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Breastfeeding Education: Improving Initiation and Duration of Breastfeeding

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Breastfeeding Education: Improving Initiation and Duration of Breastfeeding

by

Rhonda Coffey

A thesis submitted to the faculty of
Gardner-Webb University School of Nursing
in partial fulfillment of the requirements for the
Master of Science in Nursing Degree

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Date

Abstract

The purpose of this research study was to examine the level of self-efficacy for new mothers attending a formal breastfeeding education compared to those that did not. Participants were asked to complete the Breast Feeding Self-Efficacy Scale – Short Form via telephone. Twenty primigravida mothers who were breastfeeding at the time of discharge agreed to participate. A Pearson correlation coefficient was calculated examining the relationship between the participant's level of self-efficacy and participation in formal breastfeeding. The Pearson correlation coefficient was positive but was not statistically significant ($r(18) = .250, p > .05$) indicating no relationship between the participant's self-efficacy score and participation in formal breastfeeding education.

Keywords: primigravida, breastfeeding, confidence, perception, self-efficacy, initiation, and duration

Acknowledgments

I want to first thank my personal Savior Jesus Christ for being with me each and every step of this journey, because I truly feel that without Him I could not have completed this task.

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CHAPTER I

Introduction

Worldwide, breastfeeding is the most complete form of nutrition for infants up to seven years of age in some third world countries. However, in the United States the average length of time a mother breastfeeds is for two years or less (Bigger & Long, 2008). There are many benefits of breastfeeding to both the mother and infant. Benefits for the mother include: the potential decrease for certain cancers in mothers who breastfeed and helping them return to their pre-pregnancy's weight quicker. Benefits for the infant include: decreased chance for some childhood diseases such as diabetes, obesity, and it has been proven that breastfed infants have higher intelligent levels (Hannula, Kaunonen, & Tarkka, 2008).

There are both financial and social benefits for families as well. Breastfed infants are usually healthier and require less sick visits to the pediatrician, fewer medications, and fewer hospitalizations (Ku & Chow, 2010). With these improvements in the newborn, a decrease in maternal absenteeism in the work force has also been seen (Ku & Chow, 2010; Mulder & Johnson, 2010).

Otsuka et al. (2014) states:

...maternal breastfeeding self-efficacy has been highlighted as an important psychometric factor for improving breastfeeding outcomes. Breastfeeding self-efficacy is defined as a mother's confidence in her ability to breastfeed her new infant and has been positively associated with breastfeeding duration and exclusivity in various cultures and age groups. Theoretically, breastfeeding self-efficacy is influenced by the following four main sources of information: (a)

performance accomplishments (e.g., past breastfeeding experiences), (b) vicarious experiences (e.g., watching other women breastfeed, peer counseling), (c) verbal persuasion (e.g., encouragement from influential others such as friends, family, and lactation consultants), and (d) influence of one's physiological and/or affective states (e.g., pain, fatigue, anxiety, and stress). (p. 297)

Problem Statement

Breastfeeding often presents challenges for the primigravida woman. These challenges can occur when patients receive inconsistent information and advice related to their care from healthcare providers. Patients have questions and value the opinions of the healthcare team, which helps provide mothers the education and support they need to be successful in their own care (Bigger & Long, 2008). Consistent educational advice that occurs throughout a patient's course of treatment is imperative in improving the patient's ability in managing their care. The ability to breastfeed is a learned art and usually does not occur spontaneously (Harris & Miller, 2012). The level of breastfeeding success is different with each mother. Some mothers feel success if they breastfeed for two weeks while others do not feel they have succeeded if they do not breastfeed for two years or greater, with a large variety of levels of expectation in between. The attitude and support that is communicated from the healthcare professional about breastfeeding and the ability to assist with the process of breastfeeding will have a great influence with the patient's participation on whether or not breastfeeding will be successful (Harris & Miller, 2012). While social media and other informal resources can provide patients with information about breastfeeding, actually attending a formal breastfeeding educational class could be a helpful resource for new mothers in understanding breastfeeding techniques.

Justification of Research

There are many influences to a mother's breastfeeding self-efficacy. Some mothers believe that breastfeeding will be easy and that it is human nature and occurs naturally. The average length of time for a mother's milk supply to come in is three to five days. A mother can increase her breast milk supply by consistently feeding on demand by monitoring hunger cues demonstrated by the infant, such as suckling fist, fingers, rooting, and/or lip smacking and by feeding or pumping 8-12 times a day (Harris & Miller, 2012). According to the Centers for Disease Control and Prevention (CDC) (2013) breastfeeding report card, it is estimated that as many as 75% of mothers started to breastfeed in the United States. Over the last 10 years, the United States has continued to make significant progress in the advancement of breastfeeding. One objective of Healthy People 2020 is to increase the number of infants who are breastfed (CDC, 2014).

In formal breastfeeding educational classes, nurses assist in teaching the breastfeeding mother techniques that will better prepare her to successfully breastfeed. Topics such as how to know when the newborn is hungry and postpartum measures that promote successful breastfeeding (such as having the infant stay in the room with the mother), are only two of the many breastfeeding education topics the nurse will cover with the breastfeeding mother. Mothers should be commended and encouraged on their successful breastfeeding efforts. Searching for ways to increase maternal confidence in her ability to breastfeed has been a focus of many researchers (Artieta-Pinedo et al., 2012).

Purpose

Breastfeeding education is vital for mothers and infants. It provides information that will assist mothers in making the decision on how they will feed their newborn. Breastfeeding is considered to be the best form of nutrition for infants. The benefits to the mother and infant can be invaluable throughout their lifetime. Through formal educational opportunities, new mothers can increase their knowledge base related to breastfeeding and ultimately be better prepared and more confident to breastfeed. This research study aims to evaluