66,7
Severe pain	0	0
controled		
Severe pain uncontroled	0	0
Total	6	100

According to the table 2. most of respondents shows that after having Massage Efflurance experienced the level of pain is degrease with the medium pain categories were as many as four respondents (66.7%).

### Test Results Statistics

**Table 3: Results of the analysis Wilcoxon rate of decrease in pain after being given Masage Efflurance in primiparous active phase of the first stage in Puskesmas Balowerti Kediri**

	PAIN LEVEL AFTER PAIN LEVEL BIFORE
Z	-2.271 <sup>a</sup>
Asymp. Sig. (2-tailed)	.023

Based on Table 3 showed that decreased levels of pain have significant value  $0.023 < \alpha 0.05$  then H0 rejected H1 accepted, which means, there is the influence of Massage Efflurance to decreased levels of pain when one of the active phase in the work area health centers Balowerti Kediri.

### The pain level before giving Massage Decreased Inpartu In Active Phase of the first stage.

According to the table 1 is known that all respondents before given Massage Efflurance experiencing severe pain controled, namely 6 respondent (100%).



Pain in the first stage of labor occurs due to large activity in the body in order to remove the baby. Labor is defined as stretching dilation of the cervix, the incident occurred when the muscles of the uterus contract to push out the baby (Bobak, 2008).

Labor pain is an unpleasant feeling that is a response to individuals when its labor process because of the physiological changes of the birth canal and uterus.

### **Decrease Pain Level After the Cast Massage Efflurage Decreased Inpartu In Active Phase of the first stage.**

According to the table 2 most respondents decreased levels of pain after given Massage Efflurage moderate pain that is in category 4 respondents (66.7%) and the category of mild pain as much as 2 respondents (33.3%).

Massage Effleurance can give the effect of relaxation and calm. Effleurance or abdominal massage on a regular with breathing exercises during contraction is used to divert women from the pain during contractions. Similarly, the existence of which has the effect of distraction massage can also increase the formation of endorphins in the control system dasenden. Massage can make the patient more comfortable for making muscle relaxation. (Danuatmadja, 2008).

Touches such as Massage (massage) was soft and motivation to the mother by medical personnel and family midwife asspesialy would divert pain inpatu mother active phase of the first stage. Because of pain inpartu mother would stress, after being given a massage we hope that the mother relax and the pain has subsided.

### **Effect of Massage Effleurance Against Pain Levels Decreased Inpartu In Active Phase of the first stage.**

Data analysis using the Wilcoxon test showed that reduction in pain level has significance value of  $0.023 < \alpha 0.05$  then  $H_0$  rejected  $H_1$  accepted. means, there is the influence of Massage Efflurage to decreased levels of pain when one of

the active phase in the working area health centers Balowerti City Kediri.

Regular Effleurance or abdominal massage with breathing exercises during contraction is used to divert women from the pain during contractions. Similarly, the existence of which has the effect of distraction massage can also increase the formation of endorphins in the control system dasenden. Massage can make the patient more comfortable for making muscle relaxation (Moondragon, 2008).

Benefits of Massage Effleurance in Childbirth : it can increase the production of endogenous oxytocin, which stimulates contractions getting stronger (Simkin, 2011), increase oxytocin is associated with comfort and satisfaction (Ericbrown, 2012), and decreases stress hormones and increases the hormone oxytocin (Beckel, 2012)

from the above results, indicating that the massage efflurage have an effect in reducing pain level first stage of labor active phase of the mother primipara thus massage efflurage used as an alternative to measures of non farmakologi that can be applied to reduce the level of labor pain besides the relaxation method that has been applied.

### **CONCLUSION**

Effect of effleurance massage technique on the level of pain reduction in the active phase of the first stage primipara in puskesmas balowerti kediri performed at 6 respondents can be concluded that all respondents experiencing severe pain controlled before being given massage efflurage as many as six respondents (100%).once granted massage efflurage most respondents decreased pain levels, its 4 respondents (66.7%) had moderate pain and a small portion is 2 respondents (33.3%) experienced mild pain.

Based on an analysis using the wilcoxon test showed that reduction in pain level has a significance value of  $0.023 < \alpha 0.05$  then  $H_0$  rejected  $H_1$  accepted, which means, there is the

influence of massage efflurage to decreased levels of pain when one of the active phase in the region of puskesmas balowerti Kediri

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# FACTORS ASSOCIATED WITH INCIDENCE OF ANEMIA AMONG ADOLESCENT GIRLS AT MAN 8 JAKARTA TIMUR

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## ABSTRACT

Household Health Survey Data in 2009 stated that the prevalence of anemia deficiency of young women aged 10-18 years was 61.11%. The cause of anemia in adolescents is the amount of iron consumed is not in accordance with what is needed. Various factors may affect the occurrence of iron-deficiency anemia, among others, diet, menstruation, and knowledge of iron deficiency anemia. The research objective was to determine the factors associated with the incidence of anemia among adolescent girls in MAN 8 East Jakarta. The type of research used cross sectional approach. A population of 148 students selected from schoolgirls grade 10, and a sample size was 66 respondents. The sampling used simple random sampling technique. Instruments used portable hemoglobinometer and questionnaires. Data were analyzed by chi-square statistical test with significance level ( $\alpha = 5\%$ ) 0.05. The results showed that there was a significant relationship between knowledge about anemia (pvalue = 0.000), the habit of breakfast in the morning (pvalue = 0.002), the menstrual cycle (pvalue = 0.01), duration of menstruation (pvalue = 0.007), and the volume of menstruation (pvalue = 0.000).

*Keywords: Anemia Adolescent girls*

## INTRODUCTION

Nutritional anemia is the most important nutritional problems in Indonesia and more common in young women. Impact of anemia in adolescents, among others, can lower the immune system resulting in susceptible to illnesses, decrease the activity of teenagers, school performance, lowering the teen fitness, and affecting reproductive health. Additionally, anemia in adolescent girls is a risk of physical and mental disorders. One effort to achieve this goal is to add the program at the premarital age so that knowledge about anemia owned by the teens will increase prevention efforts to be more effective and efficient.

Many factors can cause young women to have anemia. The cause of anemia in adolescents is the amount of iron consumed which is not in accordance with what is needed. Various factors may affect the occurrence of iron-deficiency anemia including diet, menstruation, knowledge of iron-deficiency anemia, and knowledge about substances that trigger and inhibit iron absorption (vitamin C and tea) (Bakta, 2006). Besides, the menstrual cycle each month is one of the causes of young women susceptible to iron deficiency anemia (Soedioetama, 2006).

WHO (2003) mentions the current adolescent population in the world has reached 1200 million people or about 19% of the total world population. One of the nutritional problems of young women in Indonesia is the prevalence of anemia in adolescent girls that reaches 31%. Data of Household Health Survey (2009) states that the prevalence of iron-deficiency anemia in pregnant women is 56.5%, young women ages 10-18 years is 61.11% and women aged 19-45 years is 36.5%. Of all the age groups, women have the highest risk of suffering from anemia, especially girls (MOH, 2011).

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Based on the above data, the young women in Indonesia who are anemic are still quite high. Health program at school (UKS) is a program from the school to combat anemia especially iron deficiency anemia in adolescent girls (Nashty, 2011). If the majority of the girls suffer from anemia, especially iron-deficiency anemia, the impact will continue until menopause. The adverse impacts include teens who will experience decline in their endurance, infertility that can occur in pre-nuptial time, abortion and premature that can occur during pregnancy, bleeding at the time of childbirth which can cause maternal mortality and give birth to babies with low birth weight, stitches infection at the time of parturition as well as bone loss at the time of menopause. Overcoming the problem of anemia which is not good is feared to increase the risk in adolescents. Among the consequences of anemia is a child's inhibited growth, the less formation of muscle cells so the muscles become weak, the declined immune system, and reduced achievement and behavioral changes (Sukidjo, 2003).

## RESEARCH METHODS

This research was a descriptive analytic study with cross sectional approach. The sample was all students in grade 10 in MAN 8 Jakarta Timur in a total of 148 students. Based on the sample formula, 66 students were obtained. Sampling method used Simple Random Sampling technique. Data collection tools in this study were a questionnaire and examination of Hb to each respondent conducted by researchers using portable hemoglobinometer.

Data analysis was done by univariate and bivariate using Chi Square test with software data analysis using the significance level ( $\alpha$ ) 0.05.

## RESULTS AND DISCUSSION

**Table 1: Proportion distribution of respondents based on classification of hemoglobin levels among schoolgirls of MAN 8 Jakarta Timur**

Variable	f	%
<b>Anemic</b>		
yes	44	66,7
no	22	33,3
<b>breakfast habit</b>		
no	31	47,0
yes	35	53,0
<b>menstrual cycle</b>		
not Normal	33	50,0
Normal	33	50,0
<b>menstrual duration</b>		
not Normal	22	33,3
Normal	44	66,7
<b>menstrual volume</b>		
Not Normal	22	33,3
Normal	44	66,7

The following is the table of the results of bivariate analysis

**Table. 2: Relationship of knowledge to hemoglobin levels among schoolgirls at MAN 8 Jakarta Timur**

Knowledge	Hemoglobin				P Value
	Anemic		Not anemic		
	f	%	f	%	
Bad	28	96,6	1	3,4	29 0,00
Good	16	43,2	21	56,8	
Total	44	66,7	22	33,3	66

Table 2 shows that of the 29 respondents (43.9%) with less knowledge 28 respondents (96.6%) were anemia, and one respondent (3.4%) was not anemic. Of 37 respondents (56.1%) who had good knowledge there were 16 respondents (43.2%) were anemia, and 21 respondents (56.8%) were not anemic. Statistical test results obtained p value = 0.000, meaning there was a significant relationship between knowledge about anemia and hemoglobin levels.

**Tabel . 3: Relationship Between Breakfast Habits and Hemoglobin among Schoolgirl Class 10 MAN 8 in Jakarta Timur**

Breakfast	Hemoglobin				P Value	
	Anemic		Not anemic			
	t	f	%	f	%	F
No	27	87,1	4	12,9	31	0,002
Yes	17	48,6	18	51,4	35	
Total	44	66,7	22	33,3	66	

In Table 3, of the 31 respondents (47.0%) who did not have a habit of breakfast in the morning there were 27 respondents (87.1%) were anemic and 4 respondents (12.9%) were not anemic. Of 35 respondents (53.0%) who had a habit of breakfast in the morning there were 17 respondents (48.6%) were anemic, and 18 respondents (51.4%) were not anemic. The statistical test results obtained p value = 0.002, meaning there was a significant relationship between breakfast habits and hemoglobin levels.

**Table 4: Relationship Between Cycles, Duration, and Volume of Menstruation and Hemoglobin Among schoolgirls Grade 10 at MAN 8 Jakarta Timur**

Variable	Hemoglobin				P Value	
	Anemic		Not anemic			
	f	%	f	%	F	
Menstrual cycle						
Not Normal	27	81,89	6	18,2	3	0.001
Normal	19	51,5	16	48,5	33	
Duration						
Not normal	20	90,9	2	9,1	22	0.007
Normal	24	54,5	20	45,5	44	
Volume						
Not Normal	22	100	0	0	22	0.000
Normal	22	50	22	50	44	

In table 4, the first variable indicated that of the 33 respondents (50.0%) with abnormal menstrual cycle, there were 27 respondents (81.8%) were anemic and 6 respondents (18.2%) were not anemic. Of 33 respondents (50.0%) who had normal menstrual cycles, 19 respondents (51.5%) were anemic, and 16 respondents (48.5%) were not anemic. The results of statistical tests showed

a p value of 0.01, meaning there was a significant relationship between the menstrual cycle and hemoglobin levels. For the second variable, of 22 respondents (33.3%) who had abnormal menstrual duration there were 20 respondents (90.9 %) were anemic and 2 respondents (9.1%) were not anemic. Of 44 respondents (66.7%) who had normal menstrual duration, there were 24 respondents (54.5%) were anemic, and 20 respondents (45.5%) were not anemic. The results of statistical tests showed a p value of 0.007, meaning there was a significant relationship between menstruation duration and hemoglobin levels. For the third variables, of the 22 respondents (33.3%) who had abnormal menstrual volume 22 respondents (100.0%) were anemic and no respondents (0%) were not anemic. Of 44 respondents (66.7%) who had normal menstrual volume 22 respondents (50%) were not anemic and 20 respondents (45.5%) were not anemic. The results of statistical tests showed a p value of 0.000, meaning there was a significant relationship between the volume of menstruation and hemoglobin levels.

In this study of 66 respondents 66.7% experienced anemia. Based on the prevalence of anemia among adolescent girls in MAN 8 Jakarta Timur, it was is 66.7%. This included health problem in MAN 8 Jakarta Timur.

The results of this study were also greater when compared with the results obtained in another study (Amrin, et al, 2014) performed on girls at SMAN 10 Makasar, ie, 34.5% of young women suffered from anemia. This occurred due to differences in the number of larger population, ie, 380 students while the samples were 148 students.

The incidence of anemia in adolescent girls in MAN 8 Jakarta Timur would be bad for the quality of the respondents, because anemia can lead to reduced concentration while studying so that it impacts on reducing the percentage of learning and its impact can lower school performance (Path, et al., 2005). It is also caused due to the increased demand by the body, especially on the youth especially in case of hookworm, malaria and excessive menstruation



(Bakta, 2006). It is in need of attention from the local government to make efforts in the prevention and management of anemia in adolescents, especially in girls with Hb <12 g / dl (anemia). Based on nutritional anemia control guidelines for adolescents and women of childbearing age, one of which is consuming tablet for anemia (TTD). As we know, the young women as mothers will play an important role in determining the quality of human resources that will come. Therefore, it needs a good and optimal handling.

In this study, the relationship between the knowledge of young women and anemia was that the respondents who had a good knowledge tended to be less likely to develop anemia. Knowledge of the presence of anemia is one thing that must be known is about the notion of anemia, signs and symptoms, causes, consequences and prevention and treatment of anemia. An important cause of the lack of nutrients is the lack of knowledge about nutrition or the ability to apply that information in everyday life because according to Notoatmodjo (2003), the knowledge or the cognitive domain is very important in shaping a person's actions.

From experience and research, behavior based on knowledge is more lasting than the behaviors that are not based on Knowledge. This means that each individual in the community should have a good knowledge and capabilities of the means of health care (Notoatmodjo 2003).

For breakfast habits on young women in this study, as many as 31 young women did not normally do breakfast in the morning and as many as 27 respondents experienced anemia. Based on the statistical test, there was a significant relationship between breakfast habits and the incidence of anemia. According to (Lailiyana, 2007), not having breakfast habits, among others, may be due to lack of appetite, accustomed to not eating in the morning and not have enough time to do it. In addition, it can also be caused by the dishes that are less attractive and therefore cannot cause appetite.

Considering breakfast is very important in maintaining concentration while studying and in

preventing anemia, there is a need for attention from teachers to urge young women to make breakfast in the morning before learning. Aside from teachers, parents should be willing to provide their children a nutritious and varied breakfast menu so that the child can be more tasteful to eat as well as the girls themselves also play a role in this regard. Consuming food before going to school is very important to support learning activities that require full concentration (Mathys, et.all, 2007)

The results of this research on teenage girls at MAN 8 showed the relationship between the menstrual cycle and anemia status. It is shown from a mean value of Hb of respondents who had a normal menstrual cycle pattern that was higher than Hb of respondents who had an abnormal menstrual cycle pattern.

The menstrual cycle is controlled by the hormone system and aided by hypophysis gland. Besides being influenced by estrogen, the menstrual cycle is also influenced by the progesterone. If the performance of the brain is reduced because the amount of oxygen that is received is not optimum, then it will affect the hypothalamus. The disrupted hypothalamus will impact the hormones that can stimulate the maturation of the reproductive glands and the release of sexual hormones to be obstructed or longer working. So that the menstrual cycle is usually irregular and long (Prawirohardjo, 2006). Low oxygen levels in the blood result in the low hemoglobin concentration in the blood. Low hemoglobin levels are closely associated with anemia, and can affect the menstrual cycle changes. Low hemoglobin levels can also be caused by coagulation abnormalities which, if left untreated, can lead to disruption of the menstrual cycle patterns such as menorrhagia (Bobak, 2005)

In this study, respondents associated with menstruation duration had a significant relationship with the incidence of anemia. blood loss during menstruation showed loss of iron stores rapidly in accordance with the amount of blood coming out. The longer women menstruate, the more blood loss and iron.

Therefore, women in menstruation is a group which is more prone to iron deficiency.

The daily diet contains an average of 10-20 mg of iron per day. Someone with iron stores in normal quantities will absorb approximately 5-10% of the total number of entries, namely 0.5-2 mg daily. As for a person with iron deficiency would be able to absorb up to 50% of the total input of iron or about 5-10 mg. There is no specific mechanism for the excretion of iron, but the unavoidable loss of iron daily is as a result of exfoliation of the small intestine and the epithelial cells of the skin where in all cells there are enzymes that contain iron (Gibney, et al. 2005)

The average loss of iron each day in a normal person is around 0.6 to 1 mg. While in menstruating women iron loss can reach 42 mg every cycle. Thus, the iron in the blood will be so low and the levels of hemoglobin in the blood would be decreased. A heavy blood loss in women is an important risk factor that can lead to iron deficiency anemia in women. Iron will come out of approximately 42 mg in each menstrual cycle (MOH, 2008))

In this study, the menstrual volume factors also had a significant relationship with the incidence of anemia. This was consistent with the theory (Arisman, 2004) that girls who had experienced menarche, if blood loss during menstruation was very much, iron deficiency anemia would occur, due to the amount of blood loss during the menstrual period ranging from 20-25 cc. This number implies iron losses amounting to 12.5 to 15 mg / month, or equal to 0.4-0.5 mg / day. If the amount is added to the basal loss, the total amount of iron lost 1.25 mg / day (Halterman et al, 2001).

According to the guidelines for the prevention of nutritional anemia among girls and women of childbearing age, blood loss during menstruation causes women need iron three times more than men so that the incidence of anemia among women is higher than men. Duration of bleeding during menstruation is 3-5 days, there are 1-2 days followed by blood a little bit and without feeling pain. The amount of blood loss is about

30-40 cc., with the peak on day 2 or 3 with the use of pads about 2-3 pieces (Manuaba, 2008). This condition is characterized by symptoms such as fatigue, pallor, and short breath. One of risk factors for anemia in women is the blood loss which is when the blood comes out. It can contribute to anemia because women do not have enough supply and absorption of Fe and the body cannot replace the loss of Fe during menstruation. Without enough iron, the red blood cell count will be reduced significantly, resulting in anemia (Arisman, 2004)

The presence of menstruation in young women every month causes blood loss in teenagers periodically. More blood to come out, the more hemoglobin wasted. Therefore, they need more iron intake to compensate for hemoglobin is wasted through menstrual blood, thus teenagers need to pay attention to nutrition when having their periods. This can be done by taking iron tablet, increasing the intake of vegetables, fruits, without reducing the intake of vegetable protein and reducing the consumption of tea, caffeine and milk along with eating.

## CONCLUSION

In this study, 66.7% of young women suffer from anemia. Based on the results of the statistical test, there is a significant relationship of knowledge, breakfast habits, and periods (cycles, duration and volume of menstrual periods) to an incidence anemia in adolescent girls.

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# THE RELATIONSHIP OF THE ABILITIES AND MOTIVATION OF HEALTH WORKERS WORK ON PERFORMANCE IN THE IMPLEMENTATION OF SICK TODDLER'S INTEGRATED MANAGEMENT PROGRAM

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## ABSTRACT

MTBS is an integrated management approach / integrated in the management of sick children who came in health care, both regarding some diseases classification, status of IMCI, immunization status and treatment of the sick children and counseling. The concept of IMCI is an approach to prepare health care workers to assess, classify, and provide measures to children against diseases that generally life-threatening. The purpose of this study was to determine the direct and indirect influence and magnitude between Ability and Motivation Work Health Officer for Performance in IMCI implementation in Pasar Minggu, South Jakarta Health Center 2014. The method used in this study is a quantitative approach that uses cross-sectional design (cross-sectional). Samples used about 50 officers MTBS as respondents. The analytical method used is Structural Equation Model (SEM) using. The results of hypothesis testing with Structural Equation Model (SEM) with a method smartPLS produce research findings that directly influence and magnitude of the performance capability of Health Personnel in IMCI implementation.

**Key words: Abilities, Motivation, Sick Toodler**

## INTRODUCTION

The degree of child health reflects the health of the nation, for children as the future generation has the ability to be developed in the continuing development of the nation. Child health indicators consist from few things, that the infant mortality rate, infant morbidity. The infant mortality rate is still quite high in Indonesia. Setiaptahun, more than hundreds of companies die before reaching age 5. More than half of the 5 conditions caused by preventable and treatable, among others: pnemumonia, diarrhea, malaria, measles and malnutrisi.

The low quality of health services in Indonesia is well understood by the WHO. The World Health Organization has been nearly a decade before trying to make efforts to improve the quality of health services especially for the basic level of

healthy toddler program. Reason preferential healthy toddler program management is at this age morbidity and death are high and cause mainly by the five major types of disease that

are actually very likely to be cured with proper management.

Indonesia's infant mortality rate is still very high. If this figure is converted mathematically, then at least 400 infant deaths occur per day or 17 infant deaths per 1 hour throughout Indonesia, while the Infant Mortality Rate (Akbal) of 44/1000 live births which means there is 529 deaths / hariatau 22 under-five deaths each hour, When we tried to count further, meaning there lebihdari 15,000 under-five deaths each month. In South Jakarta, one of Jakarta City also infant mortality rate continues to increase from year to year. "Based laporanrutin, AKB South Jakarta in 2009 amounted to 10.2 per 1,000 live births, and compared with 2008 IMR has increased from 6.75 per 1,000 births.

Sick toddler care program approach at the first time using the program separately intervention approach that uses a separate manual intervention and does not constitute a single entity. Separately intervention will certainly make it difficult for officials because they have to collect separate guidelines for dealing with a

child suffering from various diseases. Therefore it is very necessary interventions more systematic and effective. In this case the interventions more systematic and effective by using the Integrated Management of Childhood Illness (IMCI).

IMCI is an integrated management approach / integrated management of sick children who come dipelayanan health, either about some disease classification, status of IMCI, immunization status and treatment of the sick children and counseling. One of the initial activities were important at the time it is adapting IMCI Modules WHO in collaboration with WHO and the Indonesian Pediatric Association (IDAI) so as to produce one set of generic version of IMCI module Indonesia. After that IMCI module was revised several times in accordance with the development of the situation of the disease status and treatment policy in Indonesia. IMCI module that is used now (last update) is a module revision in 2008.

The concept of IMCI is an approach to prepare health workers assessing, classifying, and provide measures to children against diseases that generally life-threatening. The integration approach in the management of sick children who came for treatment to outpatient facilities such as health centers of primary health care which includes curative against pneumonia, diarrhea, measles, malaria, ear infections, malnutrition and promotive and covering preventive immunization, administration of Vitamin A, and feeding counseling. Implementation of IMCI will be effective when the mother / family immediately bring sick children to health workers who are trained and get the right treatment. Therefore, pesanmengeuai when mothers need to seek help when a child is sick is an important part of the program perapan MTBS.

By the end of 2010, the implementation of the IMCI has covered 33 provinces, but not all health centers are able to apply for a variety of reasons: the performance of health workers in health centers has not been trained IMCI, already trained health workers but the infrastructure is not ready, yet the ability of health workers to implement a program IMCI and no encouragement / motivation of the

leadership of the health center to health workers, etc. According to data from routine reports that dihimpundari Health Department provinces throughout Indonesia through the National Meeting of Children's Health Program in 2010, the number of health centers that implement IMCI until the end of 2009 amounted to 51.55%. PHC said already implementing IMCI if it fulfills the criteria already implemented (approaching wear IMCI) at minima L60% of the number of visits sick children at the health center. To dipropinsi Jakarta through Community Health Care Access Program with a sick toddler targets dealt with Integrated Management of Childhood Illness (IMCI) amounted to 90% of infants who berkunjung.

Integrated Management of Childhood Illness (IMCI) in dealing with sick infants using an algorithm. This program can classify diseases suffered precisely, detect all diseases suffered by a sick toddler, perform quick reference when needed, to assess the status of IMCI and give immunizations to infants in need. In addition, for mothers are also given counseling regarding the procedures for giving medicine to infants at home, giving advice on foods that should be given, and let you know when to back or right back to services follow IMCI is a comprehensive package that includes aspects of preventive, promotive, curative and rehabilitatif. In these efforts lead to the improvement of the quality of human resources, improvement of service management and evaluation of IMCI coverage including supervision carried out by the health centers and the Department of Health. The successful implementation of IMCI is strongly supported by a variety of factors. One of them is the human factor, in this case the puskesmas officers responsible for maternal and child health services in particular regarding the IMCI. IMCI is integrated with programs other basic health, it is necessary for management to human resources baik.

The successful implementation of IMCI reflected in the performance of health workers in providing services to children treatment measures against diseases that often occur. Performance has a broader meaning not only the work but how does the process work in



progress. Performance is about what you do and how to do the work and achievements of individuals tersebut.

Conduct requires consideration of three variables that influence individual behavior and things that worked employees concerned. These three variables that are often applied to health care at the health center are: the individual variables include the ability, motivation and energy performance kesehatan.

Health services at the health center which is oriented to the scope and minimum service standards (SPM) program-related services health quality companies which gradually became more involved in promoting and supporting the clerk of IMCI in order for them to improve and enhance their performance and not simply follow a fixed standard (although the preparation of uniform standards is a critical component

IMCI program in the province). That is the minimum service health role to assist the officers in designing realistic performance targets corresponding order at the health center and to monitor their progress. In fact IMCI services in the provinces is an approach to problem identification and problem solving approach, linking the improvement of the quality of its human resources with performance ratings continue menerus.

The human resources of the organization (puskesmas) have different characteristics, including the quality of its performance. Performance components are closely related and are in themselves IMCI officers who carry out everyday tasks. According Factors affecting performance is the responsibility jawab an individual to do a job that includes talent, enthusiasm, work ethic, attendance, task design, performance standards, management and co-kerja.

Performance result is achieved according to the size of a person applying for a job that bersangkutan.<sup>16</sup> Things often look good in the life of the household, community organizations, health organizations even when a person enters the world of work is a health worker performance. Someone will interact, and into a part of the organization where she worked. Organization consists of people who have a

clear set of activities to sustained and in order to achieve organizational goals. All the actions taken in each of the activities initiated and is determined by the performance of employees who become members of the organization, where the employee as the main supporter of any organization of any form of organization itu.

Fundamental organizational survival is largely determined by their employees peningkatankinerja consistently. Pegawailah that can drive an organization to connect all their energy, thoughts, talents, creativity and strive for the continuation of the life of the organization. Employees are resources that have the highest value for any organization, because it can provide immense benefits if the use of human resources appropriately. Problems associated with an employee at the health center is a drop in morale and employee creativity, so the impact on the decline in the performance of employees puskesmas (health workers) .

The continuing decline of the IMCI puskesmas officers in completing its tasks, which it is responsible, suggesting that the ability of the IMCI officials also declined, for example: the collection of monthly performance reports are not timely (passed from the date specified). Based on the results of the annual report consistent information IMCI Jakarta Health Department in 2012, the low performance of staff IMCI health center can be seen that the officer IMCI health centers still do not complete the work on time, there are errors in filling out monthly reports Information Systems IMCI and still no clerk IMCI which has not been able to carry out several activities IMCI because the educational background of non kesehatan.<sup>3</sup>

Health worker performance is strongly influenced by the factors of work motivation. Work motivation is a desire or a desire arose in IMCI officer who raises the spirit or the drive to work optimally to achieve the goal. With the motivation, IMCI officer would feel to have a special incentive to complete a job towards achieving organizational effectiveness. When the clerk IMCI has the motivation to excel, someone will do the job as well as possible, but when one considers that carrying out the work

only as a routine so they tend to be static in bekerja.

Low motivation of puskesmas IMCI officer due to a lack of stimulation in carrying out the work in accordance with the health department Auth, less innovation and creativity in carrying out the work, the desire to improve personal performance is still lacking, the lack of appreciation of the health department against officers IMCI achievers, yet their punishment (sanctions) which is firmly against the officer IMCI were violated and the lack of facilities and infrastructure that support officers IMCI in the works.

The phenomenon of the incidence of Childhood Illness exist in two districts, the districts Lenteng Agung and Pasar Minggu. District in Pasar Minggu persistence of Childhood Illness requiring IMCI program seesar 55.1%. South Jakarta area of child health problems is still a major problem, both in pain and death. The IMCI program has long since started proclaimed, but in practice the sustainability of IMCI is still in doubt.

This situation is reflected in the high rate of infant and child mortality in South Jakarta. The impact that occurs in people if IMCI is not implemented is to increase morbidity and mortality related to diseases common in infants. IMCI contribute to the growth and healthy development of children.

Diseases most toddlers who can be managed in the IMCI is a disease that is a major cause of death, such as pneumonia, diarrhea, malaria, measles and conditions are exacerbated by the problem of nutrition (malnutrition and anemia). The successful implementation of IMCI is inseparable from their post-training monitoring, technical guidance for nurses and midwives, completeness of facilities and infrastructure, including the adequacy of IMCI drugs. From the description above can be seen a strong correlation between the ability, motivation and performance.

So it is necessary to know more about measuring indicators to describe the variables related to the performance of health workers in implementing PHC MTBSdi Sunday Market.

Based on the phenomenon that occurred in the clinic, prompting the authors to examine more

in research on the effect of the ability and motivation Health Officer on the performance in the implementation of IMCI in Puskesmas Pasar Minggu 2014 The purpose of this study was to determine the effect of direct and indirect and magnitude between ability and work motivation on the Performance Health Officer in the implementation of IMCI in Puskesmas Pasar Minggu 2014

## METHODS

This study used quantitative research methods, the research uses a variable approach to prove the causal connection, by way of collecting data on the sample, and then performed statistical analysis and the results are generalizable to populations where berasal.

Samples used in the study design this is a cross-sectional study (cross-sectional) with a quantitative approach.

In this study, not to control or specific treatment against the research variables. Researchers looked only at the effects of events that have occurred naturally, and then observing the causal relationship between the independent variables and variable terikat. Dalam this case, the researchers conducted a study of the effects of a causal relationship between the leadership, training, infrastructure and motivation either individually or simultaneously the performance of cadres posyandu.

This research was conducted at the health center in Pasar Minggu, South Jakarta for 2 months starting November 2014 until January 2015.

The population in this study were all health workers IMCI Head of Puskesmas Pasar Minggu in South Jakarta which totaled 50 people in November 2014, with the criteria of respondents. This study did not use a sample, because all populations serve as respondent.

The minimum number of samples / respondents were taken by investigators directly through the object as much as 50 respondents. Criteria of respondents is as follows (1) Inclusion criteria that IMCI officers with tenure of more than 2 years and Domicile stay around Jakarta. (2) The criteria for exclusion are not willing or reject respondents and respondents moved to another health center for assignment / transfer

temporarily. This incident caused the respondent was not selected again by investigators and should be replaced by other respondents with the same criteria.

From this stage the process developed is distributing questionnaires in all health centers in the region Pasar Minggu. The number of samples taken in accordance with the rules of the number of samples in the guidelines PLS (Partial Least Squares) where the amount of sample (Sample size) taken is 5 to 10 multiples of a number of indicators that will be examined (and Heri Sofyan, 2011). So in this case the amount of samples taken are still in the range of 45 to 90.

Descriptive analysis in research inidigunakan to quantify the value of the capability and motivation to employee performance, and highlights the description of the variables based on answers to a questionnaire by giving each a score for each answer. In the analysis using the average value and the percentage of respondents score. To examine the relationship between variables and find the model empirical relationships between variables and factors supporting, used analysis of PLS (Partial Least Square) using SmartPLS program.

PLS is an alternative method of settlement of complex multilevel models that do not require large sample number. In addition there are also some advantages, namely PLS of which will have implications optimal prediction accuracy. PLS method is a powerful method of analysis because it does not assume a scale of measurement data and can also be used to confirm teori.

Presentation of research data in the form of (1) the presentation of the composition and the frequency of the sample. Data presented at the beginning of the analysis results is in the form of a picture or description of the sample, which penjelsan also be disetai summary table of the main description. This is done to help readers learn more about the characteristics of the respondent where the study's data was obtained. (2) Presentation of SEM analysis. Data presentation SEM analysis of the output data processing using the help SmatPLS 2.0, presented in diagrams, tables and others. Presentation of more complete data will be

presented in the appendix including the display of the questionnaire. (3) Testing of the hypothesis of the study based on the output of the data processing.

## RESULTS

Respondents in this study were health workers in IMCI implementation in Puskesmas Pasar Minggu. Accompanied by a questionnaire distributed capability assessment, Work Motivation and Performance Officer IMCI. Profile of respondents in this study relates to the assessment ability, motivation and performance of health workers. Most besarresponden aged 25-35 years as many as 35 respondents (70%), while respondents aged 36-45 years as many as eight respondents (16%) and > 45 years were 7 respondents (14%). Based on the education level of respondents mostly educated D3 there were 35 respondents (70%) and bachelor / S1 there were 10 respondents (20%). According to the working lives of the respondents <5 years as many as 15 respondents (30%) and > 5 years as many as 35 respondents (70%).

Variable Performance Officer IMCI range of respondents between 27-75 approaching the theoretical range of the highest score (15-75) with an average value of 50.56 and a standard deviation of 10 728.

This indicates that respondents tend to assume an important perception Officer Performance of IMCI. In the variable capability, an assessment of the ability of between 27-75 approaching the theoretical range (15-75) with an average value of 50.25 and 9728 standards.

This indicates that respondents tend to regard the important ability. In the variable Work Motivation, Work Motivation assessment of between 27-75 approaching the theoretical range (15-75) with an average value of 50.98 and a standard deviation of 10 679. This indicates that the achievement of Work Motivation was deemed paramount in this study. Variable Performance of IMCI Officer of respondents value the smallest is 27 and the largest is 75 with an average of 50.56 median 52 and rate the most was 52.

Ability to variable values respondent's answer is the smallest and the largest 27 75 dengan 9,728 average median 52 and rate the most was 52. To work motivation of respondents value the smallest is 27 and the largest is 75 with an average of 50.98 median 52 and rate the most was 52.

Based on the test bivariate with chi-square test was conducted to see variations of total respondents per variable to study characteristics. Variations answers variable Officer Performance of IMCI, ability and motivation are not influenced by the characteristics of respondents as the result of Chi Square test with significance level of 5% are all greater than 0.05. It shows the performance variables clerk IMCI no relation to the characteristics of the respondent.

Structural Equation Modeling (SEM) is one of the multivariate analysis to analyze the relationship between the variables in the complex. This analysis is generally used for studies that use a lot of variables. Data were analyzed using Structural Equation Modeling (SEM), performed to elucidate more thoroughly the relationship between variables that exist in the research. SEM is used instead to design a theory, but rather is intended to examine and justify a model.

The main requirement of using SEM is to build a hypothetical model that consists of structural models and measurement models in the form of the path diagram based justification theory. SEM is a set of statistical techniques that enable testing of a series of relationships simultaneously.

The results of the evaluation of the significance of the model is set in outer PLS output below by evaluating the value of reflection factor loading models through the evaluation outer and inner evalausi models. Image loading factor and T statistical models through the evaluation outer and inner evalausi models. Constructs Work Motivation variables measured by three indicators. Likewise, the ability is measured by one indicator and performance measured by 3 indikator. Pengujian Confirmatory factor analysis can be seen in the following figure.

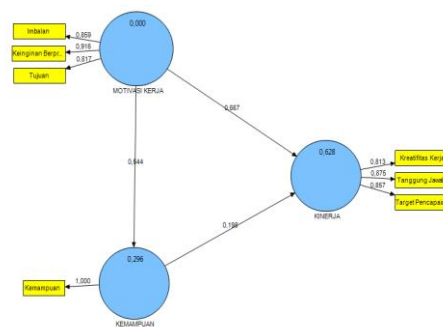


Figure 1. Output PLS (factor loading) Outer Model

From Figure 5.4 shows that the value of the loading factor has fulfilled the requirements of a value loading factors greater than 0.5. An indicator reflective declared invalid if it has a loading factor above 0.5 to construct the destination based on its substantive content to see the significance of weight ( $t = 1.96$ ). While looking at the composite value of all the variables reliability reliable. The validity of the indicators used in the study can be done by evaluating the results of cross loading (discriminant validity) of all the indicators. From the above table shows the value of the loading factor rewards to aim to construct Work Motivation construct than the other, so that the construct of Work Motivation to predict a loading factor rewards, desire and goal achievement is higher than other constructs. Similarly to the loading factor on latent variable capacity and higher performance for konstrukvaraibel latency than other constructs

Evaluation of the measurement model with average Square root of variance extracted is compared with the value of the root AVE correlations among constructs. PLS outputs the results of the root of all constructs larger than the correlation between constructs. AVE value for all constructs larger or closer than 0.5 so that it can be concluded that the evaluation of the measurement model has good discriminant validity. Value Cronbach's Alpha

reliability dan Composite most have a value greater than 0.7 so that it can be said that the contract of Work Motivation, Ability and Performance has a good reliability. Evaluation of the measurement model with average Square root of variance extracted is compared with the value of the root AVE correlations among constructs. From the table above shows that the root value AVE of each construct.

The results of the evaluation of the significance of the model is set in outer PLS output by evaluating reflection T-Statistic value against the variable indicator. From the picture above states that the value of T statistics are reflected on the variable most of > 1.96, indicating a block indicators positively and significantly to reflect the variable.

Inner model is also called the structural model can be evaluated by looking at the value of R Square test, T-statistics hypothesis testing, the effect of direct and indirect variable terhadap performance and predictive relevance (Q square value). Here's a picture of inner models.

Value T statistics are reflected on the variable most of > 1.96, indicating a block indicators positively and significantly to reflect the variable Rated R-Square used to assess the amount of diversity or variety of data, research on the phenomenon being examined.

The following output results in tabular form items, namely:

**Tabel 1. Evaluasi Nilai R Square Menurut Variabel Penelitian**

Variabel	R Square
Motivasi Kerja ( $\xi_1$ )	
Kemampuan ( $\eta_1$ )	0,295751
Kinerja ( $\eta_2$ )	0,628130

Source: SmartPLS 2.0 output, 2015

The magnitude of the variables that affect the variable that affects, how to use a coefficient of determination (R square). Based on the output performance value R square is 0.628, meaning that 62.8% of the variance Kinerja dapat explained by changes in work motivation and ability. While the value of R square capability of 0.295, which means that 29.5% of the

variance of ability can be explained by changes in work motivation.

There are three variables that ties the value of t statistics greater than 1.96, the variable Work Motivation to Performance (10 639), the variable ability to Performance (2575) and variable work motivation against Capability (7146) so that H0 is rejected, and H1 diterima. Means three patterns of the relationship of these variables partially positive and significant impact, because the value of T statistically greater than 1.96 so significant at  $\alpha = 5\%$ .

Third T-statistic values are much greater than the critical value of 1.96. Value T statistics are reflected on the variable most of > 1.96, indicating a block indicators positively and significantly to reflect the variables Furthermore, based on the pattern of relationships between the variables described in the conceptual framework, there is a relationship that is both direct and indirect. From table 2 di bawah states that work motivation influence directly and indirectly to the performance. The results of the test parameter coefficient between work motivation to show there is a direct influence performance of 51.7%. Here below is a table direct and indirect relationships.

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Source	LV Cor re- llati on	Di re ct R ho	In di re ct R ho	T ot al	Dire ct %	In dir ect %	Tot al %
Moti- vation	0,7 75	0, 66 7	0, 10 8	0, 77 5	51,7 0%	3,3 3 %	54, 99 %
Capa- bility	0,5 61	0, 19 8	0	0, 19 8	11,1 %	0 %	11, 1%
	<b>Tot al</b>				<b>62,8 %</b>	<b>3,2 84 %</b>	66. 09 %

$$Q2 = 1 - (1-R12) (1-R22)$$

$$= 1 - (1-0,296) (1-0,628)$$

$$= 1 - (0,912384) (0,605616)$$

$$= 0,447 \text{ or } 44.7\%$$

$$\text{Error Model} = 100\% - 44.7\% = 55.3\%$$

It shows a model of the analysis results can explain the diversity of data and 44.7% were able to examine the phenomenon used in the study, while 55.3% described other variables that are not researched in this study.

#### **The relationship between the variables on the Performance Ability Health Officer in the implementation of IMCI in Puskesmas Pasar Minggu.**

Variable Ability Health Officer has been measured, so the indicator has been able to

explain the variable Ability Health Officer, this proves the theory that the ability is influenced by beliefs, skills, experience, personality characteristics and issues emosional.

These results also demonstrate the research and academic economists, performance many factors that influence it. Performance is affected by the skills, experience, knowledge resources, leadership and motivation. The theory is supported by Usman (2006) stated in the same book that the performance in addition influenced by motivation, experience and abilities are also environmental factors that contribute to improved performance Kesehatan. Officer Results showed a positive correlation to the performance capabilities Officer of Health in the implementation of IMCI in the clinic Sunday Market. Therefore, when the enhanced capabilities it can also increase the performance of Officers of Health in implementing IMCI puskesmas Sunday market directly or indirectly through motivation, and vice versa when performance can degrade performance declined Health Officer in the implementation of IMCI in health centers e cara Minggu market directly and indirectly.

The author assumes that the effectiveness of Health Personnel working optimally influenced by how big the Health Officer master the skills and knowledge to form an adequate ability to follow unified management for sick infants. In addition, the knowledge factors also have an important role in encouraging Health Officer to achieve the goal. Through its function, Health Officer must be able to align the capabilities, skills and resources with the goal of community health centers.

IMCI attendant capabilities are lower than the clerk work motivation IMCI districts of the Sunday market, because of the reward, the desire to excel and work purposes more encouraging officers to improve the ability of the integrated management of sick children. Education and skills in IMCI also needs to be improved such as by increasing the amount of training and skills of officers in every sub-district Puskesmas Pasar Minggu.

The more often health workers mengikiuti education and training, the better the ability of health workers to manage IMCI. So there is a

good balance between work ability motivasi working with officers in Puskesmas Pasar Minggu, where in addition to health care workers have a high motivation to work, is also expected to have a good ability to implement integrated management of sick children.

#### **The relationship between variables Work Motivation to Performance Health Officer in the implementation of IMCI in Puskesmas Pasar Minggu 2014.**

Of the three indicators measuring owned motivational variables Health Officer, all indicators able to explain the motivation variable Health Officer that rewards, goals and desires of achievement, it proves the theory that motivation is influenced by two factors: intrinsic factors (one of which is desire of achievement) and extrinsic factors (one of which is a destination and imbalan.

this result also proves that the research work performance, responsibility, rewards, relationships, control, dependency, expansion and development of the dimensional measurement of motivation to contribute to the improved performance Kesehatan.

Officer So the authors analyzed in this study, people behave in order to achieve good performance because there is a boost in itself (internal) and encouragement from the outside (external). Dorongan in yourself like onset of confidence do an activity because of its capability. While the push from outside may arise as a result of the relationship aspects of knowledge such as Health Officers are always empathetic, open and others, or it can also motivation arises due to the combination of two things. Therefore, the three indicators (achievement, goals and rewards) are contained in a measure of motivation for the achievement of performance Health Officer in the implementation of the IMCI better. Reward indicator has a significant level of the highest compared to other indicators on motivation Health Officer, so it is worth getting the interventions to expectations doronganya Health Officer to improve the performance of the Health Officer in the implementation of IMCI in the clinic Sunday Market.

Motivation is the readiness of a special someone to conduct a series of activities aimed at achieving tujuan.<sup>10</sup> Motivasi (motivation) is the desire in a person that causes the person acts. People act for a reason, namely to achieve the goal.

Understanding motivation is critical for performance, reaction to the compensation and other HR issues that affected dan mempengaruhi motivasi.

Results showed that there is a positive relationship of motivation Health Officer Health Officer on the performance in the implementation of IMCI.

Therefore, when motivation Health Officer enhanced, it can also increase the performance of Officers of Health in implementing IMCI in health centers Sunday market directly or indirectly through the ability, and vice versa if motivation decreases can degrade the performance of Health Personnel in the application of IMCI in health centers Sunday market directly and not directly. The author assumes that improved performance can not be separated from the role of self-motivation and other supporting factors, one of which plays a major role there is motivation for the achievement of both a career and material. On the other hand two extrinsic factors (goals and rewards) are also an important factor for improving the performance of Health Personnel in IMCI implementation in the clinic Sunday Market.

In the implementation of IMCI, Health Department and Head of Puskesmas is expected to maintain motivation is good and improve motivation in the personnel whose motivation is lacking. To increase motivation in halini is the policy / implementation procedures clearly, reward performance officer, guidance and supervision of the health department.

In addition to the ability and motivation of health workers, IMCI Implementation also requires a complete facility that went so well that need to be considered for the procurement of IMCI supporting facilities are not yet available such as procurement cards mother's advice, along with the sphygmomanometer cuff child, NGT and vacuum mucus. And the necessary facilities should be available in the

examination room IMCI so that when the tool is required is already available and does not need to find the room the other.

It is concluded that this study contains a model of the test of direct and indirect relations ability and motivation on the performance of health workers in IMCI implementation in Puskesmas Pasar Minggu 2014. Results of testing the hypothesis by Structural Equation Model (SEM) method smartPLS is (1) 3 correlation between variables significantly associated positively with the level of  $\alpha = 5\%$  ( $0.05 = \text{Confidence } 95\%$ ) and 50 samples, the final model dimodifikasi. (2) Formed two variables (ability and motivation), which has a direct influence with the goodness of fit is significant to the variable performance of health workers. Most work motivation is positively related to Thitung amounted to 10.639 above value T table ( $> 1.96$ ). (3) Percentage of relationship all the variables on the performance of health workers in these models amounted to 66.09%, consisting of a direct relationship of 62.8% and the indirect influence of 3:28%. Value Q Square (predictive relevance) amounted to 44.7%, meaning that the model explains the diversity and the representatif mampu mampu examines the phenomenon exists in this study. From these findings it can be concluded that the health worker performance variables influenced by the ability and motivation to work in simult 62.8% means that the performance of health workers who either applied as it has the ability and motivation to work well, while the other 37.2% is influenced by other variables not examined.

Based on the limitations in this study, the suggestions in future research (1) Improve employee motivation through good cooperation in team, instilling a sense of pride is believed to be the clerk of IMCI, and make the officer who had the purpose of which is clear and has a desire achievements in health centers. (2) Improve the training, guidance and supervision in a planned and continuing through supervision and feedback in order to improve the coverage and improve the workability of IMCI IMCI officer. Also required mapping officer who has never participated in education and training and to propose IMCI training officer. (3) The reward

program (award) and Punish (sanctions) upon achievement of IMCI officers and give warning to the officers who have poor performance, such as the take good quality work, responsibility and achievement of targets which have not been up properly.

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# THE INFLUENCE OF ABDOMINAL BREATHING TECHNIQUE AGAINST A DECREASE IN LABOR PAIN KALA ACTIVE PHASE I

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## ABSTRACT

Labor pain is a subjective experience of physical sensations associated with uterine contractions, dilation and thinning of the cervix as well as a decrease of the fetus during labor. One method that is very effective in this abdominal breathing method is done in nonfarmakologi. Pain scale measurement is done using a scale VAS (Visual Analog Scale). The purpose of this study is to measure or no decrease labor pain active phase I Scorpion with abdominal breathing Method used in this study is an experiment that is one group pretest-postes. with huge samples as many as 26 people with accidental sampling sample retrieval methods and data analysis used is the t-test dependent. The research was conducted on 22 July to 28 August 2015. Instrument in this research in the form of observation sheet that includes the level of pain with pain scale VAS numeric before and after the intervention. From the results of the t-test dependent retrieved intensity pain abdominal breathing method is done before the average rating is the standard deviasinya 7.15 1.144 and, after the intervention of the average rating is the standard deviasinya 5.85 1.625. And for the control group prior to do abdominal breathing technique obtained average value of 7.23 with SD 0.927 and abdominal breathing technique, after the average value is 7.85 0.987 with SD and the difference in the average scale of pain before and after the intervention of 7.486. The results of statistical tests t-dependent there is influence significant relaxation breathing methods against labor pain kala active phase I with value  $p = 0.000$ . From the results of this research a midwife can apply methods of abdominal breathing relaxation in normal childbirth and care of service expected a further research using other similar titles for research.

**Keywords: Abdominal Breathing, painful Childbirth Kala I Active Phase**

## INTRODUCTION

In 2010 the WHO Making Pregnancy Safer (MPS) which essentially emphasizes the provision of maternal and neonatal health services who are skilled to reduce infant mortality and maternal mortality significantly by 2015 with early detection, antenatal care, delivery and management of good parturition (WHO, 2010).

Birth is a natural process that will pass by every pregnant women, where spending occurs results in the form of conception the baby and the placenta from the mother's womb. This process occurs on stretching and widening the mouth of the uterus as a result of the contraction of the uterine muscles to push the baby out. Along with each contraction, bladder, rectum, spine, pubic bone and received strong pressure from the uterus, this is the one that is causing the pain in childbirth (Danuatmaja & Meiliasari, 2008).

Birthing kala I accompanied pain that is a physiological process. Birthing Scorpion I was the subjective experience of sensasifisik associated with uterine contractions, dilation, and thinning of the cervix (Arifin, 2008). The perceived pain stems from the lower part of the abdomen and spread to my back and lumbar area decreased kepaha (Bobak, 2005). A study on women in childbirth kala I by wearing McGill Pain Questionnaire to assess the pain it brings that 60% of primipara describes pain due to contraction of the uterus is very good (intolerable, unberable, extremely severe), 30% moderate pain. At 45% multipara great pain, moderate pain, 30% 25% mild pain (Acute Pain Services (APS), 2007).

Various efforts done to lower pain in childbirth, whether pharmacological or nonfarmakologi. Pain management are more effective than pharmacological with pharmacological method nonfarmakologi method but is more expensive, and potentially have effects that are less good. While the



nonfarmakologi method is non intrusive, non invasive, inexpensive, simple, effective and without adverse effects. Nonfarmakologi method can also increase satisfaction during labor because the mother can control his feelings and strength (Burn & Blarney, 1994; Cook & Wilcox, Arifin was quoted by 1997, 2008).

As for various non pharmacological approach is by way of a position and the change of the mother, a massage (massage), pressure (pressure), distraction, and breath within. But the researchers interested in examining abdominal breathing technique as abdominal breathing techniques in addition to merelaksasikan muscles, Abdominal Breathing techniques in the trust is able to stimulate the body to release the endogenous opoid i.e. endofin and enkefalin so that it can eventually reduce perceived pain and Abdominal Breathing technique is also easy to do and no memelukan tool.

Research conducted in Trenggalek Hariati in an attempt decrease pain through labor I epoch techniques in rhythmic breath using a scale of pain Bounbanais (Hartini, 2004). The results of this research indicate from 12 respondents before the treatment of 7 people (58.34%) severe pain, 4 people (33.33%), moderate pain and one person (8.33%) very severe pain. After treatment, indicating mild aches and pains are 66.67% 33.33%

A preliminary survey of researchers who performed in April in the town of Bukittinggi, that BPS "D" and "F" BPM in BPM "D" obtained the number of mothers in labor 15 people per month, midwife using other techniques in dealing with labor pain at mother birthing with pharmacological action yet in BPM "F" Note that the total number of birthing mothers all amounted to 10 people per month ever done abdominal breathing technique but not influential in dealing with labor pain Scorpion I either the mother or the mother of primipara multipara this is because midwives only recommend patients to do it alone without abdominal breathing techniques taught are true.

The reason researchers chose both the BPS is due at the time of the preliminary survey both BPM has problems on labor pain relief, out of 10 respondents in thorough 8 of them declared experiencing great pain, marked by the mother not being able to communicate, to hit and not

be invited, but the handlers of the midwife is still minimal given to the respondent so that respondents feel less noticed by bidannya.

## RESEARCH METHODS

The subject in this study is the whole mother inpartu in BPM "D" which consists of 26 respondents are categorized into 2 groups, the intervention and control groups. The method of this research is both experimental i.e. researchers conduct experiments or treatment of its independent variable, then measure the result or the effect of the experiment on the dependent variable. The design research of Pre-Exsperimental Designs (nondesigns) i.e. the outer variables that come into effect on the formation of the dependent variable using a type design Intact-Group comparison on the design, there is one group that is used for research, but is divided into two, namely half the groups to experiment (which was given preferential treatment) and half to the control group (which was not given treatment). The location of the research funded in BPS "D" Bukittinggi. By the time the research was carried out in July-August 2015.

## RESULTS AND DISCUSSION

Table 1. Frequency Distribution Techniques Abdominal Breathing on inpartu Kala Inpartu I Phase Active In Physiological labor

Variable not done	Abdominal Breathing		Intervention Group	
	N	%	N	%
The intervention group	10	76,9	3	23,1

Based on the results of the study prior to abdominal Breathing techniques in the intervention group obtained frequency of pain if the value on the observation sheet more than 5 then said respondents do abdominal breathing techniques as many as 10 respondents do abdominal breathing techniques properly with persenatse 76.9% while that does not do engineering abdominal breathing with the correct 3 respondents with a percentage of 23.1%. As for the control group did not do any treatment as much as 13 respondents

**Table 2 Distribution of Pain Intensity at Inpartu mother Kala I Phase Active In Physiological labor**

Variable	Pain Intensity					
	Light		Moderate		Weight	
	N	%	N	%	N	%
Before action	0	0	38,4	8	61,6	
After Action	3	23,2	5	38,4	5	38,4

Based on the results of the study prior to abdominal breathing techniques in the intervention group before action is obtained in pain intensity was 5 respondents with a percentage of 38.4% and a weight of 8 respondents with a percentage of 61.6% whereas the measures obtained after mild pain intensity by 3 respondents with a percentage of 23.2 moderate pain as much as 5% of respondents with a percentage of 38.4% and severe pain as much as 5 respondents with a percentage of 38.4%

Bivariate analysis is computerized with chi square statistic test with significance level 0:05. said effect if P Value <0.05.

This analysis was conducted to determine the effect of abdominal breathing technique to the first stage of labor pain in the active phase Midwife Practice Mandiri (BPM) Delhamdani, S.ST, Bukittinggi SKM 2015. From the research that has been done, then obtained the following results:

Table 4.3 Effect of Abdominal Breathing Techniques To Decrease Pain in first stage of inpartu mother

Variable	Mean	SD	Different of Mean value	P
The intensity of pain after the action on the Control Group	7,85	0,927	7.846	0,000
The intensity of pain after the action on the Intervention Group	5.85	1,625		

The research showed an average pain after abdominal breathing techniques in the intervention group as many as 13 people gained an average pain = 5.85, SD = 1,625 and scale of pain following abdominal breathing technique is not performed in the control group as many as 13 people obtained average pain = 7.85, SD = 0.927 with a mean difference is 7846. The results of statistical tests (t-independent) values obtained P = (0.000), so that it can be concluded that the implementation of abdominal breathing technique significantly effective against the reduction in pain intensity during the first stage of labor active phase

This research is consistent with the statement of (Simpkin, 2005) that the relaxation breathing a nonpharmacological method that can be used to reduce the pain of wounds, surgical wounds and pain of childbirth, breathing relaxation method also reduces the fight or evade such as trembling. In inpartu mothers find that this action will mepelancar maternal circulation and can give comfort to the mother. relaxation breathing used do not have harmful side effects. Pain coping skills can be used during labor, childbirth cope well means not overwhelmed or panic when faced with a series of contractions (Whalley., Simkin., & Keppler.2008).

Relaxation breathing during labor can maintain the components of the sympathetic nervous system in a state of homeostasis so that there was no increase blood supply, reduces anxiety and fear so that mothers can adapt to pain during childbirth (Mander, 2003).

Based on the theory of Smeltzer & Bare 2008 taken nothing in common with what the researchers did that technique abdominal breathing is effective in reducing labor pain, because of the technique of abdominal breathing method is simple, requiring no tools and involves a full-time mother with the purpose of the mother can control the pain she felt.

Labor pain is a subjective experience of physical sensations associated with uterine contractions, cervical dilation and thinning, as well as a decrease in the fetus during labor. Physiological responses to pain include increased blood pressure, pulse, respiration, perspiration, pupil diameter, and muscle tension (Arifin, 2008). Where the pain from the contraction in the lower back and then

spread to the lower abdomen, pain generally have different perceived every mother. Judging from parity (kids keberapa), unveiling how. And the results showed that mothers inpartu feel severe pain at first birth by 22 people (100%).

This is consistent with that proposed by Potter and Perry (2005) that pain is a thorough experience felt by all human beings and are subjective, so its value can vary from one person to another and vary felt by people from time to time.

Method of labor pain management there are 2 of pharmacological and nonpharmacological, one nonpharmacological method is abdominal breathing technique in which the midwife to teach clients how to perform a deep breath, slow breath, (holding inspiration to maximum) and how to breathe slowly. Besides being able to reduce the intensity of pain, breath relaxation techniques can also improve lung ventilitas and improve blood oxygenation. (Smeltzer & Bare, 2002).

Relaxation is an effective method, especially in patients who are experiencing pain perfect kronis. Relaksasi can reduce muscle tension and boredom and anxiety thus preventing menghebatnya painful stimulus.

(Eni Kusyati, Page 198, 2006). Interest deep breathing relaxation technique is to improve alveolar ventilation, maintaining gas exchange, preventing atelaksi lung, cough increase efficiency, reduce stress, stress both physical and emotional stress that reduce the intensity of pain and reduce anxiety.

The results of this study together with the results of research Suparni 2014 differential effectiveness of relaxation and a cold compress to the first stage of labor pain intensity active phase which states that there is significant relationship between methods of relaxation breathing with labor Kala I with P Value <0.002.

Based on the above statement can be concluded that the results of the study the researchers did similar to the results of research conducted by Theresia yulianti (2010), namely that there is influence between relaxation techniques to decrease pain first stage of labor, where the results of this study support the theory strengthened by some. With the results of this study are expected in the relevant agencies such as maternity clinics,

health centers or hospitals to apply this technique of abdominal breathing, because the method is very simple and no cost so that it can be applied easily.

## CONCLUSIONS

From the discussion, it can be concluded that there is influence between abdominal breathing technique to the first stage of labor pain in the active phase of Midwives Practice Mandiri (BPM) "D" London 2015 with the following description:

1. The distribution frequency of abdominal breathing techniques in the mother inpartu first stage of the active phase of physiologic labor as many as 10 respondents do abdominal breathing technique correctly with a percentage of 76.9%, while that did not launch an abdominal breathing techniques with the correct 3 respondents with a percentage of 23.1%. As for the control group did not do any treatment as much as 13 respondents

2. The frequency distribution of the intensity of pain in the mother inpartu active phase of the first stage of labor is physiologically obtained before treatment of pain intensity was 5 respondents with a percentage of 38.4% and a weight of 8 respondents with a percentage of 61.6% whereas the measures obtained after mild pain intensity as much as 3 respondents with a percentage of 23.2% moderate pain as much as 5 percent of respondents with 38.4% and severe pain as much as 5 respondents with a percentage of 38.4%.

3. Effect of abdominal breathing techniques to decrease pain in the first stage the mother inpartu the active phase of labor, namely physiological pain after abdominal breathing techniques in the intervention group as many as 13 people gained an average pain = 5.85, SD = 1.625 and the pain scale after do not do abdominal breathing techniques in the control group were 13 gained an average pain = 7.85, SD = 0.927 with a mean difference is 7846. The results of statistical tests (t-independent) values obtained P = (0.000), so that it can be concluded that the implementation of abdominal breathing technique significantly effective against the reduction in pain intensity during the first stage of labor active phase.

## ACKNOWLEDGEMENT

Can provide information to health authorities, especially Midwife Practice Mandiri (BPM) Delhamdani, S.ST, Bukittinggi SKM 2015 in dealing with labor pain using the techniques of

abdominal breathing because this method is effective in dealing with labor pains, because this technique does not require a fee and only tool involves a full-time mother

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# THE EFFECT OF HOT AND COLD COMPRESS ON PAIN RELIEF DURING ACTIVE FIRST STAGE OF PHYSIOLOGIC LABOR IN PRIMIPAROUS WOMEN

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## ABSTRACT

Childbirth is a physiologic process that happened in each woman's development to be a mother. This process may cause trauma because of the pain. Even, some mother choose sectio caesarea without medical implication as a labor choice. Hot and cold compress therapy is one of non-pharmacological approach to reduce pain. The aim of this study is to know the difference of the effect of hot and cold compress pain relief during active first stage of physiologic labor in primiparous women. This is an experimental study with one group pretest posttest design. This study takes places in BPS Bunda and BPS Rita in Bukittinggi from 26<sup>th</sup> of March till 26<sup>th</sup> of May, 2014. The population of this study is inpartu primiparous women in active first stage of labor using non probability sampling and consecutive sampling method. The result of this study are mean rate of the pain before hot compress are  $7.29 \pm 1.102$  and before cold compress are  $7.33 \pm 1.238$ . Mean rate of the pain after hot compress are  $4.95 \pm 1.244$  and after cold compress are  $3.90 \pm 0.889$ . There is no differences of the pain during labor before hot and cold compress  $p=0.896$ . There is differences of the pain during labor after hot and cold compress  $p=0,003$ . There is differences of the pain deviation in hot compress and cold compress  $p=0.001$ . We conclude that there is the difference of the effect of hot and cold compress on pain relief during labor.

**Keywords:** hot compress, cold compress, pain relief, primiparous

## INTRODUCTION

Gestation, childbirth, and puerperal is a physiologic process that happened in each woman's development to be a mother. This physiologic process may cause trauma because of the pain. Even, some mother there are feel trauma for pregnant and give brith again because afraid to face another same pain. For a mother which have a give brith, childbirth pain is the most painful especially for mothers who first feel this.

A pain in the child brith is a pain from uterine contractions which can result increasing the sympathetic nervous system activity, changes in blood pressure, heart rate, respiration and if not immediately resolved it will increase the worries, uptight, and stress. A pain in maternity also led to increasing levels of catecholamines, or stress hormone like epinephrine and cortisol. Increased levels

of catecholamines or stress hormone can decrease bodys ability to fight a pain.

Management of child brith pain is one of the main goals of care child brith, the totality purpose in pain treatment are to decrease the

pain as big as possible with the least possible side. Management to resolve of the pain child birth according to study in nine home in the united states in 1996 as 4171 patient, the brith is assisted by a nurse midwife using some type of managemet pain to resolve the pain. The brith mothers around 90 % including selecting non pharmacological methods to manage pain.

Hot and cold compress therapy is one methods to manage the pain. Non pharmacological metods is the most metods commonly used to reduce pain. This metods has very low risks are cheap, simple, effective with no adverse effects.

Local anesthesia will block pain in the uterus, cervix and upper vagina. However, the pelvic floor muscles may still conduct the rotational movement of the baby's head out through the reduction of labor pain lahir.2 also retains some sensation of uterine contractions and the ability to bear down. Most mothers inpartu who experience a sense of comfort in the first stage of labor is the active phase by



applying warm compresses. There is a significant relationship between the provision of a warm compress to the first stage of labor pain of the active phase

Studies that have been done do not separate subject of study among mothers with multipara primipara, while the pain is also influenced by previous experience and only examined regarding the provision of a hot compress. Based on the above phenomenon and given the importance of giving a sense of comfort on the pain in order to avoid complications during labor and easy technique of hot and cold compresses, the writer interested to do further research on the effect of hot and cold compresses to decrease the pain of the first stage of the active phase of labor physiological mother primiparas.

### RESEARCH METHODS

This type of research is to design Experimental One Group Pretest Posttest. This research was conducted at the Mother and BPS BPS Rita Bukittinggi starting on March 26 s / d May 26, 2014. The population in this study is a first time mother primiparity inpartu active phase. This study uses a technique Non-Probability Sampling method Sampling Consecutive samples. The number of samples for each group is 21 people.

Data were analyzed using univariate and bivariate analysis. Using the t-test Paired Samples t Test and Independent t Test. Computerized data is processed using SPSS with 95% confidence level.

### RESULTS AND DISCUSSION

**Table 1. Respondent Characteristic**

caracte ristic	hot compress rerata ± sd	cold compress rerata ± sd	<i>p</i>
age	25,14 ±	25,43 ±	>
opening age	3,321	3,544	0,05
pregna ncy	6,38 ± 1,071	6,76 ±	>
	38,90 ±	1,044	0,05
	0,625	38,95 ±	>
		0,805	0,05

Based on the results of the Test of normality in Table 1 above, the data characteristics of respondents have a score > 0.05, which means the normal distribution of data or

homogeneous. Then the statistical test used was t-Test Independent. Based on the test results of the bivariate analysis on the data characteristics of respondents, it can be concluded that there are no differences in characteristics between the hot packs and cold compresses.

**Tabel 2. Distribusi Derajat Nyeri Sebelum Diberikan Kompres Panas dan Kompres Dingin**

	RERAT A	SD	MEDIA N (MIN- MAK)
HOT COMPRES S	7,29	1,10	7(5-9)
COLD COMPRES S	7,33	1,23	8(4-9)

From table 2 above can be seen that the average degree of pain before being given a hot compress was  $7.29 \pm 1.102$  and before being given a cold compress is  $7.33 \pm 1.238$ .

**Table 3. Distribution Degrees of Pain After Awarded Compress Hot and Cold Compress**

	RERATA	SD	MEDIAN (MIN- MAK)
HOT COMPRESS	4,95	1,244	5(3-7)
COLD COMPRESS	3,90	0,889	4(3-6)

From Table 3 above it can be seen that the average degree of pain after being given a hot compress is  $4.95 \pm 1.244$  and after being given a cold compress is  $3.90 \pm 0.889$ .

**Table 4. Decrease Pain Before and After Degrees Awarded Hot Compress**

	RERATA±SD	<i>P</i>
pain before hot compress	7,29±1,102	0,000
pain after hot compress	4,95±1,244	

From Table 4 above can be seen that there is the effect of hot compresses to the painful decline in the first stage of the active phase of physiologic labor with p value of 0.000.

**Table 5. Decrease Pain Before and After Degrees Awarded Cold Compress**

	RERATA±SD	P
PAIN BEFORE COLD COMPRESS	7,33±1,238	0,000
PAIN AFTER COLD COMPRESS	3,90±0,889	

From Table 5 above can be seen that there is the effect of a cold compress to the first stage of a decrease in pain physiologically active phase of labor with p value of 0.000.

**Table 6. Differences Decreased Pain Degrees Awarded Compress Before and After Hot and Cold Compress**

Variable	Hot Compress rerata±sd	Cold Compress rerata±sd	P
Before Compress	7,29±1,102	7,33±1,238	0,896
After Compress	4,95±1,244	3,90±0,889	0,003

From Table 6 above it can be seen that there is no difference in the degree of pain before being given a hot compress and cold compress with p value 0.896.

**Table 7. Difference Difference in Degree of Pain Before and After Awarded Compress Hot and Cold Compress**

Variable	Hot Compress rerata±sd	Cold Compress rerata±sd	P
Difference in Pain Before And After Compress	2,33±0,658	3,38±1,117	0,001

From Table 7 above can be seen that there are differences in pain intensity difference before and after being given a hot compress and cold compress with ap value of 0.001.

**Decrease Pain Before And After Degrees Awarded Hot Compress**

From the research results can be seen that there is the effect of hot compresses to the painful decline in the first stage of the active phase of physiologic labor primipara mothers with a p-value of 0.000. The results are consistent with research conducted Khusniyah in 2011 that there are significant stimulation of the skin with a hot compress technique to pain when I physiologically active phase of labor with p value 0,003.

Research conducted by Manurung in 2011 to get the result that there were significant differences between the degree of pain before and after the hot compress with p value 0.002 Research conducted by Yani in 2012 to get the result that there is the effect of a hot compress to comfort the mother in partu active phase of the first stage with a p-value of 0.04. Warm water compresses given to the woman's lower back in the area where the head of the fetus compresses the spinal cord relieves the pain, the heat will increase circulation to the area, thus improving tissue anoxia caused by pressure.

Research conducted by Novitasari in 2011 showed that there is a significant relationship between the provision of a hot compress to the first stage of labor pain of the active phase with p value 0.000. Heating is a simple method that is used in women to relieve sakit.11 skin stimulation through the provision of this compress can provide effective pain reduction effect.

Most mothers experience a sense of comfort in partu after being given a hot compress. Applying heat given to the mother in the lower back area of the head where the head compresses the spinal cord relieves the pain, the heat will increase circulation to the area, thus improving tissue anoxia caused by pressure.

From the results of the study proved that a hot compress effective in reducing labor pain. At the time of the study, the authors also communicate with the respondent at the time of compress given. Researchers always

evaluate every action taken. Always ask if the respondent felt uncomfortable because the presence of foreign objects placed on its back. Or how a respondent's feelings at this time, is there any effect of this compress or not

Overall based on what researchers have observed, all the respondents on average said that she felt labor pains diminished. Although responses vary slightly. This could be caused by other factors that affect pain researcher someone who has no control, such as ethnicity, employment, psychological conditions and other factors.

### **Decrease Pain Before And After Degrees Awarded Cold Compress**

From the results of this research is that there is the effect of a cold compress to the first stage of a decrease in pain physiologically active phase of labor primipara mothers with a p-value of 0.000. The results are consistent with research Khusniyah in 2011 with the result that there is the effect of a cold compress to the first stage of a decrease in pain physiologically active phase of labor with p value 0.001

Many patients and health team members tend to view drugs as the only method for pain relief. However, many non-pharmacological nursing activities that can help in the relief of pain. Non-pharmacological methods of pain relief usually have a very low risk.

Along with hot packs, cold compresses are also shown to be effective in reducing labor pain. At the time of the study, the authors found one respondent who did not experience a decrease in pain. When asked, respondents said that did not feel the reduction of the pain of childbirth. This is one of the weaknesses of this study, which, in addition to the measuring instrument that is still very objective, which is not controlled confounding variables such as ethnicity, psychological conditions, family support, employment status, etc., have affected the results of this study.

### **The degree of difference Decline Before And After Cast Compress Heat And Cold Compress**

From the results of this research is that there are no differences in the degree of pain before being given a hot compress and before

being given a cold compress with p value 0.896. While there is a significant difference between the degree of pain after being given a hot compress and after being given a cold compress with ap value of 0.001.

In line with research conducted Manurung in 2011 that there was no difference in the degree of pain before the intervention and after the intervention in the control group with ap value of 0.187. While the intervention group there were significant differences between the degree of pain before administration with a hot compress after being given a hot compress p value 0.002

Research conducted in 2011 Khusniyah get the result that there is a significant difference between the degree of pain after being given a hot compress and after being given a cold compress with ap value of 0.005. In this study can also be concluded that a cold compress is more effective in reducing pain than hot compress due to a decrease in the degree of pain before and after application of heat obtained p 0.003, whereas before and after the cold compress obtained p 0.001.

Hot compress is vasodilatation relieve pain by means of relaxing the muscles. While the cold compress is vasoconstriction which relieve pain by making the area becomes numb, slow the flow of pain impulses and increase a person's pain threshold

There is no difference in the degree of pain before being given hot and cold compresses. This proves that the factors that controlled such as age, parity, gestational age and the opening of the cervix to help in the research. where in outline all respondent already homogeneous. While there are differences in the degree of pain after being given hot and cold compresses, this proves that there is a significant difference between the decrease in pain after being given a hot compress and after being given a cold compress.

### **Degrees of Difference Between Pain Before and After Hot Compress and Cold Compress**

From the results showed that the mean difference in pain before and after being given a hot compress is  $2,33 \pm 0,658$ , while difference in pain before and after being given a cold compress is  $3.38 \pm 1.117$ . This proves that a cold compress more effectively reduce the degree of pain than the visible hot

compress on the average value of a decrease in pain was higher in the group cold compress when compared with the hot compress group.

Based on the statistical test can be concluded that there is a degree differences in pain before and after being given a hot compress and cold compress as seen from the p-value of 0.001.

The results with research conducted by Khusniyah in 2011, which is based on the statistical test *Mann Whitney Test* value of  $p$  0.005, which means there are significant differences between the groups of hot compresses and group cold compresses. This difference is supported by the results of *Wilcoxon Signed Rank Test* in each compress group, where the group hot compress value  $p$  0.003 and the group of cold compresses value of  $p$  0.001, which means the group cold compress is more effective in reducing pain than group hot compress.<sup>1</sup>

The physiological effects of hot compress is vasodilatation, relieve pain by relaxing the muscles, increasing blood flow, has a sedative effect and relieve pain by removing the inflammatory products that cause pain.<sup>11</sup> The heat will stimulate the nerve fibers that close the gate so that the transmission of pain impulses to the spinal cord and to the brain is blocked.<sup>14</sup>

Physiological effects of a cold compress is to be vasoconstriction, making the area becomes numb, slow down nerve conduction velocity thereby slowing the flow of pain impulses, increases the pain threshold and have an anesthetic effect lokal.<sup>11</sup> Another mechanism that might work is that the perception of cold become dominant and reduce the perception of pain.

Humans are the internal systems that opened and interact with internal nor external environments that cause stres. Stress causes a person to interact maintain their health through problem solving or coping mechanisms specific. Causes of stress can come from yourself, from outside individuals or for interaction with others. Influence of stress on a person depends on the level of a stressor, stressor duration and the ability and effectiveness of coping used. Then, can conclude that a person who gets stressor will respond to maintain health (reducing pain). So respondents use kopingnya to meet the

needs a sense of comfort.<sup>1</sup> On a cold compress, transfer the perception of pain the more dominant is a type of transcendence that has been reached so that respondents feel more comfortable.<sup>1</sup>

Hot compress does not have the same effect as a cold compress. Hot compress only relieve pain by getting rid of inflammatory products that cause pain. hot compress also does not have the effect of local anesthesia. Cold compresses can relieve muscle tension longer compared with a hot compress.<sup>1</sup>

During the research process, researches also found a cold compress more effectively reduce pain than hot compress. Responses given when respondents are given a cold compress faster and respondents also seem to be more relaxed when given a cold compress than when given a hot compress.

Based on theory and fact, a cold compress is more effective in reducing pain than hot compress. In the I stage of monitoring the active phase of labor using partograf, giving a cold compress is also not affect the progress and setbacks of labor. At the time of the active phase and do intervention compress, the opening of the cervix and uterine contractions continue to run normally. Therefore, cold compresses safely administered in women who are in labor and the care of mother's love can also be achieved.

## CONCLUSION

There is the effect of hot compress and cold compresses to decrease the degree of pain the I stage of the active phase of physiologic labor primipara mothers. Cold compresses are more effective in reducing degree of pain compared with a hot compress.

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# IMPORTANCE OF SIMULATED-BASED MIDWIFERY CLINICAL LEARNING: A REVIEW

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## ABSTRACT

This is a review on the importance of simulated-based clinical learning for midwifery students. As having been known that midwifery graduates need to be trained since the beginning they are in the midwifery education program. One of the important education phases in midwifery education is clinical learning.

However, clinical learning must prioritize patient safety. Thus, midwifery students cannot apply the learning process directly to the real patients and therefore they are given simulation to introduce them with clinical setting.

This is a library research with content and descriptive analyses. The results of previously done research are discussed based on their content and then it is analyzed descriptively.

the findings show that clinical learning with simulation for midwifery student is very important, considering that it will give them a clear description to what the real clinical setting is.

**Keywords:** simulation, patient safety, clinical learning.

## INTRODUCTION

Medical and health students need to undergo clinical learning because in the future after their graduation they will absolutely be faced with clinical settings in the real situation. Health education is very important to produce health workers that are competent in their field, including midwives. It has become a common knowledge that midwifery is a profession requiring various clinical skills.<sup>1</sup>

The use of simulation in midwifery clinical skills is increasing as it is a very beneficial learning/teaching aid to help students understand the real setting of real patient someday.<sup>2</sup> Declining inpatient populations, rarity of some emergency clinical situations, safety concerns and advances in learning theory are the factors that encourage midwifery teachers to have ideas to bring simulation into good clinical learning that resembles the real situation of patients.

Many midwifery institution have used simulation for their midwifery students because in health education program patient safety must become a priority.<sup>3</sup> Clinical

learning for midwifery students is also a means of building their responsibility that when they become a midwife someday, their accountability is not doubtful anymore.<sup>4</sup>

A skill that must be possessed by midwifery situation is ranging from the simple to complicated ones. Therefore, the curriculum made must be compactible or appropriate with the need of the students in clinical learning. This is in accordance with the situation that new midwifery students when they previously have nothing to do with health setting must eventually master the clinical skills in a certain degree.<sup>5</sup>

Many elements shape the success of the students in mastering clinical skills. In midwifery students, they must deal with fear when they have to face with women in labor. Therefore, in clinical skills, they have to have self-confidence to see the childbirth situation. This can be overcome when they do simulation-based learning prior to the meeting with real patients.<sup>6</sup>

The benefits that are perceived by doing simulated learning of midwifery skills are evident. Simulation learning has an educational and clinical impact and advantages over didactic approaches. Simulation enhances practice and therefore may reduce the time taken to achieve competence. Therefore, this review was conducted to give an overview the importance of simulated-based clinical learning for midwifery students.

## RESEARCH METHOD

This was a review by using a library research. The research analyzed some journal articles already published on line in internet. We used the type of analysis by means of content and descriptive analysis. First, we sorted out the contents of several studies that had been conducted in terms of the theme we chose, that is, the importance of simulated-based clinical learning for midwifery students.

The two main journal we analyzed here were "Simulated Learning Activities: Improving Midwifery Students' Understanding of Reflective Practice" by Rachel Smith, et al and "Is simulation a substitute for real life clinical experience in midwifery? A qualitative examination of perceptions of educational leaders" by Lisa McKenna, et al. Some other research results were also used to enrich the analysis and discussion of this review.

## RESULTS AND DISCUSSION

### **Simulated Learning Activities: Improving Midwifery Students' Understanding of Reflective Practice**

In this study, student satisfaction is increasing when they introduce simulation to their student. It means that, simulation has already changed the student perception to the clinical learning. When they use simulation, they will be more ready when at times of graduation they have to face real patients. Simulation has prepared them to have more paradigm and experience to imagine the real situation. Of course, after the simulation, they have to also receive clinical learning with real patients. However, they have already been equipped with knowledge about the clinical situation that they will meet in the real situation.

When this study spread feedback to their students, the students responded with positive responses. The students feel that they have increase in skill competence and requisite knowledge retention. This shows that they enjoy the learning as it does not pose fear as when they have to meet the real patients directly. Learning in steps like this commencing with simulation make the students more prepared to face the real situation.

This study also emphasizes that the students are able to perform reflective learning as they know the objective of learning really is. By knowing the direction where we should go, we can project what we will do and this also happens in midwifery clinical learning. They can focus on the midwifery skills so that the learning achievement can maximally be obtained.

### **Is simulation a substitute for real life clinical experience in midwifery? A qualitative examination of perceptions of educational leaders**

In this study, students when they are given simulation in midwifery clinical learning and some students state that simulation is a very good method to build skills related to midwifery clinical skills. Simulation is supposed to be design to resemblance the real situation and it is called fidelity. When students of midwifery program use simulation for their clinical learning, it will provide them prior knowledge about what they will do in the real settings. Therefore, simulation can be used in any aspects of midwifery clinical learning to equip the students with appropriate skills when they face real patients.

In this study, student also state that what they need in simulation is good fidelity of simulator. Therefore, good models or mannequin that can give realistic impression is needed. Good mannequin will provide students overview on the situation being faced when someday they meet real patients. When the model is not good, the clinical learning cannot be run because students will not get any realistic sense when they learn using the simulator or model.

Students also comment that what they need is a holistic model so that they can feel that

what they face is a real patient. When it is only one small part, student will not get the real impression and tend not to be serious in taking the lesson. This must be one concern for midwifery school to provide realistic model for the students in their clinical learning before they meet the real patients.

However, some students state that some element cannot be simulated. Hormone-related situation, for example, is very difficult to be stimulated. Thus, not all clinical learning will apply the use of simulator. This is a challenge for midwifery academicians to further develop simulator or learning/teaching aids for midwifery students that someday all learning can be delivered fully and holistically.

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## RELATIONS BETWEEN GRADE-POINT AVERAGE WITH COMPETENCE TEST RESULTS ON THE GRADUATE MIDWIFE IN TANJUNGPURBA HEALTH POLYTECHNIC 2014

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### ABSTRACT

Quality of midwife in Indonesia ten to decrease comparing to long time ago, this thing is be evidenced by midwife competence test result in the end of 2013 year. From 3171 midwife candidate that join competence test in east java, actually 40 percent not pass it, this condition must be anticipated as soon as possible, remind midwife role that very strategic. Globalization demand, plenary health service, application of competence based curriculum., and applied rule of laws, need standardization in education output and health worker competence. Competence test is nationally as a assessment that have function to standard applied, give direction in study process, and give suggest from current study process. This study's purpose is to know correlation of grade-point average (GPA) with the result of competence test of alumnus of third diploma of midwifery of tanjungpurba health polytechnic in 2014. The population are all of competence test participants in 2014 that have total are 118 participants and the result of sample counting got 99 participants and sampling technique is use simple random sampling. Data get use documentation study. Analysis of data is use chi square test. The result of study show there is correlation of GPA with competence test result of midwife alumnus of tanjungpurba health polytechnic in 2014 with p value is 0,009. The suggest for lecturer to increase quality of study process. And to leader to can completing infrastructures need.

**Key word: GPA, competence test, midwife alumnus.**

### INTRODUCTION

A qualified midwife produced by the midwifery educational institutions that managed by observing the development of science, technology and regulation. The education of Midwives in Indonesia at this time the majority on the level of Midwifery third Diploma with qualifications as a midwife implementor, that has the competence to implement practice in the institutions of the Ministry as well as individual practice (Kepmenkes Number 369/Menkes/ SK/III/2007 about the standards the profession of Midwife). Measure the ability of the midwives in completing education is expressed with the grade-point average (GPA), so midwives that stated pass can have the competencies like a good midwife with statement the higher the value of the GPA it means the higher quality for the individual appointed as a midwife. Academically, the success of the midwife is indicated with GPA.

The quality of midwives in Indonesia might to decline than some time before, this is proven by the results of the competency test by the end of 2013. From 3.171 the midwife candidate that follow competence in East Java, apparently that 40 percent of them did not pass, these conditions should be anticipated as soon as possible, bearing in mind the role of the midwife who is very strategic. Riskesda in 2013 known that knowledge on the existence of households about midwives practice or birthing home in nationally was 66.3 percent, the highest in Bali (85,2%) and lowest in Papua (9.9%). In fact, contraception service in Indonesia mostly provided by midwives (76,6%) in non-governmental service of facilities place of midwives (54.6%). The quality of midwives should be improved, especially at this time with many institutions of midwife so as to allow supervision of the less and very necessary improvement ranging from the quality of education, monitoring or the refresher plus" (Nafsiah Mboi in

<http://majalahbidan.com/kualitas-bidan-menurun/>).

The demands of globalization, plenary health services, the application of the competency-based curriculum, as well as the regulations of the applicable legislation, need standardization in terms of the output education and competence of health manpower. The basic aspects influenced why competence test of midwives become something that very important was done to enhance competitive advantage and satisfy the standards of global needs. National competency test as a functional assessment in standard setting, giving directions in the learning process, and provide feedback on the learning process at this time. In determining the assessment methodology, should pay attention to the principle of the validity, reliability, feasibility, and its impact for college student and educational institutions (Kirana Pritasari, 2013).

Competency test is intended to ensure the higher education of health graduates who are competent and standardized nationally. Competency test to test the knowledge and skills as the basis for the practice of the health sector and encourage lifelong learning. Competency test as a method of assessment for the management of patients with safe and effective (Directorate General of Higher Education, Ministry of Research, Technology and Higher Education, 2015) In the seminar of aipkind Bandung

Test the competencies used as a basis for issuing Registration Certificate in the form of a certificate of competence. Certificates of competence is a certificate of recognition of the competence of health professionals to be able to carry out the practice and profession or occupation throughout Indonesia after passing the competency test, which means that the impact of a midwife does not pass the competency test is not able to carry out the practice of his profession.

Illustration competency test data midwife that have been implemented three times that started in 2013 an increasing number of graduation by passing the limit value range in value 40. Nationally the number of participants graduated in 2013 with 40.14 NBL is 53.5 %, exam period in June 2014 by the passing the limit value 40.14 amounted

64.65% and the periods of November 2014 amounted to 40.28 passing the limit value is 76.3%. competency test using the blue print of the field test third Diploma in Midwifery. (Directorate General of Higher Education, Ministry of Research, Technology and Higher Education, 2015 in Bandung Seminar AIPKIND).

Ministry of Health polytechnic graduates midwife Tandjungkarang start competency test in 2014, which is in the period of June 2014 for the participants from a special line and period of November 2014 to graduates who came from Diploma. Results of Competency Test midwives graduated from the Department of Midwifery Tandjungkarang period of June 2014, from 40 participants a special line and that can not pass only one person and the competency test period of November 2014 followed by 119 people midwife diploma, which did not pass as many as 8 people (6, 7%), so the author is interested in studying with the title "Relations between Grade-point Average (GPA) with Competence Test Results on the Graduate Midwife in Tanjungkarang Health Polytechnic 2014"

## RESEARCH METHODS

This study uses a cross-sectional design of the associated between grade point average (GPA) with test results midwives graduate competence in the Department of Midwifery Polytechnic Health of Minsitry Health. who study the dynamics of the correlation between risk factors with effects, with the approach, observation or data collection at once at a time. The research variables exist independent variables in this study were Competency Test results, while the dependent variable is the Grad-point average.

The population in this study are all graduates of midwives period in August and competency test period in November 2014 amounted to 118 people. Sample calculation results obtained by 99 participants and sampling techniques with simple random sampling. *simple random sampling*, simple random sampling to obtain 69 normal birth mothers without IUFD. Inclusion criteria for the study include, birth mothers with gestation  $\geq 20$  weeks, and is willing to be the subject of research. Exclusion criteria are mothers who have abortions.



The data collection independent variables in this study is the Competency Test Results, while the dependent variable is the Grade-point average is done by documentation.

Data processing through the stages of editing, coding, entering, and cleaning. Data analysis was performed using bivariate. The statistical test using chi-square. Inferensi using p-value with a degree of confidence (confiden interval) of 95% and an error rate ( $\alpha$ ) of 5%. Significance is obtained when p value >  $\alpha$  (0.05), then Ho is accepted (no relation). When  $p \leq \alpha$  (0.05), then Ho is rejected (no relation). A causal relationship between the independent variables and the dependent expressed by the Relative Risk (RR)

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## RESULTS AND DISCUSSION

Based on the results of data processing, obtained the proportion of grade point average (GPA) of midwives graduated in 2014 were as follows:

**Tabel 1: The proportion grade point average (GPA) of graduates midwives**

GPA	n	%
Not good	52	52.2
Good	47	47.5
<b>TOTAL</b>	<b>99</b>	<b>100</b>

**Tabel 2. Proportion of the result of competence graduates midwives polytechnic of health Tanjungkarang in 2014**

Results	Total	%
Not Pass	7	7.1
Pass	92	92.9
<b>TOTAL</b>	<b>99</b>	<b>100</b>

From the table above it can be seen that the proportion of competence test results graduates midwife polytechnic Tanjungkarang in 2014 the most with the results passed the competency test, as many as 92 out of 99 respondents (92.9%). Based on the results of data processing, the result of analysis on the correlation between GPA with the results of competency tests graduates midwife polytechnic Tanjungkarang in 2014, are as follows:

**Tabel 3: the comparison table**

The results of competency tests	GPA				p value
	Not Good		Good		
	N	%	N	%	
Not Pass	7	100	0	0	0,009
Pass	45	48.9	47	51.1	
<b>Total</b>	<b>52</b>	<b>52.5</b>	<b>47</b>	<b>47.5</b>	

From the analysis of the correlation between GPA with competency test results in the table above can be seen that 7 does not pass the competency test with a GPA of not good while 45 of 92 (48.9%) passed the competency test with a GPA of less well, Statistical test results showed that the value of  $p = 0.009$  ( $p \text{ value} < \alpha$  (0,05), means that there is a correlation between GPA with test results on the competence of graduates midwife

Based on the results of this research is that the GPA graduates midwifery Polytechnic Health Tanjungkarang in 2014 still low, over half of the 99 respondents who have a GPA of less good (<3.25) is as much as 52.5%, the result of passing the competency test, 92.9% and there is a correlation between GPA with competency test results.

The results are consistent with the results of research Lestari (2012) which showed that the majority of student learning outcomes obtained (GPA) <3.00 (46.2%).

Learning outcomes achieved by students affected by two main factors, namely factor of the student and the factors that come from outside the student or environmental factors. Clark in his research found that 70% of learning outcomes are influenced by the ability of students and 30% are influenced by the environment. Factors that come from the students the ability he has as motivation,

interest and attention, attitude and study habits, persistence, social, economic, physical and psychological factors. Clark in his research found that 70% of learning outcomes are influenced by the ability of students and 30% are influenced by the environment. (Sudjana, 2004)

These results indicate the existence of differences in students with a GPA Haslinda study (2013) that saw GPA early sign that shows that there are differences in achievement between students GPA through the driveway PMDK, SNMPTN, and Swadana. At the college level, the quality of education a student can be seen from a cumulative grade point average (GPA) of his. IP results of students is an indicator of success for education. Someone who had a learning process, in order to succeed in accordance with the goals and dreams, and must consider several factors that affect learning

Opinions about learning them is that learning is a simple problem, the results are more important. When the test scores mean better learning activities that have been done has been right, are undisputed.

Activity learning is not only determined by the talents and interests, but also by the method and also a good way of learning.

A student with a mediocre intellectual capacity can only achieve success in learning due to wear and the proper method of learning so as to obtain success in learning. Progress in studies not only depends on the intelligence and diligence, but also to learn a good method. Most of students understand the field of study with a fast and fun, while others are slow and struggling. But intelligence is not the only factor that determines student's progress.

Intelligence is necessary for progress in the study but most intelligent student (native ability may be measured) failed, because of their lack of effort, do not know how or methods of effective learning. How to study at universities that show an active attitude in learning, such as frequently asked questions, like notes, pay attention to teacher explanation, in response to learning and draw up a timetable needs to be learned and practiced, but most students do not know this. Most of them only depends on the ways of

learning that are found in the school or constantly learning by trial and error. Intelligent students though rarely know how to learn lessons are effective, they advanced as more intelligence, but they will be more progress if they know the good of method learning, otherwise there are students who are less intelligent but know the good of methods of learning are, they can exceed intelligent college students.

Competency test is a process to measure the skills knowledge and attitude of health personnel in accordance with professional standards, Health Workers Competency Test System (Decree 179/2011) are National, managed at the central government by the Assembly Health Manpower Indonesia together MTPK and professional organizations. Test was prepared based on the standards of competence, blue print and grating questions developed by the National team.

The impact of the implementation of the competency test will be seen starting from the input, process, output, outcome and impactnya: Input as the quality of students, faculty and educational facilities, such as process-quality curriculum, learning and assessment process. Output from the competency test will see the quality of graduates, the quality of professional health personnel Outcome and its Impact in the form of quality health services. Through the process of competency testing, registration and licensing of this, the expected quality and competence of health workers to meet the standards that are not applied on a national, but also regional and international.

The results are consistent with research Wicaksono (2011) which shows that there is a significant relationship and strong enough between the GPA and grades Competency Test Indonesian Doctors Association (UKDI), but in contrast to the results of research Sulistianingsih (2014) which states that there is no correlation between GPA graduates with the results of competency tests midwife.

Learning outcomes achieved by students affected by two main factors namely factor of the student and the factors that come from outside the student or environmental factors. Clark in his research found that 70% of learning outcomes are influenced by the ability of students and 30% are influenced by

the environment. Factors that come from the students the ability he has as motivation, interest and attention, attitude and study habits, persistence, social, economic, physical and psychological factors. Another factor is the most dominant external factor that determine or influence the learning outcomes are achieved the quality of teaching. Results of the study showed that 76.6% Sudjana learning outcomes are influenced by a teacher's competence (Sudjana in sustainably, 2012)

Based on the results and discussion of the need to be efforts to increase the GPA of the knowledge, skills and attitude to be able to increase the percentage of graduates competency test.

## CONCLUSION

There is a correlation between GPA with competency test results gradutes midwifery at the polytechnic Tanjungkarang in 2014 with a value of  $p = 0.009$

## ACKNOWLEDGMENT

In order to improve the performance of lecturers in order to increase the number of graduates competency test, by improving the quality of teaching and learning processes optimally in the classroom, laboratory and in the clinic.

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# THE EFFECT OF AROMA THERAPY TO DECREASE ANXIETY THIRD TRIMESTER PRIMIGRAVIDA IN PREPARATION FOR CHILDBIRTH IN THE WORKING AREA BUKITTINGGI CITY GULAI BANCAH HOSPITAL CENTRE

*Rulfia Desi Maria, Tuti Oktriani, Yunefit ulva*

## ABSTRACT

**Most mothers primigravid feel fear and anxiety in the face of labor. Feelings of fear and anxiety** felt by the mothers constantly would not be good for expectant mothers. Methods are used to reduce anxiety in pregnancy there is the use of pharmacological and nonpharmacological techniques. Pharmacologically more effective than pharmacological methods nonfarmakologi but more expensive, and have adverse effects. While nonpharmacological method is cheap and without any adverse effects. Nonpharmacological methods can improve satisfaction during pregnancy if the mother can control the feelings. One technique that is often applied nonfarmakologi is aromatherapy. This study aims to look at the effect of aromatherapy to decrease anxiety primigravida third trimester in preparation for childbirth.

This type of research is experimental research with Quasi Experiment design and design is one group pretest posttest. Population is all primigravida entire third trimester in Puskesmas Guguk Long Bukittinggi the number of 15 people. The total sample of 12 people with purposive sampling technique.

Univariate analysis showed that the average values of anxiety before given aromatherapy (Pre Test) at 23.33 and the average value given aromatherapy anxiety after (post test) of 12.33. Meanwhile, bivariate using t-Test Dependent (Paired t-Test) obtained pvalue 0.001 ( $p < 0.05$ ) means that  $H_0$  is rejected. Thus concluded that there is the effect of aromatherapy to decrease anxiety in the third trimester primigravida Work Area Puskesmas Gulai Bancah Bukittinggi. Suggested to the relevant agencies to giving aromatherapy can be applied as one of the effective methods for dealing with maternal anxiety in the face of labor.

**Keywords : Aromatherapy, anxiety**

## INTRODUCTION

Healthy Indonesia is the image of condition Indonesia in the future, including society, nation and country where shows with society where living in health public area and healthy living habits, have ability to reach the good healthy service with, have the ability to reach quality health services in a fair and equitable, and achieve the health status of the highest throughout the territory of the Republic of Indonesia (Depkes, 2009).

Every pregnant mommy where will maternity the first baby will feel anxiety higher than the woman who ever maternity before, the prevalence is unidentification cause there haven't any information available. Anxiety in woman cause by scared of healthy, age and her pregnant, and financial problems (Kartono, 2002).

Pregnant is the growth process of fetus intra uterin since conception untill entering first step in maternity. Pregnant take within

about 280days (40weeks). Pregnant clasificate in in 3 midterm, first midterm from contraception till 3 month pregnant, second midterm from 4th till 6th month, and 3rd or last midterm from 7th till 9th month pregnant (wiknjosastro, 2005).

Physically and physicologist changed in-in fertus woman makes she anxiety-worried, where cause no education about pregnant. Caused highly mortality case for pregnant woman or maternity woman and the baby in Indonesia is about the lack knowledge of care pregnancy. So she dont knows how to resolve uncomfortable where she's feel. (Solihah, 2008).

Pregnant is the happiness for the pregnant woman and her husband. But pregnant can changed be some anxiety for them. Anxiety where feel by pregnant woman will effect to her in first, second and third midterm have a different charecteristic and will make some effect to her fertus. (Luluvikar, 2009).

Faced maternity, pregnant woman will get some cared-worried and anxiety feel, hows to faced birth her baby. That condition if

occurs continuously will haven't good for her and other mom-willbe. Over scared and anxiety make the junction concentration for prepare her maternity, and not optimal preparation when she maternity her first baby (Huliana, 2001).

Anxiety where faced by pregnant woman is, preparation for maternity cause entering midterm III and she will disputed the healty and baby condition. Aworried come if the baby disability physcally and psychology, where cause by blame or sins in the past (Kartono dan Utami, 2009).

Prevalens (morbidity) anxiety junction rate about 6-7% from general population. Researches with using *Hamilton anxiety Rating Scale*, prevalens the junction rate about 8-12% (Ibrahim, 2002).

Many ways to reduce anxiety during pregnant. Some use pharmacological and non-pharmacological. Manage anxiety with pharmacological more effective than non pharmacological method, but this way more expensive and the potential to make some bad effect. And nonpharmacological is cheapest simply effective with no bad effect. nonpharmacological method can boosted up happy and satisfied feeling during pregnant and maternity proces if she can take control anxiety and scareted. nonpharmacological method like meditation, hypnosis, music, *acupressure*, aromatherapy (Suryani dkk, 2011).

Aromatherapy can using with many ways, using *oil burner* or heaters, massage, breathing, and spa. Using heaters (Jawa: anglo), evaporation when *essentia oil* down into heat water the filling up the air in room with nicely aroma. This aroma stimulus reaction to our emotional moody. Scientific this happend cause aroma make some stimulus and send the signal to cereblum for influence moody (Hutasoit, 2002).

Suprijati research result (2013) "Efektivitas pemberian aromaterapi untuk menurunkan kecemasan ibu hamil trimester III dalam persiapan menghadapi persalinan di BPM Suprijati desa bagi Kecamatan/ Kabupaten Madiun" shows aromatherapy treatment effective for reducing anxiety rate in pregnant woman midterm III when faced maternity.

Damayanti research result (1995), shows 80 % pregnant woman feel scared, fear, anxiety, afraid, and worried to faced maternity. That feel about worried to her fertus, painness when maternity, and

physically and psychologist cahnge when maternity.

## RESEARCH METHOD

The type of thus research using *Quasi Experiment* design. Notoatmojo (2005), *Quasi Experiment* is the research with semi-experiment. And desaign mode is *One Group Pretest – Posttest Design* without controll group but has been done do first observation (*pretest*) are available to see thechanged after experiment (*posttest*).

Population is all research subject and object with some characteristic. Not just subject or object will be the research goal but all characteristic in thats object or subject ( A. Aziz Alimul Hidayat, 2007). In this research who will be the population is primigravid midterm III in public healt center Gulai Bancah Bukittinggi city where tottaly is 15 person.

## RESEARCH RESULT

### Anxiety Average Rate Primigravida Midterm III When Prepared Maternity Before and after Aromatherapy Treatment

Variabel	Max	Min	Median	SD	Mean
Anxiety before aroma therapy treatment	27	11	24,00	3,1	23,33
Anxiety after aroma therapy treatment	19	8	12,00	2,9	12,33

Based on list 1 we can knows anxiety averange rate in primigravida midterm III when faced maternity before aromatherapy treatment is 23,33 with standart deviation 3,1.

Base on list 2 we can see anxiety average rate in primigravid midterm III when faced maternity after aromatherapy treatment is 12,33 with standart deviation 2,9. This one way with Suprijati research "efektivitas



pemberian aromaterapi untuk menurunkan kecemasan ibu hamil trimester III dalam persiapan menghadapi persalinan di BPM Suprijati Desa Bagi Kecamatan Madiun” got 43,75% respondentwith medium anxiety before aromatherapy treatment, then reduce to 25% after aromatherapy.

Anxiety is emotional respons where imajine fear, afraid, painess, worried with all physically problem. Thats can be happend in all situation in live and healty problem. Anxiety make some body reaction previously like a empty feel in abdomen, unnormally breathing, unnormally heart rate, over sweat,and feel like wanna do pee or poo. Included with feel wanna move and runfrom anxiety things.

In midterm III, pregnant mother most oriented to reality how to be a parent soon, where the link she and her fertus grewth in this midterm. She think about her and her baby condition. With hope will come a baby, anxiety about painess and body changed after maternity and lost control when maternity its can be the attention point.

Based on researches analize after do intervension aromatherapy treatment reducing anxiety. Anxiety reduce case got some intervension like aromatherapy treatment where make some nicely effect in cereblum to influence emotional. Koensoemardiyah (2009) tells aromatherapy effective to reduce stress and anxiety when we aromatherapy treatment. Mecanism reseptor by smelling more faster than other router when handled emotional and stress, smelling have a live contact with cereblum part to stimulus for make some effect where caused cause aromatherapy.

When we breathing and breath some aroma, the chemist ingredient will entering bulbus olfactory, then limbic system. Limbic is the structural in intern part of brain and thats like a ring unter cortex cerebral. And the formation 53 part and 35 ductus or tractus where linked berhubungan dengannya, included amygdala and hipocampus (Prima Dewi, 2009).

Limbic system is the central or painess , happyness, agry, scared, afraid, depression, and other emotional. Limbic system accepted all information from hearing system, visions system, and reseptor system. This system can controled body temperature, hungry feeling, thirsty. Amygdala is a part of limbic system where responsible for emotional respons to aroma. Hipocampus responsible to memory and oriented with smelt and thats

the place for chemist to implus the storage in our cereblum for oriented smelt type (Prima Dewi, 2009). Most respondent tells aromatherapy treatment make they are realx and feel comfrot.

Bivariat Analize do with *Paired T-test* with meaning degree 0,005 and believeable rate 95%. This research have some effect within variabel dependent and independent if p value is  $\leq 0,05$ . Bivariat analize to see the impact aromatherapy giving for reducing anxiety to faced maternity.

### List 3 Impact aromatherapy Treatment for Reduce Anxiety Primigravid Midterm III When Prepared Maternity

Variabel	Mean	SD	SE	p-value	N
Anxiety (Pre Test)	23,33	3,12	0,9	0,001	12
Anxiety (Post Test)	12,33	2,9	0,8		

Based on that list, average before aromatherapy treatment is 23,33 with standart deviation 3,12 and after aroma therapy treatment is 12,33 standard deviation 2,9. After statistic test with using *Paired t-test* got p-Value 0,001 ( $p < 0,05$ ) its mean Ho rejected, so there’s have impact when aromatherapy treatment to reduce anxiety primigravid midterm III when prepared maternity in public healt center Gulai Bancah Bukittinggi on 2015.

Result shows after aromatherapy treatment median anxiety value was reducing. So its mean aromatherapy can reduce anxiety when faced maternity. Aromatherapy treatment have a possitive effect cause freshness from aromatherapy, stimulus sensoric sytem, reseptor and finally influence other organs make strong effect to emitonal person. Aroma hacked gained by reseptor in nose and give some information deeper to brain area where controlled emotional and memori and give information to hipotalmus where is internal system, included sexuality, body temperature, and stress reaction (Shinobi, 2008). So, aromatherapy treatment give real effect for anxiety pregnant woman midterm III. This impact shows aromatherapy treatment for pregnant woman impacted to reduce her anxiety in midterm III.

Internally factor is age, educational, knowledge, educational is important cause if havent or minimize knowledge/education, salary, working, and husband attitude. External factor come from condition where the pregnant woman stay. Research do in noon and afternoon, so its effect with temperature, weather, and atmosphere from social culture . By assumption research team, aromatherapy treatment is the method for reduce anxiety and make relax to do maternity. And aromatherapy can reduce painness during maternity, so aromatherapy treatment can do during maternity process.

### CONCLUSION

1. Average anxiety value before aromatherapy treatment(*pre-test*) is 23,33 with medium anxiety rate 83,3% when do preparation to faced maternity in public healt center Gulai Bancah Bukittinggi on 2015.
2. Average after aromatherapy treatment (*pre-test*) is 12,33 with medium anxiety rate 25% when do preparation to faced maternity in public healt center Gulai Bancah Bukittinggi on 2015.
3. Theres a meaning impact within aromatherapy treatment to reduce anxiety rate primigravid midterm III to do maternity in public healt center Gulai Bancah with  $p < 0.05$  (0.001).

### ACKNOWLEDGEMENT

1. For related institutions: Given this research, it is expected for relevant agencies / health personnel to provide full and detailed information about pregnancy and more open to patients with a particular approach to the patient to tell anxieties experienced in preparation for childbirth.
2. For the Next Researcher: We suggest for the next researchest for research more deeper impact aromatherapy treatment to reducing anxiety so we can preview dan studied more variable where still linked..
3. For Educational Instituion: With this research, hope educational instanton give more knowledge about aromatherapy treatment reduce anxiety. So this can be a new

knowledge for lecturer and student about aromatherapy treatment.

4. For Respondent: Client can get new knowledge about anxiety in her pregnant midterm III there's have a method to reduce anxiety when during maternity.

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# THE CORRELATION BETWEEN PERSONAL HYGIENE, FOOD INTAKE AND STRESS WITH FLUOR ALBUS RATES / EVENTS / CASES / INCIDENTS / TRENDS

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## ABSTRACT

The Relationship With the Frequency of Personal Hygiene, Lifestyle Behaviors and Stress as Opposed to Incidence / Trends / Cases / Rates of Flour Albus. Flour albus (leukore or flour albus) is a discharge from the vagina, besides menstruation. Flour albus is a very frequent symptom experienced by most women. The number of Indonesian women who experience vaginal discharge which amounted to 75%. Almost all women have experienced vaginal discharge. This study aims to determine the relationship of lifestyle behaviors in high school with flour albus events Nusa Putra 2016. The population in this study were all students of class X and XI as many as 74 people and sample taken was the entire amount of the population. Based on the results of this study concluded that most of the 74 respondents who experience vaginal discharge is normal, comprising of 38 respondents (51.4%) and those with abnormal vaginal discharge that is from 36 respondents (48.6%), most are respondents frequency of changing underwear is not good 43 (58.1%) and the frequency of replacing pants 31 (41.9%), most were frequencies of replacing menstrual pads with both 50 (67.6%) and the frequency of changing by proper timing regularly is not good 24 (32.4 %), the most is that your dietary choices is not good 42 (6.8%) and a good diet that is 32 people (43.2%), the highest good is to stress arrives at a total of 32 (43.2%) and stress is proven to be good at 42 (56.8%).

**Keywords:** Behavior, Personal Hygiene, Lifestyle, Food Intake, Flour Albus / Vaginal White Discharge / Wet Mount, Leukorea

## INTRODUCTION

Teenagers or youth are priceless human resources as successors who will take on a role of our country's struggle and progress in freedom. The reproductive health program to help them out to master knowledge, awareness, attitude towards healthy, sensible and responsible reproductive lifestyle (Manuaba, 2010).

Reproductive health-related matters seem to be the underlying issue as it is reflected on state feasibility in providing public healthcare services due to whole physical, mental, social well-being - regardless the absence of disease or weaknesses on reproductive system along with the function of the processes (Prawirohardjo, 2010).

One of the most common reproductive health problem experienced by teenagers is flour albus (white discharge/leukorea/yeast infection). This

yeast infection can trigger and create insecurity in women, especially female teenagers. Flour albus, or white discharge is a relatively used layman's term to pinpoint vaginal candidiasis invading women's private triangle area. This vaginal wet mount is a specific health issue in women. In an earlier survey held towards the lady visitors in several drug stores in Yogyakarta for a month, it can be inferred that 60% of the female guests were, or, had prescribed medications to handle / cure flour albus condition. According to expert results, 50% of junior high school & high school female students ranging less than 25 years of age (El Manan, 2011).

Flour albus/white discharge/vaginal wet mount/leukorasis is prompted by a couple of things.

One of the precipitating habits is cleaning the lady parts too often with

wet sanitary wipes, wearing overtight pants / undergarments or sensitive underwear fabrics and not changing old used ones properly. Another bad regimen is not constantly replacing previously worn pads during menstrual periods as many times needed / it should, from time to time. Also to lead a good personal hygiene, like cleaning the private parts properly after urinating or defecating, is an effective way to prevent the symptoms and causes of secreting fluor albus (Anindita, 2006).

## RESEARCH METHODS

Research population were of 74 students. The sampling technique is total sampling, of 74 female teenage students. The data collection/polling was done by applying primary type data and instruments of questionnaires. The analysis used were univariate and bivariate kinds.

## RESULTS AND DISCUSSION

**Table 1. The Frequency Distribution of Personal Hygiene, Food Intake, Stress With Fluor Albus Cases/Rates**

Factors	N	%
<b>Fluor Albus</b>		
Normal	38	51.4
Not normal	36	48.6
<b>Changing Underpants</b>		
Good $\geq 2$ times a day)	31	41.9
Not Good (< 2 times a day)	43	58.1
<b>Changing Pads</b>		
No (< 3 times a day)	50	67.6
Good ( $\geq 3$ times a day)	24	32.4
<b>Food Intake</b>		
Good (Low Carb & Sugar)	32	43.2
Not Good (High Carb & Sugar)	42	56.8
<b>Stress</b>		
Low (Personal Burden)	32	43.2
Medium (Social Burden)	42	56.8

The result indicates / implicates that the vaginal white discharge events of Nusa Putra High School female students in 2016 took place with 38 teenagers in

normal fluor albus (51,3%) as to the abnormal vaginal discharge which happened to 36 students (48,6%).

Normal fluor albus looks clear, non-smelling / scent-free and often extracted before or after monthly period, which is considered to be reasonable / standard. This fluid is also a natural shield protection to minimize frictions on rubbing against vagina walls when walking or during sex / intercourse (Saifuddin, 2010).

**Table 2. The Relationship Between Personal Hygiene Frequency, Food Intake & Stress With Induced Fluor Albus Incidence / Event / Rate / Trend / Case**

Variables	Fluor Albus		P Value	OR
	Normal	Not Normal		
<b>Changing Underpants</b>				
Good ( $\geq 2$ times a day)	21	17	0.003	3.21
Not Good (< 2 times a day)	10	26		
<b>Changing Menstrual Pads</b>				
No (< 3 times a day)	18	20	0.00	113
Good ( $\geq 3$ times a day)	32	4		
<b>Food Intake</b>				
Good (Low Carb & Sugar)	20	18	0.05	2.22
Not Good (High Carb & Sugar)	12	24		
<b>Stress</b>				
Mild (Personal)	22	16	0.01	3.54
Medium (Social)	10	26		

The most frequent cause of pathologic vaginal white discharge is generally infection with liquidy yellow-ish to green slime / stain containing leucocytes, mostly thick-textured (jelly-ish) with sometimes (foul/unpleasant) odor (Saifuddin, 2010).

In a late survey promoted towards female customers of a drug store in Yogyakarta during a period of 1 (one) month and the outcome showed that 60% of the female customers had treated



themselves orally / externally with medications to alleviate / to relieve pain, aches, infection, inflammation or any sort of discomfort in their reproductive areas, particularly fluor albus / white discharge and pertaining to expert results, 50% junior high / high school students of 13-17 years old and college students also had experienced / endured fluor albus/vaginal white discharge when hitting less than 25 years of age (Mayasari dkk, 2015).

### **Changing underpants / underwear / undergarments.**

The result implicates that the bad habit of not changing very often reaches up to 58,1% where as the well-timing for changing is 41,9%. Statistical tests came up with P value of 0,03 – then it can be summarized that there is a significant connectivity between the habit of regularly changing underwear / panties and fluor albus event rate / case.

The research is compatible with the theory stated by (Anindita, 2006) clarifying that the frequency of changing underpants twice a day minimum can help reduce and prevent fluor albus from happening – rarely changed panties is also the main trigger of humidity / moist on the genitalia area.

This finding is also supported by a theory from (Wardell & Czerwinski, 2001), asserting that a moist area, if occurring continuously can lead to bacteria and fungus growth, infecting tractus urogenitalia at the end.

The research output courtesy of (Indriyani, 2012) confirms that there is a correlation between personal hygiene and fluor albus incidences / vaginal white discharge, where 5% of the respondents had already practiced good personal hygiene.

### **Changing menstrual pads.**

From this research, it can be cited that the largest frequency of changing pads

which proves to be a good habit is at 67,6% while the less good habit represents 32,4%. Statistic tests quoted a P value of 0,00 – then bottomline would be that there is a meaningful relationship between pads changing habit as it was linked with fluor albus incidents.

(Omidvar, S & Begum, 2010) quoted that the frequency of changing pads at night times and in school or campus is very important to do, followed by replacing the pads every 3-4 hours or so is pivotal / crucial for maximum care and comfort.

### **Food Intake.**

The research demonstrates that unhealthy eating pattern of 56,8% , contradicting the good eating habit of 43,2%. Statistics tests resulted in P value of 0,05 – then it can be proclaimed that there is no positive, reinforcing relationship / connection none whatsoever between eating habit and fluor albus rates / events / incidences / happenings.

This data is however conflicted with (Dalimartha, 2002) explaining that nutritious and balanced food intake can help the body fight infection and avoid vaginal white discharge / wet mount. Extra artificially sweetened snacks / food may render negative shortcomings to the required bacterias inhabiting inside and on the vagina. Fluor albus can be managed if the lists of consumed daily food are of low-glucose, such as cabbage, coleslaw, carrot, cucumber, green leaves and beans, spinach, string beans, tomatoes and celeries, etc. These are low in calories and high source in vitamin and minerals.

### **Stress.**

It can be extracted that medium level of stress (56,8%) and mild stress (43,2%) are mostly acquired. P value of 0,01 translated that there is a valid connection between stress and fluor albus rates / events / cases / incidences.

This fact goes hand-in-hand with conceptual thinking (Solikhah, 2010) saying that women may tend to undergo disorders from time to time in their menstrual cycles or fluor albus / vaginal white discharge, which could lead to stress. Agustiani (2011) also backs up the idea by result from research, acknowledging stress level and fluor albus / vaginal white discharge events / rates in teenagers in distress (medium) are most likely to experience vaginal discharge. Saraswati (2010) breaks down / physiological functions of burnout or fatigue (physical, mental or emotional) will strongly affect the hormones flow, mechanisms and scheduling in a female's body, inducing fluor albus.

## CONCLUSIONS

Based on the outcomes and discussions on the subject, a conclusion can be drawn be that as it may; there is a significant correlation between lifestyle behavior of personal hygiene (changing underpants, menstrual pads) and stress to fluor albus incidents / rates / cases / events at hand. Nevertheless, it is officially confirmed that eating pattern has nothing to do with, significantly committing /contributing to fluor albus / vaginal white discharge incidents / rates / events.

The biggest population excerpted by result will be the female teenage students experiencing normal vaginal white discharge / wet mount, less than good frequency of underpants changing regularities, intertwined with slightly good level frequency of menstrual pads changing / replacements / removals / disposals due to timeliness, less than good eating habit and good stress, alongside its managements.

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# EFFECT OF SCHOOL SUPPORT, HEALTH WORKERS SUPPORT, PEER GROUP SUPPORT AND KNOWLEDGE ABOUT UTILIZATION BEHAVIOR OF PIK-R IN 1 SENIOR HIGH SCHOOL PARONGPONG DISTRICT OF PARONGPONG 2015

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## ABSTRACT

Adolescents are at greater risk for engaging in deviant action, one is related to sexuality. The problem occurs because teenagers tend to look for information on informal sources, although the government has made PIK-R program both at school and community. This is caused by teenagers do not understand the benefits of PIK-R, because they think PIK-R only for troubled teens. The method used in this study is cross-sectional, by using 70 samples respondents at SMAN 1 Parongpong district of parongpong 2015. Data collection tool is a questionnaire instrument model with closed questions. While the analytical method that was used is Structural Equation Modelling (SEM) with a smart software applications PLS and Special package for Science (SPSS). The results showed that there is effect among school support, health workers support, peer group support and knowledge toward behavior of PIK-R utilization at SMAN 1 Parongpong by each T-statistic values which were school support was 32.6%, health workers support was 22.01%, peer support group was 13.8%, and knowledge was 27.1%. Therefore, school should provide facilities for the implementation of PIK-R in collaboration with neighborhood health professionals

**Key Words: School effect, Support**

## INTRODUCTION

A large number of teenagers, especially in Indonesia, followed by the complexity of the problems that occur in adolescence. Physical changes, emotional and psychological causes increased sex drive that would give serious consequences for adolescents. Data Centers for Disease Control in 2008 stated that 50,000 young people around the world die each year from pregnancy and labour complication.<sup>1</sup>

Globally the number of HIV / AIDS cases occur in adolescents 15-24 years of age. The spread of HIV / AIDS are in the age of 15-19 years as many as 1.134 cases and patients with risk factors as much as 18.680 heterosexual teens cases.<sup>2</sup> Largest source of knowledge on puberty comes from teachers at school and peers. With the percentage of each 61% of young women take advantage of the teacher as a source of information and

48% of young men who take advantage of their peers as a source of information.<sup>3</sup> The rise in maternal mortality is one of them contributed by teens for sex, unsafe abortion,

HIV / AIDS and drug use as a benchmark about the success of the Youth Information and Counseling Center / Student (PIK-R / M).<sup>4,5</sup> This is due by various factors, including the low for health professionals, health services in schools inadequate and low awareness of youth on the prevention of health problems.<sup>13</sup>

Problems in adolescents is very complex, so that the PIK-R program will not work if only one of the parties that support. Research conducted in the city of Medan showed the result that 60% of school principals provide support and approval of the convening of PIK-R program. It is realized in a special meeting room

availability PIK-R and terjadwalnya counselors alternately. Starting from peer counselors, teachers Counseling (BK), health care workers to psychologists that led to increased coverage of teens who use PIK-R in schools.<sup>14</sup>

Based on the various issues among adolescents Family Planning Coordinating Board (BKKBN) West Java Province create a policy that every district / city has a pilot

school PIK-R / M. The school of which 2 Junior High School (SMP) / MTs (MTs), 1 High School (SMA) / Vocational School (SMK) / Madrasah Aliyah (MA) and 1 College (PT).<sup>1</sup> Based on these data, the researchers took the study Effects of school support, the support of health workers, peer group support and knowledge of the behavior of the utilization of PIK-R in 1 Senior High School Parangpong District of Parangpong 2015.

## RESEARCH METHODS

This study uses a quantitative method with cross sectional study design (cross-sectional), conducted in January 2016. The population in this study class X, XI and XII as many as 565 people who were in 1 Senior High School Parangpong District of Parangpong, with samples taken appropriate tool the analysis is Structural Equation Modeling (SEM), determination of the number of samples that are representative of 30-60, then the sample size in this study was set at.<sup>17</sup> Technics sample of 70 respondents in this study using stratified random sampling technique, criteria inklusi is male student -Eighteen and female class X, XI, XII ever and never take advantage of PIK-R and not the administrators PIK-R, while the exclusion criteria are boys and girls who do not attend at the time of data collection.<sup>18</sup>

Quantitative research instrument was a questionnaire consisting of five questions that school support groups, support health workers, Presentation of the research results compiled based systematics begins with an overview of univariate, bivariate to obtain the frequency distribution of exogenous and endogenous and at the end of this study are given an overview analysis of Structural Equation Modeling (SEM) to explain the complex relationship of several variables tested in the presentation of data.

Based on the results of research conducted on 70 respondents found that the majority of respondents were male students as much as 57.1%, with 16 years of age as much as 47.1% and as much as 30% in class XI. Based on the distribution range of answers knowledge of adolescents about reproductive health and compounded by cultural factors that consider the reproductive health of a taboo to talk about in public so that teenagers

only know how to do without thinking about the consequences that arise from sexual behavior.<sup>6</sup>

One approach is essential in reaching adolescents with adolescent reproductive health education in schools should be supported by the school curriculum.<sup>7</sup> Given that the National Family Planning Coordinating Board (BKKBN) made a strategic objective that every district has a PK-R. Total PIK-R in schools is as much as 55% throughout Indonesia. This number represents the numbers of schools overall.<sup>8</sup> Ironically adolescents exposed to information PIK-R is only about 28%, meaning that only 28 out of 100 teens who use PIK-R.<sup>9</sup>

Some studies say that it is not exploited PIK-R by teens is due uncomfortable counseling rooms, health workers were less friendly and PIK-R program supported by the school.<sup>10,11,12</sup> Research by Kamau in Kenya that reproductive health services are still low. One contributing factor is the lack of support peer group support and knowledge. The scale used to assess respondents' answers to the group questions school support, the support of health workers, peer group support and utilization behavior PIK-R is semantic differential scale that can measure a person's attitudes and opinions about social phenomena.<sup>19</sup> While Guttman scale is used to group questions knowledge that shows a clear and unequivocal answer.<sup>20</sup>

Variable support health workers have indicators of emotional support, information support and instrumental support. Variable peer support group is an act, the help and support given to utilize PIK-R by teenagers with the same level of age, level of maturity and involves great intimacy as well as having an important role for the development of his personality with more emphasis on similarity of behavior. Variable knowledge is the understanding of the concept of teens PIK-R form of benefits, function and purpose of convening PIK-R obtained from sense observation and sensing the particular object.

School has an indicator variable support teachers' involvement in the PIK-R, completeness of facilities and infrastructure and the implementation of PIK-R program at the school. Variable behavior of the utilization of PIK-R has indicators become

peer educators, providing services PIK-R and a program of activities

Data analysis tool used in this research is the structural equation modeling (SEM) SmartPLS 2.0. Model analysis of all lines in the latent variable PLS consists of several sets of relationships:

- 1) Outer model that specifies the relationship between the latent variables with the indicator or variable manifestnya (measurement model), measured by the convergent validity and discriminant validity. Convergent validity with a value of 0.5-0.6 is considered sufficient loading, for a variable number of indicators of 3-6, while the discriminant validity AVE recommended value greater than 0.5 and also to see where the relation weight value remains latent cases of variabel estimated,
- 2) Inner model spesifikasinya relationship between latent variables measured using Q-Square predictive

pervariabel obtained a score range of school support variable has a range of respondents between 23-43 with an average of 35.33 and a standard deviation of 9.73. Variable support health professionals have a range of respondents between 23-43 with an average of 32.31 and a standard deviation of 9.67.

Variable peer support group has a range of respondents between 28-42 with an average of 34.43 and a standard deviation of 9.98. Knowledge variable has a range of respondents between 9-15 with an average of 11.97 and a standard deviation of 1.003. Variable behavior of the utilization of PIK-R has a range of Between 25-45 with an average of 35.36 and a standard deviation of 1.01

## RESULTS AND DISCUSSION

**Table 1. Relationship between Research Variables Against Respondent Characteristics**

Research variable	P value ( $\alpha = 5\%$ ) characteristics Respondeen		
	Age	Gend er	Class
Behavior of PIK-R utilization	0,557	1,000	0,065
School Support	0,259	0,702	0,209
Health workers support	0,660	1,000	0,427
Peer Group Support	1,000	0,556	0,835
Knowledg e	0,522	0,917	0,122

Figure 1 shows the results that the specified indicators can measure latent

According to the table 1 shows that all the variables do not have a relationship with respondent characteristics (age, gender and class) this is because the results of the chi square test ( $\alpha = 5\%$ ) resulted in a value of more than 0.05. So it can be said about the variables variasijawaban school support, the support of health workers, peer group support, knowledge and behavior of the utilization of PIK-R is not influenced by the characteristics of the respondent (age, gender and class).

Figure 2 shows that the great value of the t statistic of all the indicators of the latent variable  $t > 1.96$ , so it can be said that blocks positive and significant indicators to reflect the variable

variables construct school support, the support of health workers, peer group support, knowledge and behavior of the utilization of PIK-R with the value of each indicator is greater than 0.5). Based on the output PLS, all otherwise valid indicator with a value of more than 0.5 AVE and the measurement model has good discriminant validity.

### Effect of School Support, Support Health Workers, Peer Support Group and Knowledge Utilization Behavior Against PIK-R



### Outer Model Evaluation

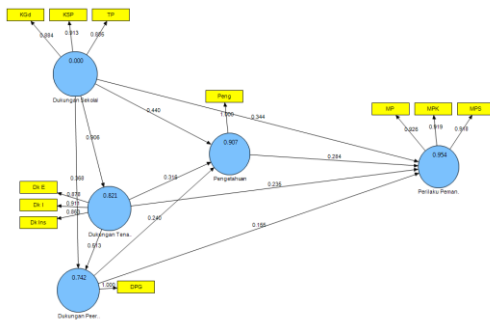


Figure 1. Outer Model (Loading Factors)

### Inner Model Evaluation

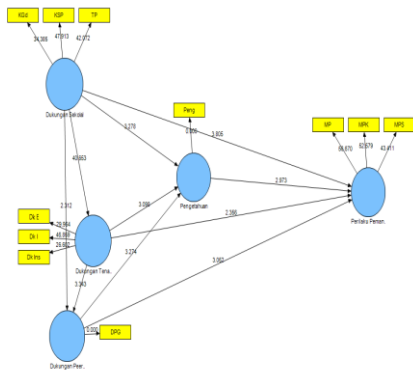


Figure 2. Inner Model (T-Statistic) Bootstrapping

Table 2. Evaluation of Value R-Square

Variabel	R-Square
Behavior of PIK-R utilization	0.953
School Support	0.000
Health workers support	0.820
Peer Group Support	0.741
Knowledge	0.906

According to the table 2. The R-square value of school support can explain the variable support peer group by 74.2% and the remaining 25.8% is influenced by other variables not examined. Variable support

health workers amounted to 82.1% and 17.9% influenced by other variables not examined in this study. Variable knowledge 90.7% and 9.3% influenced by other variables not examined in this study. Variable behavior of PIK-R tilization of 95.4% and 4.6% influenced by other variables not examined in this study.

Based on Table 3 states that the direct effect of school support, the support of health workers, peer group support and knowledge of the behavior of the utilization of PIK-R by 95.17%, while the indirect effect of school support, the support of health workers, peer group support and knowledge of the behavior of utilization PIK-R of 1.718%.

Table 3. Value Path Coefficients / Rho and Percentage Effect Against Inter Variable Utilization Behavior PIK-R

Variabel	LVC	Direct Rho	Indirect Rho	Total	Direct %	Indirect %	Total %
School Support	0,948	0,367	0,581	0,948	34,83	1,11	35,95
Health workers support	0,410	0,218	0,191	0,410	20,39	0,412	20,81
Peer Group Support	0,224	0,157	0,067	0,224	13,91	0,18	14,10
Knowledge	0,273	0,273	-	0,273	26,02	-	26,02
Total	1,855	1,015	0,839	1,855	95,17	1,718	96,89

So that the results of the above analysis can be made of mathematical equations of the variables of school support, the support of Health workers, peer group support and knowledge of the behavior of the utilization of PIK-R as follows:

$$\eta_1 = \xi_1 \gamma_3 + \zeta_1$$

Health workers support = 0,906 School Support + 0,094 another factor

$$\eta_2 = \eta_1 \beta_1 + \zeta_1 \gamma_4 + \zeta_2$$

Peer Group Support = 0,513 Health workers support + 0,368 School Support + 0,119 another factor

$\eta_3 = \eta_1 \beta_2 + \eta_2 \beta_5 + \xi_1 \gamma_2 + \zeta_3$  Knowledge = 0,316 Health workers support + 0,240 Peer Group Support + 0,440 School Support + 0,004 another factor

$\eta_4 = \eta_1 \beta_4 + \eta_2 \beta_6 + \eta_3 \beta_3 + \xi_1 \gamma_1 + \zeta_4$

Behavior of PIK-R utilization = 0,235 Health workers support + 0,155 Peer Group Support+ 0,284 Knowledge + 0,344 School Support+ 0,000 another factor

Q-square value used to assess the amount of diversity or variety of research data on the phenomenon under study results are as follows:

$$\begin{aligned} Q^2 &= 1 - (1 - R_1^2) (1 - R_2^2) (1 - R_3^2) (1 - R_4^2) \\ &= 1 - (1 - 0,741747) (1 - 0,820607) \\ &\quad (1 - 0,906738) (1 - 0,953976) \\ &= 1 - (0,258253) (0,179393) (0,093262) \\ &\quad (0,046024) \\ &= 1 - 0,000199 \\ &= 0,999801 \text{ atau } 99,9\% \end{aligned}$$

$$\begin{aligned} \text{Galat model} &= 1 - Q^2 \\ &= 1 - 0,999801 \\ &= 0,000199 \text{ atau } 0,01\% \end{aligned}$$

These results show the model of the analysis results can explain the diversity of data and 99.9% were able to examine the phenomenon used in the study, while 0.01% described other components that are not observed in this model.

### The influence of peer group support to knowledge

Based on the results that support peer group has an influence on adolescent knowledge of .240. It means that the peer group a positive influence on adolescent knowledge. Because in theory more teens explore new knowledge with their peers (peer group).

The results of T-score statistics also show the results of 3.274 > 1.96 at  $\alpha = 0.05$  or 95% CI with a magnitude of 0.239. Which means that the support are given peer group has a good influence on adolescent knowledge about how to obtain information on reproductive health.

In adolescence, peer group's dependence on increased and more to do towards social relationships or acceptance environments such as behavior, hobbies and preferences.<sup>21</sup>

Results were in line with research conducted by Coryna 2014 with the result that the peer group can affect the level of students significantly ( $Z = 4.82$ ). So the peer group buffer into methods to increase knowledge of adolescents about reproductive health.<sup>22</sup>

Darinayanti study in 2010 by the chi square test also showed that the peer group has a positive relationship with the behavior of pre-nuptial (pvalue 0,000). Sedangkat passive peer group was 2.6 times likely to premarital sexual behavior. In other words, the information provided by the peer group can influence the level of knowledge of youth that will have an impact on the behavior of the adolescent.<sup>23</sup>

Assumptions can be made by the researchers is a significant relationship between peer group support to the adolescent knowledge, because the quality of a good friendship between peers (peer group) that give clues or knowledge. Teens with good peers and provide correct information about reproductive health will form the utilization behavior PIK-R. with increased coverage visit PIK-R then the problem that occurred among teenagers can be minimized.

### The influence of peer group support to utilization behavior PIK-R

The results showed that the support of peer group influence on the utilization of PIK-R. The test results of the coefficient parameters between peer group support to utilization behavior PIK-R shows the direct influence and magnitude of the behavioral variables utilization of PIK-R was 13.8% and the indirect effect of 5.66%.

With the value of T-Stats 3.052 > 1.96 at  $\alpha = 0.05$  or 95% CI with a magnitude of 0.155. It can be interpreted that the peer support group provides a good influence on the behavior of the utilization of PIK-R.

The research result is in line with research conducted by Ika in 2009 at the high school teenagers using chi square test and logistic regression with the result that there is the influence of peers (peer group) ( $p = 0.006$ ) on

the behavior of adolescents. Support peer group (peer group) can also predict the behavior of 43.3%, which means almost half of the behavior change is influenced by peers (peer group).<sup>24</sup>

Teenage life is a life that is crucial for the next life. The peer group is the beginning of a relationship persahabatan and relationships with peers. The results of the study together with the theory that one of the social development of adolescence more than the peer group involving groups of older people. At this time, more teens do activities outside the home. Besides in behavior formed in adolescence influenced by the environment.<sup>25</sup>

The theory is supported by studies Kustanti 2014 junior high school students using the chi square test with the results of the relationship between peer group behavior ( $p = 0.000$ ). This is because students are difficult to access Guu BK so that most teenagers know about reproductive health knowledge of peers (peer group).<sup>26</sup>

From the research, researchers assumption that peer support group to contribute to the utilization behavior PIK-R, so that the school and health personnel provide training to boys and girls who will be expected to invite their peers to access information through the PIK-R.

### **The influence of school support against peer support group**

The results based on structural equation shows that support schools affects peer group support at 0.368. So it can be interpreted that the school support has a positive effect, so the better the support given then the better the peer group in support of the use of PIK-R.

Value T-statistics generated ie  $2.312 > 1.96$  at  $\alpha = 0.05$  or 95% CI with a magnitude of 0.368. Thus support the school provides good leverage against the peer group support in making use of PIK-R.

School is an environment of secondary education for adolescents. Generally, teens spend time at school about 7 hours each day. Therefore, the school has a considerable influence on adolescent development.<sup>27</sup> Kholid study in 2014 showed that the results of student involvement in school activities and in class at school or organization with a

peer group is influenced by the relationship between teachers and students of 30.4%. In other words, 69.6% are still other factors that could affect student engagement in school.<sup>28</sup>

Teachers are the adults who are responsible to give guidance or assistance to students in the physical and spiritual development in order to reach maturity. Support or assistance provided by the teacher can change the behavior of students. Besides the teacher acts as a facilitator with the key role in shaping the character of students.

The school environment is a place to spend most of his time outside the home. Adolescents with developmental stage for identity requires the support of the school to establish a behavior that will affect support with their peers (peer group).

In line with the research Triono 2016 high school students in Surabaya that there is a relationship between caring teacher with peers (peer group) with a value of  $p = 0.000$  ( $p < 0.001$ ). This means that by increasing the teachers caring peer support group will increase and better student motivation.<sup>29</sup>

Assumptions researcher on the study are that the support of the school contributed to the peer support group. The school should pay more attention to student activities and provide assistance in the form of completeness of facilities and infrastructure that can improve peer support group.

### **Effect of support from the school to support health workers.**

The results showed that the support of health workers is influenced by support at 0,906 schools. This means that the positive effect on the school support staff support for health, the greater the support given by the school, the higher the health personnel support programs PIK-R at the school.

The results of T-statistic values  $40.654 > 1.96$  at  $\alpha = 0.05$  or 96% CI with the amount of 0,906. It has been suggested that support the school provides good leverage to support health workers in providing guidance and monitoring pelaksanaan PIK-R program at the school.

These results are consistent with research conducted by Natalina in 2009 by using chi square test and ANOVA test that support

health workers are affected by school support with a value of  $p = 0.000$  ( $p < 0.05$ ). Support is an infrastructure to support the program carried.<sup>30</sup>

School is a container for the approach is essentially to provide reproductive health education for remaja.<sup>7</sup> Therefore, the government launched a program of communication, information and education in schools through the container PIK-R. training executive officer PIK-R members are health professionals in their field. Therefore the effect on the school support staff support for health in terms of facilities, the execution time is even supported by the health education curriculum.

The theory is supported by studies Mustafa in 2010 with the result that there is a relationship between the motivation of teachers with the implementation of health care ( $p = 0.025$  and  $CC = 0.468$ ). Which berrarti that if teachers have the motivation to implement health programs in schools, motivated health care workers to conduct coaching in schools to improve school health.<sup>31</sup>

The school, in this case the teacher BK work because the demands of his profession. Teachers feel less motivated to run the program PIK-R because of the lack of guidance from health personnel, especially from the district level. Because teachers feel the need to discuss with health professionals regarding the material to be delivered related TRIAD-KRR. If the teacher has a passion for implementing PIK-R program, the better the scope for the use of PIK-R at the school. It will reduce the incidence of deviant behavior among teenagers because teenagers get the correct information about reproductive health in container PIK-R. Assumptions researchers of research findings, that the school support contributes to the support of health workers. Support in the form of infrastructure, the holding time and curriculum activities can improve guidance directly performed by health workers.

### **The influence of school support for knowledge**

The results that affect the knowledge of school support. With the T-statistic value  $3.278 > 1.96$  at  $\alpha = 0.05$  or 95% CI with the amount of 0,439. It has been suggested that

support schools provide a good influence on adolescent knowledge about how to obtain information on reproductive health.

These results are consistent with research conducted by Cahyo 2008 using qualitative methods with in-depth interviews show the results that the teacher has an influence on high school students' knowledge ( $p = 0.024$ ). This means that the better support for teachers in the form of information on reproductive health is given then the better the knowledge gained.<sup>32</sup>

Schools have a role as an institution that helps the family by educating and teaching as well as improve and refine the behavior of the students. Teachers have a duty to educate, teach and train. Teaching is an activity to continue and develop science and technology in order to increase student knowledge.

The theory is supported by studies Saraswati in 2013 using the case control design and pre-post test results show that there is a relationship program 'teacher friend of the students' to increase students' knowledge about reproductive health ( $F = 14.411$ ,  $p < 0.05$ ). These results because the teacher is a role model for students who will be observed and modeled behavior that can influence knowledge about health reproduksi.<sup>33</sup>

The study analyzed school support contributing to knowledge about reproductive health. This means that teachers, infrastructure and the implementation of decisions PIK-R should be re-evaluated in order to increase the knowledge acquired is not wrong.

### **Influence the behavior of the utilization of school support PIK-R.**

The results of structural equation shows that the support of schools affects the behavior of the utilization of PIK-R of 0.344. This means that the school support has a positive influence on the behavior of the utilization of PIK-R by teenagers. Teens spend most of his time at school, so the school is a role model of a second after the family who will Markowitz adolescent behavior.

The results of the test parameter coefficient between the support of the schools to conduct utilization of PIK-R shows the direct influence and magnitude of the

behavioral variables utilization of PIK-R was 32.6% and the indirect influence of 11.00%. Variable support schools have significantly positive influence on the behavior of the utilization of PIK-R because the value of T-Stats  $3.805 > 1.96$  at  $\alpha = 0.05$  or 95% CI, and while the magnitude 0.344. It means support schools give good influence on the behavior of the utilization of PIK-R teenagers.

This is consistent with the theory that revealed that the school has a role in the formation of student behavior. The results obtained indicator of the involvement of teachers have a greater value than other indicators. So that the emotional support of teachers are expected to increase the utilization behavior PIK-R.

Assumptions researchers of research findings, that the school support provided by the teacher, availability of infrastructure, and the implementation of PIK-R has contributed directly to the behavior of the utilization of PIK-R. Schools in this case more teachers to approach peers (peer group) because the results of the study support a given peer group has a considerable influence in increasing coverage kinjungan PIK-R as a source of information.

#### **Influence support health personnel to support peer group.**

The results of structural equation shows that support health workers affect the support provided by peer group amounted to 0.513. Value test against coefficient between variable parameter support health workers have significantly positive effect on the variable peer support group with a value of T-Stats  $3.343 > 1.96$  at  $\alpha = 0.05$  or 96% CI with a magnitude of 0.513. It has been suggested that the support of health professionals provide a good influence on the peer support group to increase visits to PIK-R.

Adolescence is a period where the relationship with parents is reduced because the teens were looking for identity. So that other people outside the family became a role model or example teenagers to behave, such as teachers, friends, health workers and idol. IDHS-KRR showed that 39.3% of adolescents looking for health workers to get information on reproductive health. The findings are consistent with the results

showing that support health personnel positive effect on peer support group.

Assumptions of researchers to the study that support health workers have an influence on peer support group that will improve the utilization behavior PIK-R. Health personnel should be fostering peer group or groups students` organization to provide knowledge of the importance of utilizing the PIK-R so that the information obtained is appropriate and not wrong.

#### **Influence support health personnel to knowledge**

The results of structural equation shows that support health workers affects the knowledge of 0,316. T-Stats value  $3.098 > 1.96$  at  $\alpha = 0.05$  or 96% CI with the amount of 0,316. It has been suggested that the support of health professionals provide a good influence on adolescent knowledge about how to obtain reproductive health information.

The research result is in line with research conducted by Adnani year 2013 which show the results that there is a relationship between the source of knowledge with adolescent sexual behavior ( $p = 0.000$ ). Source of knowledge is one of them comes from health, family planning officials and the.<sup>34</sup>

Results IDHS seen that medical staff accessed by young people to gain knowledge about reproductive health is quite large. So counseling, support and guidance of health workers large enough to increase knowledge of adolescents. Health workers as agents to improve public health which has the characteristics one of which is scientific knowledge. The task of health workers to improve public health is to provide health education in the community. In accordance with the theories and research that affect the knowledge of health personnel. The theory is supported by studies showing Wijayanti 2014 results that there is a relationship between support for health personnel on behavior ( $p = 0.03$ ).<sup>35</sup>

Assumptions of researchers to the study that support health workers to contribute to knowledge of adolescents about reproductive health. Therefore health personnel should further enhance the mentoring support information in this regard health education for adolescents that lessons learned come from the right source.



### **Influence the behavior of health workers support the use of PIK-R**

The results of structural equation shows that support health workers to give effect to the behavior of the utilization of PIK-R of 0.235. The results of the test parameter coefficient between the support of health professionals on the utilization behavior PIK-R shows the direct influence and magnitude of the behavioral variables utilization of PIK-R is 22.01% and the indirect influence by 7.83%. Variable support health workers have a significantly positive influence on the behavior of the utilization of PIK-R because the value of T-Stats  $2.356 > 1.96$  at  $\alpha = 0.05$  or 95% CI, and while the magnitude 0.235. It can mean the support of health professionals to give good influence on the behavior of the utilization of PIK-R.

The results of the study in accordance with the theory that reveals that behavior is influenced by the factor of the amplifier or the support of health professionals. In this case the support given by health workers provided through counseling to students or increase the knowledge that if knowledge increases the utilization behavior PIK-R.<sup>36</sup>

In line with research conducted by Djuria 2015 by using the chi-square test results show that there is a relationship between the availability of health care services to sexual behavior ( $p = 0.025$ ). This means support health personnel in the form of support can be instrumental in shaping behavior remaja.<sup>37</sup>

Assumptions of researchers to the study that support health personnel in the form of aid information, emotional and instrumental contribute directly to the behavior of the utilization of PIK-R. so the need to improve the support of the delivery of material to students so that behavior to get information on reproductive health obtained from PIK-R.

### **Influence of knowledge on the behavior of the utilization of PIK-R.**

The results of structural equation shows that knowledge has an influence on the behavior of the utilization of PIK-R of 0.284. In addition to the test results parameter coefficient between the knowledge of the behavior of the utilization of PIK-R shows the direct influence and magnitude of the

behavioral variables utilization of PIK-R was 27.1%. Knowledge variable has a significantly positive influence on the behavior of the utilization of PIK-R with the value of T-Stats  $2.973 > 1.96$  at  $\alpha = 0.05$  or 95% CI, and while the magnitude 0.284. It can mean the knowledge to give good influence on the behavior of the utilization of PIK-R.

In line with research conducted by Olgavianita 2015 using Man Whitney test shows the result of differences in knowledge based on the utilization of PIK-RRR at SMAN 1 Nguter ( $p = 0.000$ ). Of these 47% are already using PIK-R with good knowledge. While that is not taken advantage of PIK-R has knowledge.<sup>38</sup>

Sources of information contributing to knowledge of adolescents about reproductive health right. Teenagers who have a good knowledge will be looking for information on reproductive health by visiting PIK-R in school or read books even rare reproductive health will be consulted directly to the teacher concerned. Knowledge is influenced by the level of education, age, experience, employment, income, culturally and socially. Knowledge gained from resources that are not appropriate, unrealistic expectations, low self esteem, fear not successful and pessimism menunjukkan that adolescent personality immature and emotionally unstable will lead to adolescent is susceptible to negative things such as sexual misconduct.<sup>39</sup>

Assumptions of researchers to the study that contribute to the knowledge of the behavior of the utilization of PIK-R. So the need to improve knowledge about adolescent reproductive health so much access to the PIK-R to obtain true knowledge.

### **Conclusion**

(1) These five variables have significant influence in a positive way with  $\alpha = 5\%$ , (2) There are four variables (school support, the support of health professionals, support peer group and knowledge), which has a direct influence with the goodness of fit significant behavioral variables utilization of PIK-R, (3) variable school support, the support of health workers, peer group support and knowledge influence simultaneously (concurrently) to variable utilization behavior PIK-R in SMAN 1 Parongpong District of Perongpong amounted to 95.17%, consisting of influence amounting to 95.17% direct and indirect

influence of 1.718%, (4) Value Q-Square (predictive relevance) amounted to 99.9% means that this model is representative mampu explain the diversity and able mengkaji phenomenon that exists in this study.

From the findings in this study can be concluded that the support of the school is the dominant factor that greatly influences the behavior of the utilization of PIK-R in SMAN 1 Parongpong District of Parongpong. Because the school is a second place where teens spend most of his time after the house so that the information obtained by juveniles are more easily absorbed and followed.

### Suggestion

PIK-R utilization behavior by adolescents is influenced by many kinds of factors, one of which comes from the teacher BK. The involvement of teachers in the implementation of PIK-R further enhanced through training on how to follow the PIK-R for all teachers so that when students will

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access information not only looking for BK teachers only. Not only in terms of teachers alone, the school is more creative in implementing programs for PIK-R by inviting speakers who are experts and BKKBN as a routine activity that seems more interesting is followed by students

For students of all members of PIK-R should protect their peers to join become peer educators so precise knowledge about reproductive health and can spread the right information to their peers. In addition, if there are things that should be asked about accessing reproductive health peer educators or teachers BK.

Providers also be a source of information that is accessible to teenagers. Therefore, as health workers should provide more intensive coaching in order PIK-R program run according to procedure. Besides monitoring the PIK-R in the selection of materials that do not deviate from what is supposed to be known in adolescence

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## **EARLY DETECTION OF HIV BY MIDWIVES IN COMMUNITY: An Operational Study on The Increased Access of HIV Prevention from Mother to child in Karawang Regency**

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### **ABSTRACT**

Increased number of women affected by HIV will have an impact on HIV transmission from mother to baby. Therefore, early detection as one of the activities to prevent HIV transmission from mother to child (PMCTC) becomes the leading program in preventing HIV and AIDS epidemic in women. This study aimed to apply the model of early detection of HIV in pregnant women by midwives in the community.

This was an operational study, which was done in improving access to prevention of HIV transmission from Mother to Child. The study was conducted in 17 sub-district health centers, selected by cluster random sampling. Early detection was done by conducting HIV tests on 385 pregnant women and their partners in the community (*Posyandu* and family midwife). HIV tests were performed using rapid test by trained midwives who received trust from the Health Office for performing the test. The results showed that a total of 18 midwives of 17 sub-districts had received training on PMCTC and HIV test with rapid test. A total of 85.5% of pregnant women were willing to have HIV tests and the results came out negative. HIV test by midwives was able to overcome the barriers of distance and stigma that improve PMCTC access. Support from the Health Office to sustain the program is needed and the implementation of HIV testing for pregnant women should be developed into SOP, for the prevention of HIV transmission from mother to baby can only be done if the status of HIV in pregnant women is unknown.

**KEY WORDS: HIV, EARLY DETECTION, MIDWIVES**

### **INTRODUCTION**

Feminization of the epidemic shows that women are a group at risk for contracting HIV. In pregnant women, HIV is not just a threat to the safety of motherhood, but also a threat to the unborn child. HIV prevalence in pregnant women is projected to increase from 0.4% (2012) to 0.5% (2016), and the number of HIV positive pregnant women who require Prevention of Mother to Child Transmission of HIV (PMCTC) services will also be increased from 13,189 people in 2012 to 16,191 people in 2016. Similarly, the number of children aged under 15 years who contract HIV from their mothers at birth or during breastfeeding will increase from 4,361 (2012) to 5,565 (2016), which means there is a trend in an increase of child mortality rates due to AIDS (Ministry of Health, 2012).

In 2013, 6% of HIV infections were transmitted from mother to baby in West Java.

In pregnant women, HIV is not only a threat to the safety of motherhood, but also a threat to the

unborn child because transmission occurs from mother to baby. More than 90% of HIV transmission in children result from transmission from mother to child (Mother-To-Child Transmission/MTCT). Until June 2014, 3.6% of children under 15 years were infected with HIV and AIDS (Ministry of Health, 2014). HIV and AIDS cases in the household can cause problems both in terms of the family's economic and social impact on the lives of children later. Muhaimin (2010) states that HIV AIDS cases in the household can reduce the quality of life of children to 1.59 times than families without HIV-AIDS and the opportunities will be greater if the child is female, lack of parenting and younger.

Hence, efforts are needed to prevent HIV transmission from mother to child known as PMTCT (Prevention of Mother to Child Transmission of HIV), or in Indonesia known as PPIA (*Pencegahan Penularan HIV dari Ibu ke Anak*). Since 1998, the PMTCT program has been a leader in global HIV prevention (WHO, 2010). Prevention of HIV transmission from mother to child is done with four components: 1) Prevention of HIV transmission in childbearing age women, 2) prevention of unintended pregnancies in HIV-positive women, 3) prevention of HIV transmission from HIV positive pregnant women to their fetuses

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and 4) Provision of psychological support, social support and care to HIV-positive mothers and their infants and families.

PMCTC services have been available in the referral hospital located in provincial capitals and major cities in Indonesia, but up to June 2013, of 1,200 health centers across Indonesia that provide services PMCTC, only 264 health centers could provide the service or reach only 22 % (Ministry of Health, 2013). Likewise, of 400 hospitals that are supposed to give ARV, only 105 hospitals could provide ARV treatment, or reach only 26%. HIV testing for pregnant women reached only 1.4%. Of those 1.4%, 3.8% were HIV positive. The provision of antiretroviral drugs to HIV positive mothers was also still low at just 55% (DG P2PL Ministry of Health, 2013).

The same picture also occurs in Karawang. The examination of HIV testing for pregnant women is not yet a priority program. Of 5000 rapid test obtained in 2014 from West Java province, some 60% or 3,000 rapid tests were allocated for pregnant women at 15 health centers of the 50 health centers in the Karawang regency. This number is still very small compared with the estimated number of pregnant women in the Karawang regency in one year amounted to 63,000 pregnant women. In other words, the number of new rapid tests is available for only 4.7% of pregnant women.

Budisuari and Mirojab (2011) showed similar things that PMTCT policy implementation in the city of Surabaya is not maximized. This study shows that the PMTCT facilities and infrastructure are limited; not all health centers have PMTCT teams and services and PMTCT financing is still limited. Therefore, an implementation strategy that can be implemented by local governments in improving PMCTC access is required. This study aimed to apply the model of early detection of HIV in pregnant women in the community in an effort to improve PMCTC access.

## RESEARCH METHODS

This was an operational study, which was done in improving access to prevention of HIV transmission from Mother to Child. Early detection model was implemented in two stages, ie, setting up support and improving the knowledge and competence of midwives by providing PMCTC training. The next stage is the implementation of early detection by performing HIV test for pregnant women in the community (*Posyandu* and family midwife). The study was conducted in 17 sub-district health centers, selected by cluster random sampling. HIV tests were conducted on 385

pregnant women and their partners by using rapid test. Examination of HIV tests was performed by a trained midwife.

Data were analyzed descriptively, to see the successful application of the model and the increase in the percentage of pregnant women who underwent HIV test.

## RESULTS AND DISCUSSION

The results showed that early detection model could be implemented. In the first stage, the support from the health office was obviously seen from the implemented PMCTC training activities for midwives held for two days in Karawang District Health Office, on 29 and 30 December 2014. The trainees were 18 midwives. The facilitator age ranged from 24-52 years with an average of 40.2 years. The facilitator education were almost evenly equal, with 50% holding Diploma III degree, 44.4% holding Diploma IV/S1 degree and only one facilitator (5.6%) was with a master's degree background. The average length of employment as a midwife was 16 years and more than half had never received training on HIV. The output of this training was that the midwives had to perform HIV test for pregnant women with rapid test. The frequency distribution of participants by socio-demographic characteristics is shown in Table 1

**Table 1. Distribution of Trainees (Midwives) by Socio-Demographic Characteristic in Karawang Regency (n=18)**

Characteristic	N	%
Age		
30-39 yo	6	35,3
<30 yo	1	5,9
>= 40 yo	11	61,1
Education		
Master	1	5,6
Diploma IV/S1	8	44,5
Diploma III	9	50,0
Length of employment		
>=20 y	8	44,4
10-19 y	5	27,8
5-9 y	2	11,1
<5 y	3	16,7
HIV Training		
Yes	7	38,9
No	11	61,1

PMCTC training was also successful in increasing the midwives' knowledge on the prevention of transmission of HIV and AIDS from mother to child. The results of the difference of mean value

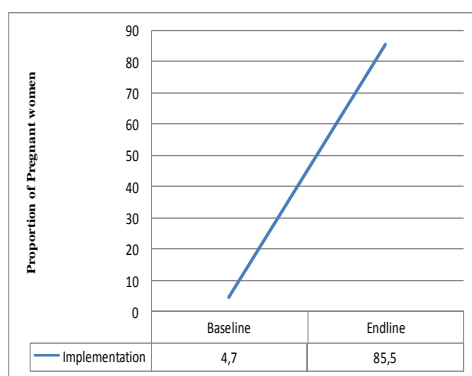
of midwives' knowledge before and after the research can be seen in Table 2.

**Tabel 2.**  
**Distribution of Pre Test and Post Test mean value of the knowledge of the participants of PPIS Training**

Variable	Mean	SD	SE	p value	Total
Knowledge					
Pre Test	56,1	6,94	1,63	0,0001	18
Post Test	74,0	6,64	1,56		

The mean value of pre-test on the participants' knowledge was 56.1 and the mean value of the participants' knowledge after the training was 74.0. The difference in mean value of pre test and post test was 17.83. Statistical test results obtained a p-value of 0.001, meaning that there was a significant difference on the participants' knowledge before and after training.

In the second stage, the study was able to implement early detection of HIV with rapid tests for 385 pregnant women in Karawang regency. Figure 1 shows the increase in the proportion of pregnant women who were tested for HIV before and after the model of early detection was implemented.



**Figure 1.** The Proportion of Pregnant Women Who Had an HIV Test Before and After the Implementation

This study tried to implement early detection of HIV in pregnant women as improving access to PMCTC. Application of early detection of HIV cannot be done if not getting support from the Health Office. The success in increasing access to PMTCT in Kenya shows that leaders at all levels play an important role in the implementation of PMTCT activities, the involvement of all team members, especially DHO at all stages from planning to implementation, and the improvement of quality of care and supervision at the district

level to improve PMTCT access services from 1,300 women in 2003 to more than 25,000 women in early 2005 (Colton, TC, 2005). Fixen (2005) states that the implementation relies on innovation/programs to be carried out, how these innovations are implemented (preparing the infrastructure, improving the implementation and the system), and anyone else involved.

In addition, the successful implementation of early detection was also supported by the skills of midwives in doing rapid test. Increased training skills were performed by the midwives. The training given was a non-formal education being made to improve the knowledge and skills of midwives. In training activities, which needed to be considered was the retention of midwives. The decline in retention can occur when the training has been done in a long time. Su, et al, 2000 in Hadi 2007, shows that the decline in knowledge retention occurs after 12 months, where knowledge value after the 12<sup>th</sup> month is the same as before the training. Therefore, it is necessary to strengthen retention efforts. Increased retention in the study was done by supervision after 3 months of training done.

Application of early detection of HIV in pregnant women by midwives also proved to increase PMCTC access. The authority granted to midwives made access barriers to the health center to be overcome (overcoming lost to follow up). Early detection of HIV by midwives in the community is an opportunity to increase PMCTC access. The proportion of pregnant women who were willing to have the HIV test increased from 4.7% to 85.5%, and the number of PMCTC services was increasing, too. Youngleson, et al, 2010 show that the method of improving the system, protocol changes and additions/reallocation of resources contributes to increasing PMTCT. The proportion of infants exposed with HIV positive decreased from 7.6% to 5%. PMTCT increased from 75% to 86%, the use of ART increased from 10% to 25%, and post-natal HIV test increased from 75% to 95%.

## CONCLUSION

Early detection of HIV in pregnant women by midwives was successfully implemented in Karawang regency. Support from Health Office and the active participation of midwives in conducting HIV tests had contributed to the implementation of the program. Early detection of HIV in pregnant women in Karawang was able to increase the number of services to provide HIV tests and to increase the proportion of pregnant

women who were willing to have the HIV test from 4.7% to 85.5%

Implementation sustainability of early detection of HIV by midwives can be assured if there is support from the Health Office and the Government in giving over the job to the midwife to test for HIV in the community as an alternative solution to overcome the barriers of PMCTC access.

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# DECISION MAKING AND SUPPORT FAMILIES TO USE HEALTH FACILITIES AT CHILDBIRTH IN PUBLIC HEALTH WAIGETE DISTRICT SIKKA PROVINCE NTT 2015

IGNASENSIA D. MIRONG

## ABSTRACT

The low utilization of health facilities affect the health status of mothers and children, so it is still far from expectations are characterized by high MMR and IMR. One of the factors causing low utilization of health facilities during childbirth is the decision making and family support for not utilizing healthcare facilities during labor. Data puskesmas Waigete in 2015 showed that the deliveries of non medical in favor by non health workers were 94 (6%) of the mother.

Knowing overview of decision-making and family support in the utilization of health facilities for delivery Type study, *adescriptivewith* approach, *cross sectional* the number of respondents who met the inclusion criteria as much as 57 respondents. When the study February 2 until February 9, 2016

A total of 38 people (67%) of respondents said that the husband is the decision maker in the family to not take advantage of health facilities during labor and as many as 45 people (79%) of respondents did not have the support of the family to avail the facility healthcare delivery. The majority of respondents' decision not to make use of health facilities at delivery was made by the husband and the majority of respondents did not receive support from a family untuk memanfaatkan health facilities during childbirth in health centers Waigete

**Key words: decision making, family Support, Waste facility Health.**

## INTRODUCTION

The degree of maternal and child health in Indonesia is still very alarming, it can be seen from the high *maternal Mortality Rate* (MMR) and *Infant Mortality Rate* (IMR). *Maternal Mortality(maternalmortality)* is the death that occurs in pregnant women (regardless of gestational age), birth and postpartum (up to 42 days after birth) as a result of disorders associated with her pregnancy or other diseases that worsen by the pregnancy and not for accident or injury (MoH RI, 2013).

MMR and IMR and child including the most serious challenges to achieve the MDGs(*MillenniumDevelopmentGoals*). One of the reasons for the high MMR and IMR is still a lot of mothers who did ANC and childbirth assistance conducted in non-health facility. Births occur at the facility non-health caused due to several factors such as lack of health personnel (midwives), access to health facilities, economic factors, no family, no family support to accompany the mother's antenatal and childbirth in health facilities as well as the culture of patriarchy that a husband is decision makers, including the decision-seeking labor (Syafudin, 2009

According to Syafudin (2009), in addition to access to health facilities, support factor is also

very influential in the decision to use health facilities. A husband who gives support to wives in

prenatal care, will be more enthusiasm and many take advantage of health care facilities. This is in line with research conducted by Rusnawati (2012), states that psychological factors in pregnant women who received support from the husband would give a large contribution to the mother's health facilities.

Facilities affects the health status of mothers and children, so that they short of expectations which is characterized by high MMR and IMR. Results Demographic and Health Survey 2012 in Indonesia AKI 359 per 100 thousand live births and IMR was 32 per 1,000 live births, while for NTT MMR in 2013 was 176 per 100 thousand live births and IMR of 13.5 per 1,000 live births. Waigete City Health Department noted that the MMR in 2014 as many as 7 people, IMR 29 people. In 2015, as many as 5 people MMR and IMR by 32 people. High maternal mortality rate due to the persistence of the labor performed by non-health personnel in non-health facility. MDGs by 2015 is AKI 102 per 100 thousand live births and IMR 17 per 1,000 live births (Risksdas, 2013).

In the province of NTT, utilization of health facilities for delivery assistance still does not meet the government's target that 90 per cent of births

assisted by skilled health and 100 percent of deliveries in health facilities. Data in 2013 showed that the scope of delivery assistance by health personnel 77.7 per cent while the targets to be achieved by 90 percent (NTT PHO Profile, 2013).

Seeing the scope of delivery assistance by health professionals is still low, the NTT provincial government has committed strong support of the central government to create a strategy of "Revolutionary KIA" is determined to push all deliveries take place in health facilities are ready for 24-hour adequate (NTT Provincial health Office, 2013).

In Sikka, the number of women giving birth in 2015 as many as 8302 people. Delivery by health personnel in health facilities for 8056 people and childbirth by non-health personnel in non-health facility for 246 people. Contribution of labor by non-health personnel in non-health facilities are mostly from Puskesmas Waigete. Based on data from Puskesmas Waigete 2014, the number of women giving birth in 1891 people with the number of deliveries by skilled health personnel by 1753 mothers (92.7%), deliveries by non-health personnel in non-health facility for 138 mothers (7.3%). 2015 Health Center Waigete mention that the number of women giving birth as 1561 mothers with the number of deliveries in health personnel as much as 1 467 mothers (94%) and delivery by trained non-health facility non-health by 94 mothers (6%) (DHO. Sikka, 2015) .

Therefore, it can give you an idea that there are mothers who do not take advantage of inadequate health facilities, especially facilities deliveries in health personnel. Faced with these conditions, indispensable role of midwives and other health to reduce MMR and IMR to implement the program of the Revolution MCH through childbirth safely in health facilities adequate available 24 hours, and make rules together across sectors in the local area that all women who give birth should help health workers in health facilities. But the fact still many deliveries in favor by trained non-health facility non-health.

Based on the background of the problems above, the writer interested to examine the decision-making and support families with health care utilization in deliveries in health centers Waigete.

The aim of this study to describe the decision-making and family support in the utilization of health facilities for delivery.

## RESEARCH METHODS

This research uses research design *descriptive* with *cross sectional* survey method. The population in this study were pregnant women be 135 people from (November-December 2015), husband, family, religious leaders and community leaders in Puskesmas Waigete. The sample in this study were pregnant women who met the inclusion criteria, namely: Parity  $\geq 2$  that the delivery is done in non-health personnel and first delivery is done in non-health personnel in Puskesmas Waigete 2015 which amounted to 57 pregnant women, the husband, family, toga and sampling using *accidental sampling*.

The variables used were the decision-making and family support in the utilization of health facilities during labor. The means used in this study using interviews. The tools used in data collection is a closed question questionnaire (*closed ended*). Research instrument used was a questionnaire sheet. Analysis using descriptive analysis. Analysis using ascale *Likert*, after *editing*, *coding* and *transferring* tabulation then performed. Categorical data using a frequency distribution of the size of the percentage or proportion.

## RESULTS AND DISCUSSION

**Tabel 1: Characteristics of Respondents age**

Age (Years)	N	%
<20	0	0
20-30	32	56
30	25	44
Total	57	100

**Tabel 2: Respondent's Education**

Education Degree	N	%
High school	13	23
Junior	21	37
Elementary	22	38
Total	57	100

**Table 3. Parity Characteristic**

Parity	N	(%)
1	25	44
2	32	56
Total	57	100



**Table 4. Characteristics birth attendant Based Delivery.**

Birth attendant	N	%
Shaman	55	96
In-laws	2	4
Total	57	100

**Table 5. Distribution Frequency Utilization Decision Making in Healthcare Facilities Currently Maternity**

Decision Makers	N	%
Husband	38	67
Together	18	31
Individual	1	2
Total	57	100

**Table 6. Frequency Distribution of family Support**

family Support	N	%
Very Positive	0	0
Positive	12	21
Negative	45	79
Very Negative	0	0
Total	57	100

In this section will be discussed in detail the decision-making and family support in the utilization of health facilities during childbirth in health centers Waigete.

Age is one of the variables that are used as a measure of the absolute or physiological indicators to measure differences in health status, degree of illness and use of health services (Notoatmodjo, 2010). There are three age categories sharing the research results table, where the first category is the age range <20 years, the second category is the age range of 20-30 years and the third age category is >30 years. Each individual with different age have a tendency to take advantage of different health facilities.

In the context of health care utilization during childbirth in Puskesmas Waigete found that respondents aged 20-30 years as many as 32 people (56%) and respondents aged >30 years as many as 25 people (44%) who took the decision and support the family to not utilize health facilities during labor. According to WHO (2012), age >20-30 years are psychologically mature age for women that includes aspects of emotional maturity, mindset and behavior. This age is also included healthy

reproductive age, while those aged >30 years is a risk factor which could occur during childbirth complications if not treated by health workers.

This is in line with research conducted in the Christian (2012), states that women aged 20-30 has odds of 1, 65 times for select health facilities for delivery. Education is a basic human need that was instrumental in the development diri. Tingkat mother's education is the factor that most influence on decision making in facility utilization kesehatan during childbirth. High levels of education will allow a person or a community to absorb the information and implement in daily life, whereas low education levels lead to difficulty of absorption in receiving new information and ideas so that its behavior is still heavily influenced by the surrounding circumstances or behavior of relatives or people they tuakan (Nursalam, 2010).

Judging from the characteristics of respondents above, the elementary education as many as 22 people (38%) of respondents and SMP 21 people (37%) of respondents. These data suggest that low levels of education greatly affects the respondent in making the decision not to make use of health facilities for delivery.

These results are consistent with research Rusnawati (2012), which states that there is a significant relationship between maternal education level with the selection of the place of delivery. Based on the Odds Ratio (OR) obtained a value of 6, 074 which means that mothers with lower education have the opportunity to 6 times to choose a house as a place of delivery compared with women who are highly educated.

People who are educated will be more rational, thus educated mothers high more aware of the health facilities more adequate. Parity is the number of fetuses ever born alive or dead weights of more than or equal to 500 grams (Sarwono, 2012). Risiko health during pregnancy and childbirth will increase if a mother too often breeds that are not directly life-threatening maternal and will worsen the situation of the mother. The more the number of births, the higher the risk of complications. The risk of complications arising can be prevented as early as possible, to the labor needs in favor by health professionals in health facilities were adequate (MOH, 2010).

The link with the history of obstetrics with health care utilization during childbirth is the experience of the delivery of the previously highly affect the mother's choose the place of delivery. Mothers with parity 1 and parity >2 who do not have problems

during childbirth in a facility non-health has a great chance to choose a maternity home for delivery next (Rusnawati, 2012).

Based on the results obtained parity > 2 32 people (56%) respondents took the decision not to make use of health facilities for delivery. The results are consistent with research Rosnani (2011), which shows that the proportion of women who chose home as a place of labor in the group of mothers with parity a much larger when compared to women who are not at risk. Mothers with parity 1 and parity > 2 who do not know the danger signs of pregnancy and childbirth and does not know a safe place for delivery will greatly affect the mother in the decision to utilize the health facilities.

Ideally in mothers group with parity at risk should have more health facilities when labor, in order to avoid complications that may occur during childbirth, the more often the mother giving birth, the higher the risk of mother to have complications (MOH, 2010).

Helper labor can be divided into two health workers or professionals and personnel non-health. The health worker is anyone who dedicate themselves to the health sector and have knowledge and skills through education or health which for certain types have the authority to implement health measures (Permenkes RI, 9 2014).

Non-health personnel or TBAs is a member of the public in general, women who gained the confidence and skills to help labor and acquire skills traditionally hereditary (MOH, 2010). The role of TBAs This greatly affects the mother so that the mother no longer think of the impact of aid delivery by herbalists threatening the mother and baby. Theory of Manuaba (2012), states that complications will arise if delivery by herbalists include hemorrhage, uterine rupture, asphyxia and neonatal mortality and infection from non-sterile equipment.

Based on the results obtained, as many as 55 people (98%) of respondents birth in favor by the shaman. This is due to lack of public awareness of health information and ignore the impact and dangers of childbirth with a shaman. The results of the interview the respondents (10, 11, 15, 22, 24) states that "yes, mother su usual beta of the first child gave birth at home please mama shaman, yes maternal grandmother usual beta pung help the childless". The results of observations researchers found, birth attendants before affecting the mother and family to take a decision not to take advantage

of health facilities and health workers during childbirth.

This is clarified by the theory that the Electoral TBAs as a birth attendant is basically due to several reasons, among others, are known to be close, low cost, understand and be able to assist in the ceremonies associated with childbirth, and care for mothers and infants up to 40 days (Mubarak et al, 2012).

Decision-making is one of the indicators of social power which is dominant in the family and is based on the power *legitimized*. In the family system is no trust in someone who has the right to take decisions on the other, the husband or father has the *prerogative* to make many decisions, although the decisions related to women. Women's participation, either directly or indirectly stating that they respect the husband as head of the family, so do not mind if the husband takes a decision.

Based on the research, as many as 38 people (67%) of respondents said that the husband is the decision maker in the family despite the decision gets input from wife or parents. The decision to choose birth attendants that occur in women in Puskesmas Waigete, still determined unilaterally by the husband. This is especially true in a society still adheres to the culture *patriarchal* that position husband is more dominant that decision in choosing health care, especially of labor is still determined by the husband.

The results are consistent with research conducted by Rusnawati (2012), that there is a significant relationship between the husband as decision makers in the selection of labor and decision-husband was very honored.

To cope with this, the expected involvement of the husband during antenatal so that the husband can get information about pregnancy and childbirth safer in adequate health facilities.

Family support is a support comprising of information or advice verbal or non-verbal, real help or acquired due to the presence of people who support that have the effect of emotional or behavioral effects recipient. Moral support from her husband and family psychologically give a feeling of security in undergoing the process of pregnancy and childbirth, while the support material have a considerable influence in determining the helper and the place of delivery.

Based on the results of research on family support in the utilization of health facilities in Puskesmas

Waigete show that as many as 45 people (79%) of respondents support negative family to not take advantage of health facilities during childbirth, and 12 people (21%) of respondents received dukungan positive for not utilizing healthcare facilities.

Respondents who have the support of a negative is the respondents who are not at all supported by good from family and toma / toga to health facilities during childbirth, while respondents who received positive support is to enable the respondent to refuse or not health facilities for delivery.

The results are consistent with research conducted by Rusnawati (2012), states that the level of support husband and family have a huge opportunity to deliver at a health facility compared with mothers who did not receive support.

## CONCLUSION

Based on the results of research conducted in Puskesmas Waigete shows that most decision makers do not utilize health facilities created by the husband and the majority of respondents no support at all from her husband, family and toma / toga to health facilities for delivery.

It is expected that the respondents were able to take decisions based on the process and critical thinking so as to involve husbands and families to support the physiological, psychological and social aspects of the family in order to take advantage health facilities during labor. Expected cooperation between health workers and cross-sectoral program to support the objectives of the Revolution KIA by creating rules that all deliveries should help health workers in health facilities were adequate. Conduct home visits and assistance to the mother until the birth. Also expected toma / toga, volunteers and shamans work together and play an active role in addressing the problem KIA by motivating mothers and families to health facilities for delivery.

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# CORRELATION WITH HISTORY PREECLAMPSIA WITH EFFECTIVENESS EARLY OF POSTPARTUM WOMEN IN DR. H. ABDUL MOELOEK HOSPITAL LAMPUNG

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## ABSTRACT

Based on preliminary study conducted at Hospital Dr. H. Abdul Moeloek Lampung there are 21 postpartum mothers who ara spontan delivered. It was found that 38.9% were doing early mobilization and 61.90% were not mobilized, five of them suffered preeclampsia. The purpose of this research is to analyze correlation of history pre-eclampsia with the effectiveness of early mobilization on postpartum mother in dr. H. Abdul Moeloek Bandar Lampung.

This research uses a type of cross-sectional design, with a retrospective approach. The study population was the whole postpartum mothers who birth in April 2015. The research samples 40 postpartum mothers in Dr. Hi. Abdul Moeloek hospitals Lampung April 2015. The sampling technique used purposive sampling

Result of statistical test there is correlation based on a history of preeclampsia with the effectiveness of early mobilization on postpartum mother  $\rho$  value = 0.041; OR = 4.333 95% CI = 1.235 to 15.206. Statistically the results showed a highly significant positive influence between the history of pre-eclampsia with early mobilization effectiveness on postpartum mother, practically preeclampsia history has a four times greater risk for not doing early mobilization effectively compared with mothers who did not have a history of preeclampsia.

## Keywords: history of preeclampsia, early mobilization Effectiveness

152 cases and occurs an increase in 2012 as many as 178 cases. Based on the annual report of the

## INTRODUCTION

One indicator to determine the health of a nation characterized by mortality among mothers and infants. Based on data from the World Health Organization (WHO) in 2008, that each year maternity woman died reached more than 500,000 people. In 2002 Maternal Mortality Rate (MMR) in Indonesia amounted to 307 per 100,000 live births KH to 228 per 100,000 in 2007. According to the Indonesian Demographic and Health Survey (IDHS) reported AKI in 2012 amounted to 359 per 100,000 KH ( USAID said that the Board, and the MOH, 2012). Based on that data MMR in Indonesia is still relatively high.

The direct causes of maternal mortality in MMR biggest contributor is bleeding 28%, pre-eclampsia or eclampsia by 24%, 11% infection, puerperal complications obstructed 8% and 5% (MOH, 2008). The cause of MMR highest occupied by bleeding and the second order is pre-eclampsia or eclampsia.

According to Demographic and Health Data Estimation Indonesia in 2011, the number of maternal deaths in Lampung Province reached

Provincial Health Office of Lampung in 2010 of 184 432 pregnancies there are around 39 150 (21%) who had severe preeclampsia, in 2011 of 186.327 pregnancies there are around 41.550 (22.3%), while in 2012 of 181.047 pregnancies there are as many as 60, 017 (33.15%) incidence of preeclampsia (Lampung Provincial Health Office, 2012). Preeclampsia cases in Lampung province mengalmi increase from 2011 to 2012.

Dr. H. Abdul Moeloek Hospital is one of the largest contributors of preeclampsia cases in Lampung because this hospital is the only government hospital was a referral from a hospital - another hospital. From the preliminary study conducted at Dr. A. Dadi Tjokrodipo Hospital, data collection in February 2015, the number of cases of preeclampsia as many as 14 people (13.72%) of 102 deliveries (medical Report of Obstetrics Dr. A. Dadi Tjokrodipo Hospital, 2015). At the Hospital Dr. H. Abdul Moeloek number of cases of preeclampsia in March 2015 as many as 19 people (26.02%) out of 73

deliveries (medical Report of Obstetrics Dr. A. Dadi Tjokrodipo Hospital, 2015).

Preeclampsia is a typical syndrome in pregnancy characterized by decreased organ function due to vasospasm and endothelial activation is accompanied by proteinuria (Kenneth, 2009). Decreased organ function due to occurrence of preeclampsia, one resulting in anaerobic metabolism that lead to the formation of Adenosine triphosphate (ATP) in small amounts and the buildup of lactic acid in esktermitas area, which causes the mother was tired and felt pain during mobilization (Sukarni & Margareth, 2013). For this purpose the need for health education about early mobilization so that the implementation of early mobilization more leverage to do.

Results of research by Suanti titled description of the factors that affect the implementation of early mobilization in normal post partum mothers in RSUD. Abdul Manan Simatupang in April of 2011 by using descriptive design. The number of samples in this study 63 people. Sampling using total sampling technique. The results showed that mobilization can be influenced by the knowledge at 17.50, amounting to 24.63% of certain diseases, pain intensity amounted to 34.33%, and 23.54% of family support. In this study, pain intensity was very influential in the implementation of early mobilization.

Preliminary studies conducted at Hospital Dr. H. Abdul Moeloek Lampung Province on 3 April 2015 there were 21 maternal postpartum vaginal birth, found that there were 8 people (38.09%) who did early mobilization, and 13 (61.90%) did not do early mobilization. Where 21 of the postpartum mother 5 (23.80%) of them suffered a history of preeclampsia.

Based on the above researchers interested in conducting research on the history of preeclampsia correlation with effectiveness mobilisai early postpartum mother in Dr. H. Abdul Moeloek Hospital Lampung Province.

## RESEARCH METHODS

This study design using analytical survey method. The research design used in this study using cross sectional approach to find out the history of preeclampsia Correlation with Early Mobilization Effectiveness of Maternal postpartum in at Dr. H. Abdul Moeloek Hospital Lampung Province.

## RESULT AND DISCUSSION

**Table 1**  
**Univariate analysis of the effectiveness Preeclampsia History of Early Mobilization at Hospital Dr. H Abdul Moeloek Lampung Province**

Category	N	Proportion (%)
1. History of Preeclampsia	19	41,3
- History of Preeclampsia	27	58,7
- No History of Preeclampsia		
Total	46	100
2. Effectiveness of Early Mobilization	22	47,8
- Ineffective	24	52,2
- Effective		
Total	46	100

Based on the above table 1 Proportion history of pre-eclampsia less than those without a history of pre-eclampsia while the proportion who did early mobilization is effectively lower than they did early mobilization effectively.

The bivariate analysis was conducted to determine the effectiveness of Correlation history of preeclampsia with early mobilization on postpartum mother in Dr. Hi. Abdul Moeloek Hospital Lampung province the period April

Cate gory	Mobilization				N	% OR	ρ
	Ineffecti ve		Effecti ve				
	N	%	N	%			
History of Pre eclamps ia	13	28	6	13	19	41	4,333 0,04 1,235- 15,206
No History of Pre eclamps ia	9	19	18	39	27	59	
<b>Total</b>	<b>22</b>	<b>48</b>	<b>24</b>	<b>52</b>	<b>46</b>	<b>100</b>	

2015.

**Table 2**  
**Preeclampsia Historical Correlation with Early Mobilization Effectiveness**



Based on the results of Table 2 test Chi Square obtained count of 4,186 where the Chi Square test bigger than Chi Square table with a degree of freedom (df) 1 (3,841). This means there is a history of preeclampsia correlation with the effectiveness of early mobilization in postpartum mothers.  $R = 0.041$  showed that a history of preeclampsia have a significant correlation with the effectiveness of early mobilization in postpartum mothers. Variables with a history of preeclampsia early mobilization effectiveness on postpartum mother has a CI (95%) were between 1.235 to 15.206, which means a history of preeclampsia have a positive correlation with the effectiveness of early mobilization on postpartum mothers, which means the greater the mother has a history of preeclampsia, the greater the number of occurrences mother who did early mobilization effectively on postpartum mothers. In this research earned value  $OR = 4.333$  shows that postpartum mothers who do not effectively perform early mobilization is four times greater than postpartum mothers who effectively conduct early mobilization in the groups of women who have a history of preeclampsia.

According to the results known that mothers who do not do the effectiveness of early mobilization due to a history of preeclampsia. Maternal preeclampsia there is decreased blood flow that causes decreased prostaglandin placenta and uterus resulting in ischemia. The state of ischemia in the uterus stimulates the release of trophoblastin resulting in the release of thromboplastin caused decreased blood perfusion (Sinclair, 2010)

Preeclampsia will cause vasospasm resulting in arteriolar lumen narrowed so lumen can only be crossed by a red blood cell. Peripheral pressure will increase in order to meet the need of oxygen, causing the occurrence of hypertension, but it happens multiorgan disorder of the body including brain, blood, lungs, liver, and renal (Sinclair, 2010)

Kidneys due to the influence of an increase reabsorbs aldosterone causes sodium and fluid retention and can cause edema. Besides vasospasm of arterioles of the kidneys decreased reabsorption of proteins and permeability to protein will increase so much protein will escape glomerular filtration lead to proteinuria. In estermitas anaerobic metabolism can occur causing adenine triphosphate (ATP) is produced in small quantities that is 2 ATP and lactic acid formation. The formation of lactic acid and ATP produced at least will lead to a state of fatigue,

weakness, and pain causing activity intolerance (Sukarni & Margareth 2013).

Based on the results of previous studies by Rita Suanti titled description of the factors that affect the implementation of early mobilization in normal post partum mothers in RSU H. Abdul Manan Simatupang in April of 2011 by using deskriptiv design. The number of samples in this study as many as 63 people. Sampling using total sampling technique.

The results showed that mobilization can be influenced by the knowledge at 17.50, amounting to 24.63% of certain diseases, pain intensity amounted to 34.33%, and 23.54% of family support. In this study, pain intensity was very influential in the implementation of early mobilization. This is consistent with the theory of Chapman, 2006, which states that the factors that influence early mobilization after delivery is a specific disease or injury, the energy, the presence of pain, anxiety levels, and the level of knowledge (Chapman, 2006).

The results of this study do not there are any discrepancies with the theory that has been described previously, and therefore mothers who have a history of preeclampsia need to get encouragement and motivation of health workers and family support of early mobilization after delivery. However, these results need to be developed further by taking into account the experience factor that researchers do based on previous studies resulting in broader research and accurate.

The results of this study also found no correlation was significant between the history of preeclampsia with the effectiveness of early mobilization on postpartum mother with  $p$  value = 0.041 and practical results obtained in the field the opportunity mother postpartum ineffective conduct early mobilization are four times more likely than mothers postpartum effective early mobilization in the groups of women who have a history of preeclampsia. Allegedly, the mother who had a history of preeclampsia will be a reduction of oxygen in the blood vessels that lead to anaerobic metabolism to produce ATP in small amounts and the buildup of lactic acid, which creates energy in the body decreases and the presence of lactic acid creates a feeling of stiffness in the muscles so Mom who should be able to effectively perform early mobilization are not able to effectively perform early mobilization

## CONCLUSIONS

There is a significant positive correlation between a history of pre-eclampsia with early mobilization effectiveness on postpartum mothers. The correlation can be seen as follows: Mrs. puerperal who had a history of preeclampsia risk four times more likely to not mobilize effectively compared with postpartum mothers who had no history of preeclampsia. Improved service through the medium of information in hospital and for which further research should be done with a different subject, namely the mother who had a history of preeclampsia by caesarea seccio labor action

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## DETERMINANT FACTORS OF MATERNAL MORTALITY IN PASAMAN- WEST SUMATRA

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### ABSTRACT

Maternal mortality become problematic in most of developing countries. Main causes of maternal mortality are divided into two groups, i.e., direct and indirect causes (Indonesia Demography and Health Survey, 2013). Based on the result of Indonesia Demography and Health Survey in 2012, Maternal Mortality Rate in Indonesia was 359/100.000 live birth. Indirect causes of maternal death are proxies determinant, middle determinant, and contextual determinant (McCharty and Maine, 1992). The objective of this study was to analyze contextual determinant of maternal mortality in District of Pasaman. This was an analytic study with a *cross sectional* study design. The study was held on December 2015 until February 2016 in District of Pasaman – West Sumatera. The population of the study was all women in either their pregnancy, giving birth, or postnatal period during 2013 – 2015. The samples were divided into two groups, ie, case group consisting of all maternal death case during the years (15 people) and control group consisting of women who were pregnant, giving birth, or in postnatal period and still alive between 2013 – 2015. Data was collected with documentation or assessing the verbal autopsy data, data analysis was with *chi square* analysis. The result of the study showed that the main direct cause of maternal death in District of Pasaman was Haemorrhagic PostPartum (53,33%); nearly half (40%) of maternal mortality occurred during delivery. *Chi square* test showed that there was no correlation between educational background of a mother and husband and maternal mortality and there was no correlation between working status of a women and maternal mortality. The conclusion was that there was no correlation between contextual determinant factors and maternal mortality. The risk increased when a women or husband had low level of education and and the mother was a career woman. Thus, demand of action involving cross sector especially to increase women status in family and society is needed. Furthermore, the certainty in clinical decision and clinical assessment by the health professional in emergency case is an urgent thing.

**Keywords :** maternal mortality, Status of women, family status,,Status in society

### INTRODUCTION

Death among pregnant women and in childbirth is a huge problem in developing countries, because the maternal mortality rate is an indicator to reflect the health status of the mother. According to the World Health Organization (WHO), the maternal mortality rate (MMR) in ASEAN ranks highest in the world. The WHO estimates the total maternal mortality rate in ASEAN is about 170,000 cases (MOH, 2013). The results of Indonesia Demographic and Health Survey (IDHS) in 2012 shows that the maternal mortality rate in 2012 reached 359 deaths per 100 thousand live births.

The main causes of maternal mortality according to Demographic and Health Survey (2012) are classified into direct and indirect causes. The direct cause is closely related to the health condition of mothers since pregnancy, childbirth and post-partum, such as bleeding, infection, post-partum

complications, obstructed/prolonged labor, abortion, obstetric trauma, obstetric embolism, and others. For the indirect causes, they are associated with socio-economic conditions, geography and cultural attitudes of society summarized in condition 4 too, too old, too young, too many, and too often. In addition, there are 3 factors, ie, Too late, which is delay in decision, too late for referring, and too late to get service (PUSDATIN, 2014)

The study aimed to examine the contextual determinants of maternal mortality in Pasaman, namely the status of women in the family and society, the status of the family in society and related community health status, according to the concept put forward by Mc Charty and Mainn (1992)

## RESEARCH METHOD

This was an analytical research with a case control study design. The dependent variable was maternal mortality, and the independent variables were the contextual determinants of maternal mortality, namely: 1) the status of women in the family and society, including education level, employment status, and empowerment of women; 2) the status of the family in society, including ownership of health care, husband education, husband's and employment status; 3) status of the community, including the availability of health care facilities and health care workers.

Research was conducted in December 2015-February 2016 in Pasaman District, West Sumatra. The cases were deceased mothers, and the controls were life mothers; the birth was on the same day or almost simultaneously with the incidence of maternal mortality. The sample size of cases and controls was 15, respectively. The research data was secondary data, obtained on maternal deaths in Pasaman District Health Office, verbal autopsy documents and registers cohorts of women. The analytical methods used univariate analysis and bivariate with chi square test.

## RESULTS AND DISCUSSION

### Incidence of maternal mortality

The incidence of maternal mortality in Pasaman during 2013 was eight cases. In 2014, there were 3 cases and in 2015 there were 5 cases. Total cases were 16. However, the researchers did not obtain data on one incidence of maternal mortality in 2015 because of the absence of documentation of the case, so that the data of this study was only 15 cases.

Here are the full results of the incidence of maternal mortality, shown in Table 1:

**Table 1. Incidence of maternal mortality in Pasaman during 2013-2015**

Time of death	Sum	%
During pregnancy	5	33,3
During delivery	6	40
During postnatal	4	26,7
<b>Sum</b>	<b>15</b>	<b>100</b>
<b>Cause of maternal death</b>		
<b>Direct Obstetric cause</b>		
HPP	8	53,3
Pre eklampsia/eklampsia	4	26,6
Abortus	1	6,7
Solusio plasenta	1	6,7
<b>Indirect obstetric cause</b>		
Asma Bronkiale	1	6,7
<b>Sum</b>	<b>15</b>	<b>100</b>

Based on the research above shows that the incidence of maternal mortality occurred more frequently during childbirth (40%). The direct causes of maternal deaths were due to postpartum hemorrhage (PPH) by 8 cases (53.3%), and pre-eclampsia / eclampsia by 4 cases (26.6%).

Postpartum hemorrhage incidence occurred more frequently during delivery. In this study, PPH during delivery was due to retained placenta by 3 cases and atonic by 1 case. PPH on puerperal was 4 cases, caused by atonic by 2 cases and the retained placenta by 2 cases.

Retained placenta causes the uterus not to contract properly. Uterine contraction results in blood vessels to always be open. This is what causes the HPP. For that, we can respond quickly and appropriately in the case of HPP is indispensable. This study found that the case of HPP was not handled properly because the aid given was too late and bleeding was not managed well when she arrived at the hospital as a place of referral.

In addition to HPP cases, pre-eclampsia / eclampsia cases were also quite high. There were 4 cases found in this case, 3 cases found during pregnancy, and 1 case at the time of birth. Similar to the case of HPP, the handling of cases of pre-eclampsia / eclampsia required the skills of health workers to recognize the signs and symptoms as early as possible. Delays in providing help could be due to delays in recognizing early the possible complications that occurred in the mother, late

referral in a timely and late to get help at a place of reference.

One of the saddest things was that the hospital as a referral did not have the blood preparation so that mothers who needed blood were struggling between life and death while blood was sought after by the family. In addition, it also required the skills of midwives attending births in the handling of emergency obstetric care because the midwife is the front line in maternal and child health services.

This was in line with the results of the study of Mathur et al that in order to decrease the problem of maternal mortality, it is necessary to increase the availability of blood for transfusion, improving emergency transportation, training of health workers, improving infrastructure at health facilities, effective management of supplies and equipment, improve public awareness, better coordination, and improve referral mechanisms.

#### Contextual determinants factors of maternal death

**Table 2. Contextual determinants factors of maternal death**

Independent Variable	Cath- gory	Case		Control	
		N	%	N	%
<b>Woman status in family and society</b>					
Education Level	High	8	53,3	5	33,3
	Low	7	46,7	10	66,7
Working status	Yes	7	46,7	3	20
	No	8	53,3	12	80
Women empower	High	0	0	0	0
	Less	15	100	15	100
<b>Family status in society</b>					
Ownership of health insurance	Yes	15	100	15	100
	No	0	0	0	0
Husband's Level of education	High	4	26,7	2	13,3
	Low	11	73,3	13	86,7
Husband's working status	Yes	15	100	15	100
	No	0	0	0	0
<b>Community status</b>					
The Availability of healthcare facilities	Availab	15	100	15	100
	Not availabl	0	0	0	0
Availability of healthcare workers	Availab	15	100	15	100
	Not availabl	0	0	0	0

Research results in Table 2 show strong status of women in family and society. It is seen that the higher educated mother just over half (53.3%) in the case, while in control most of the mothers (66.7%) had high education. The majority of mothers did not work well on cases (53.3%) and control (80%). Especially about the empowerment of women, in which all good mothers of both groups were equally not have empowerment in decision-making on the health of yourself. Family status in the community of both groups have not been fully robust controls. Although all the family already have health insurance and all the husband works, but most of the husband's level of education is low, both in the cases (73.3%) and control (86.7%). Status society concerning the availability of health services and health personnel is adequate, because the public already has a health-care facilities and health care workers in their respective areas (100%).

**Table 3. Bivariate analysis of Contextual Determinants Factors of Maternal Death**

Independent variable	OR	p value
<b>Woman status in family and society</b>		
Level of education	0,438	0,269
Working status	3,5	0,121
<b>Family status on society</b>		
Husband's level of education	0,423	0,651

Bivariate analysis used chi - square to examine the relationship between a dependent variable with each sub-variable on the independent variable. Based on univariate data analysis, the variables that are eligible to be tested chi - square there are only two, namely the status of women in the family and society (sub variables education level and employment status of the mother) and family status in society (education husband).

The result of chi - square at maternal education level obtained p value 0.269 with OR 0.438. This means that there was no relationship between maternal education level with maternal mortality. Mothers who had low levels of education have 0,438 times the risk of experiencing maternal mortality than mothers with high education. The results are consistent with research (Aeni, 2013) that the mother's education level was not associated with maternal mortality, but in contrast to the results of research (Sinaga M, 2007) that the low level of education can lead to increased incidence of maternal mortality. Can be explained that a mother who is highly educated does not mean there is no guarantee to avoid the risk of maternal death, and vice versa with low-educated



mothers. But highly educated mothers tend to be more able to avoid the risks posed by pregnancy, childbirth and post-partum because education can affect a person's intellectual power in deciding a case. Corresponding opinion (Sumaatmadja, 2002) that education is defined as the process of changing individual behaviour toward maturity and ripeness. Low maternal education causes intellectual power is still limited so that its behaviour is still heavily influenced by the surrounding circumstances, the behaviour of other relatives or people they respected (Asriani, 2009). Improvements in factors of various sectors such as the environment, education, health system, fertility, and empowerment of women all contributed significantly to the reduction of mortality (David et al, 2012)

The result of chi - square on the variable of maternal employment status obtained p value of 0.121 with OR 3.5. This means there was no relationship between maternal employment status and maternal mortality. The results were consistent with research by Aeni (2013) that the mother's employment status was not associated with maternal mortality. Working mothers had 3.5 times the risk of mother mortality compared with mothers who did not work. Although statistics showed the results were not related, in real life of the working mothers, they were likely to do the heavy activity so that it could deplete the mother's energy. Energy of the mothers are supposed to be for fetal growth and needs of the body's own mother, it would used to work. This condition will trigger a waterwheel and nutritional deficiency in pregnant women, especially if the mother did not know about the nutritional needs of pregnant women. One form of nutritional deficiency that most often occurs in pregnant women is anemia. Anemia will affect the occurrence of post partum hemorrhage. This is certainly very dangerous for the mother, because post partum hemorrhage is the most common cause of maternal death.

Table 3 shows that the results of the chi - square in husband education obtained p value 0.651 with OR 0.423. This means there was no relationship between husband's education and maternal deaths. But the mother who had a husband with low levels of education had 0.423-fold risk of experiencing maternal deaths. This was because education could make her husband change attitudes and behaviour to be better. Education can affect a person's intellectual power in deciding a case. In line with the opinion (Notoatmodjo, 2007) that education aims to change knowledge / understanding, opinions and concepts. In addition, education is also changing attitudes and perceptions and inculcate behaviour / habits are new. Moreover, the husband's role in making decisions in the family is very dominant. For that, attitudes and

behaviours can support the health of pregnant women.

## CONCLUSION

The incidence of maternal mortality in the years 2013-2015 were more prevalent during childbirth (40%). The direct causes of maternal deaths were due to PPH majority (HPP) by 8 cases (53.3%), and pre-eclampsia / eclampsia by 4 cases (26.6%). There was no relationship with the contextual determinants of maternal mortality. However, the risk of maternal death could occur if the mother and husband were less educated and the mothers were working mothers. The recommendations given are efforts involving cross-sector, mainly to improve the status of women in the family and society and raise public awareness about the importance of maternal health. In addition, the development of partnerships is also important for the MCH.

On the other hand, the availability of adequate and affordable health care in providing health services, especially emergency obstetric actions, significantly affects maternal mortality. For that, it is expected that health personnel are stationed at primary health care facilities expected to provide optimal emergency obstetric care. Accuracy in making clinical decisions is very important, because the delay means death.

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# TRADITIONAL HEALTH BELIEF PRACTICES THAT HARM WOMEN'S AND CHILD'S HEALTH: A REVIEW ON DELAYED BREASTFEEDING AND POOR DIET IN PREGNANCY

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## ABSTRACT

This review is about ethnographic approach done in midwifery studies concerning traditional health belief practices that may pose harmful effects for the wellbeing and health of mother and baby. Two important issues are discussed here, which are delayed breastfeeding that brings disadvantages to newly born babies because they miss colostrum that can provide them with so much important nutrient and poor dietary intake during pregnancy that gives bad impacts to both mother and fetus.

Some journal results are illustrated to give clearer description on the matters being discussed. Findings among societies that can surprise intellectual domain are presented, such as the belief that colostrum is bad for the health of newborn. This wrong perception must be corrected so that better generation can be produced.

Midwifery ethnography can know what practices done in it. Therefore, ethnographic approach can be as a means for midwifery fields to know what exactly happens inside the community to address some issues that **may hinder the health of women, mothers, and child.**

**Key Words: Traditional Health Belief, Delayed breastfeeding**

## INTRODUCTION

When we talk about clinical settings, actually we cannot separate it with cultural background of the pertinent ones. Culture has shaped all of human aspects in this world since the interaction at least between two people will certainly involve culture those two people hold. Thus, cultural beliefs become one of the most important elements to study health-related sciences, not exceptionally midwifery. As all have known that life, birth and death will remain a mystery for human beings and it is heavily entwined with cultural beliefs.

Most women experience cycles of producing the next offspring through pregnancy, birth, and postpartum as this earth is still revolving. However, cultural beliefs are inevitably always present in that cycle.<sup>1</sup> Some cultural beliefs are safe or helpful for women to go through the cycle, but some are harmful to even both mother and fetus. Unhealthy belief in certain society can actually disadvantage the psychology of the mothers, such as a belief that describes twins and other

multiple pregnancies may be viewed as unlucky.<sup>2</sup> Furthermore, beliefs concerning unhealthy practices starting from pregnancy to childbirth may impact on the bad outcomes of pregnancy and childbirth, which eventually may bring morbidity and mortality to mother and baby.<sup>3</sup> Therefore, maternal and fetal/infant health is strongly associated with beliefs and practices around pregnancy and childbirth which has implications for the health of the infant and mother after the birth. Unfortunately, traditional cultural practices are often held by members of a community and passed from one generation to the next generation.

In fact, when we refer to a discussion about beliefs regarding women's reproductive health, discussion about childbirth is inseparable. Thus, health beliefs about childbirth have been discussed and practiced in entire world since perhaps the beginning of human life.<sup>4</sup> Some studies have been conducted concerning certain health beliefs that pose a danger to the health of the woman, one of which is a study conducted in Lusaka Zambia that discusses the safe motherhood perspectives and support for pregnant women.<sup>5</sup> In that study, health beliefs have provided many women in the area to encounter obstacles as the beliefs are contradictory

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with what has been suggested by health professionals.

The most critical periods in the health of women are pregnancy, birth, and the postnatal period and of newborn are some moments after birth, especially the initiation of breastfeeding. However, traditional practices and beliefs might differently be practiced by women and their newborn babies in the world since levels of understanding on perceiving a culture is bad or not to a certain person is greatly dependent on any individual to hold cultural and social structures. In some regions, traditional birth attendants are still trusted to assist delivery as well as treating the newborn and various traditional medicine practices are still used which may have positive or harmful health effects, such as delaying diagnosis and treatment.<sup>6</sup>

This review talks mainly about unhealthy practices that have been discussed in some previous published journal articles. This review is intended to give an overview about what actually happens around traditional practices experienced by women and their newborns when dealing with their health and wellbeing.

## RESEARCH METHODS

This review was based on the analysis of several studies on ethnography point of view. Culture is very important in human life, as to analyze the clinical settings in regard to the health status of women. This research method was a research library.<sup>7</sup> This kind of research involves the identification and allocation of sources that provide factual information or expert opinion on a research question. Researcher in the research literature did not refer to the books in the library literally, but referred to the data in the journals obtained on-line from the internet, given that "It is becoming generally accepted that technology builds upon itself and advances quite independently of any link with the scientific frontier."<sup>8</sup> For the analysis, descriptive and content analyses were considered appropriate to elaborate the findings in the journal articles reviewed based on the ethnography approach.

## RESULTS AND DISCUSSION

The following are results of studies that are reviewed to have the common sense to what had happened in global society concerning health beliefs around women's and newborns' health and wellbeing:

### **Delayed initiation of breastfeeding to waste the production of colostrum**

One of traditional beliefs regarding with breastfeeding is delayed initiation. Some studies have shown that this practice is still being practiced among traditional society with some reasons.<sup>9,10,11</sup> The colostrum which is very beneficial for the health being of baby in the future life is discarded without giving it to the baby. Traditional health beliefs consider colostrum as it is yellowish in color as a substance that can bring harm to the baby's health.

Colostrum is highly nutritious and belied to have substances serving as antibodies that protect the newly born babies from many diseases.<sup>12</sup>

Colostrum is the thin fluid produced by breastfeeding mothers in abundance during the very first few milkings, and with each milking, less is produced. When given properly, colostrum can provide immunoglobulins from the mother to the baby and turns on the child's immune system. Facts have proven than colostrum has incredible immune-balancing benefits.

Many important nutrients can be found in colostrum that include growth factors, lipidic and glucidic factors, oligosaccharides, antimicrobials, cytokines and nucleosides. Studies have proven that colostrum is much more beneficial than the regular milk as it can provide over 100 times the amount of immunoglobulins as regular milk. Colostrum with its transfer factors, such as hydrogen peroxide and immunoglobulin G (IgG), can recognize specific antigens and also help coordinate the immune system to be able to recognize the difference between normal tissue and pathological microbes or abnormal tissue growth.<sup>13</sup> These transfer factors can actually boost natural killer cell (NK) activity and calm a hyperactive immune system through activating suppressor T cells. As a result, this condition will improve the intelligence of the immune system and allow it to function with greater efficiency.

Actually, it takes around two or three days after birth for colostrum to converse to mature milk, although there is variation among individuals due to individual differences in the timing of initiation and the intensity of breastfeeding.<sup>14</sup> Therefore, mothers after birth have golden opportunity to give the colostrum to their newborns.

Colostrum avoidance practices are against health benefits that can be possessed by the newborn babies. These practices must be discontinued by providing proper education to societies that still firmly hold this belief. With certain education, one

of the first rights that can be given to newborns in form of colostrum can belong to the correct receivers.

### **Dietary taboos during pregnancy that contribute to poor nutrition in women and fetal growth**

Women in some area of the world are faced with some taboos concerning their food intake when they are in the state of pregnancy until lactation period. Sometimes, they are forced to abstain from especially nutritious and beneficial foods that this of course will bring adverse effects on their health as well as fetal or infant health. The two study results to be reviewed here are 'Food taboos among nursing mothers of Mexico'<sup>15</sup> and 'The importance of eating rice: changing food habits among pregnant Indonesian women during the economic crisis'.<sup>16</sup>

Good nutrition during pregnancy can help to keep developing mother and fetus healthy. The need for certain nutrients, such as iron, iodine and folate, is increased at this time. A varied diet that includes the right amount of healthy foods from the five food groups generally provides our bodies with enough of each vitamin and mineral each day. However, pregnant women may need supplements of particular vitamins or minerals.

Pregnant women who practice a restricted-protein diet during pregnancy may pose growth retardation to their fetuses since reduced protein may mean reduced nutrient supply to the fetuses.<sup>17</sup> The belief to restrict some important nutrients during pregnancy only based on traditional assumption and not based on medical or trial evidence should actually be avoided. Many bad impacts on poor pregnancy states and outcomes have been studies, such as iron-deficiency anemia during pregnancy.

The contribution of common nutrients or other nutritional factors can promote the fetal growth. Therefore, it emphasizes the importance of maternal nutritional intake and availability of nutrients contributing to adequate fetal growth. Some traditional beliefs to restrict some nutritious food that can give bad influence to pregnant women and fetuses must be stopped. Education to society concerning good diets during pregnancy and avoidance of traditional health practices regarding certain food restriction that actually harm the women themselves is very important.

## **CONCLUSION**

With ethnographic approach, problems that occur in society concerning bad health practices that are forced to women such as wasting colostrum and having restriction to beneficial foods for pregnancy can be known. It is therefore a duty for midwives who are interested in the field of midwifery ethnography to study deeper about phenomena that may happen in the middle of our society.

Midwifery ethnography can go deep into society, for example, to know what practices that are done in it. In this review, two cases that are delayed breastfeeding and dietary taboo for pregnant women are cases that actually harm women and child health. Therefore, ethnographic approach will always be needed in midwifery fields to know what exactly happens inside the community to address some issues that may hinder the health of women, mothers, and child.

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# HUSBAND'S SUPPORT ON A SUCCESSFUL BREASTFEEDING : A REVIEW

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## ABSTRACT

The WHO has recommended mothers to breastfeed their babies until at least six months after birth. The success of the WHO recommendation is dependent on several factors, and one of those factors is the support of the husband. Of the three journal articles reviewed in this study, it is proven that supportive husband supports the success of early initiation of breastfeeding and exclusive breastfeeding. With the support of the husband and the husband's presence when nursing mothers are still active to breastfeed their babies, early breastfeeding cessation can be prevented for breastfeeding mothers feel rewarded for their efforts so far in pregnancy, childbirth, and breastfeeding their babies. Therefore, the husband support is regarded as a very significant intervention towards successful breastfeeding.

**Keywords:** *exclusive breastfeeding, husband's support, the success of breastfeeding*

## INTRODUCTION

WHO has recommended exclusive breastfeeding for the baby for at least six month afterbirth, and can be continued until the baby reach the age of two years old.<sup>1</sup> Breastfeeding has an important role in optimizing the health of society. Breastfeeding and breastmilk is proven to have many positive impacts on health and welfare of a mother and the baby. Breastfeeding is even reported to be able to decrease illness, in the growing time and in the future. Diabetes type I and II are two of many illness which can be prevented,<sup>2</sup> meanwhile the risk of ovaries cancer and diabetes type two can also be decreased for the mother who has breastfed her baby.<sup>3</sup>

When it is successful, breastfeeding can improve the welfare of a mother, thus it is affecting the family life. Some studies has reported that problems which occur in breastfeeding are related to the lack of supports for the mother.<sup>4</sup>

The supports for successful breastfeeding can be provided by many people, such as midwife and other health assistance, family, especially husband, and also the community. As the person who is very close to the new mother, a husband has a fundamental role in succeeding the

breastfeeding program, both the initiation and the exclusive. Some research had been done to recognize if a husband's support is really

effective in the successful breastfeeding, including the duration of program.<sup>5,6</sup>

One research has acknowledged that the mothers who received the support from their husbands or spouse, from the family members and health assistance will have the possibility of 37 times to keep their duration of breastfeeding until at least 6 weeks after delivery, comparing to those who has no supports.<sup>7</sup> A husband's support is then very important in the duration of breastfeeding. In a research amongst 123 mothers, the most significant factor for a mother to stop breastfeeding is her perception of her husband's attitude, and 80 % among those are even reporting that their husband are not supportive and wanting them to stop the breastfeeding process.<sup>8</sup>

Since supports are the most important things for a mother to continue breastfeeding, eventually those supports are considered to be effective intervention for the improvement of welfare for mother and child. This review is done to give a clear overview of how important the support, especially from a husband, in order for a breastfeeding to be successful.

## METHODS

This research is a library research<sup>9</sup> which focusing in informations regarding to the similar research. All the informations and relevant ideas will be used for analysis and discussion for this research. This research

involves the identification process and allocation of resources which providing the factual information related to this research. The materials in this library research are referred to the data in journals collected from the internet.

Primary data used in this research are taken from several journals which had done the studies about the relation between husband's supports and the successful breastfeeding. Those studies are 1) *Maternal Perceptions of Partner Support during Breastfeeding*<sup>10</sup> by Mannion et al, 2013; 2) *The Maternal Perception on Paternal Support: Influence on the Duration of Breastfeeding*<sup>11</sup> by Silva et.al, 2012; and 3) *Engaging and supporting fathers to promote breastfeeding: A Concept analysis*<sup>12</sup> by Sherriff et all, 2013. This research is using the descriptive method to explain the substances compiled from those four articles.

## RESULT

In research of Mannion et.al, husband's support is very related to the confidence of a mother and her feelings of being able to breastfeed her baby. The mothers who received positive and active supports from their husbands show high confidence comparing to those mothers who did not get any positive supports from their husbands.

In the research of Silva et.al, one of the factors of breastfeeding cessation in the first three months afterbirth is the lack of husband's participation to support the mother in breastfeeding their baby. The husband's presence is apparently affecting the mother's decision to stop or to continue breastfeeding her baby. In this research, if the husband is not there to accompany the mother in breastfeeding process, the mother tends to stop breastfeeding in the third month afterbirth.

In the research of Sherriff et.al, husband's support is the most important thing in breastfeeding initiation and continuation. With the support of husbands, mothers will feel the reduction of anxiety and isolation, thus they feel comfortable to continue breastfeeding the baby.

## DISCUSSION

Empiric proof of above stated researches shows that husband is the first and foremost supports needed by a mother to initiate the process of breastfeeding. Besides, the support can also affecting the mother's decision to continue breastfeeding her baby, increasing her confidence, and to help her planning the right timing to wean her baby.

The research about the factors which may affecting the duration of breastfeeding can also be used to make a program of breastfeeding promotion. One of those factors is the presence of husband to support the mother to keep continuing the process of breastfeeding. A husband is also important to participate in decision making, of when the weaning process has to be done.

A husband's support has a tremendous effect in breastfeeding prevalence within the first month afterbirth. This finding is similar to the research done by Arora et.al which stated that the most significant factor in early weaning process is the mother perception to the husband's preference. In that research, 80% of mothers reported that the supports of their husband gave them spirits to keep on breastfeeding their babies. The research from Litman et.al<sup>13</sup> stated that a husband's agreement is the most significant factor in the decision making of breastfeeding. In that research, almost all the husband is present in the process of delivery, which, however, the form of support and attention for the mother.

Take care of the children, to educate and upbringing them are the obligations and responsibilities of both mother and father. Therefore, every thing regarding to this process of upbringing shall be done together by mother and father as the parents with consciousness and responsibility, and also love for their children. Even though mother is the only person who can provide the breastmilk, the success and quality of breastfeeding rely mostly on the condition of togetherness between the mother and father. The presence of a husband which is felt by a breastfeeding mother is the most important factor for the succesful early breastfeeding initiation and its continuation.

The existence of a husband support, or the presence of the husband himself can raise the happiness of a breastfeeding mother; those happiness can increase the production of oxytocin hormones, and eventually will boost the production of breastmilk.<sup>14</sup> On the contrary, the sadness, physical exhaustion and mental of a mother will disturb the reflex of oxytocin, thus will compromise the production of breastmilk.

Besides the physical exhaustion, breastfeeding can also be wearisome emotionally. Moreover, in the early time of breastfeeding, a mother would face a lot of trouble which will cause the problem in breastmilk production, or even more causing the mother to experience baby blues. A wife needs a support and encouragement from her spouse. Therefore, a husband's support will be an acknowledgement for everything that a mother does in carrying the baby, delivering and breastfeeding. That acknowledgement can raise a mother's spirit to keep on breastfeeding and not giving up.

A husband's role to anticipate and to give his physical and emotional support to a mother, such as love, safe and comfortable feelings through encouragement, are somehow worthwhile. In a research,<sup>15</sup> husband's empathy to a breastfeeding mother is really important in successful breastfeeding. That empathy can raise the happiness and safe for the mother and will give impact on happiness of the baby, since the mother-baby strong bondage will be able to transfer such positive feeling from mother to a baby.

## CONCLUSION

Of those three journals discussed in this research, a husband roles in supporting a breastfeeding mother to commence the initiation of breastfeeding and to continue the process, is very crucial. Physical presence and emotional of a husband is very related to the rate of happiness of a breastfeeding mother, thus the succesful of breastfeeding can be achieved.

The care and love given by a husband for a mother, she will feel safe and comfortable to breastfeed her baby. Such togetherness will give the great timing to plan the duration of breastfeeding and weaning

process within the comfortable condition of discussion, for the sake of the mother and baby.

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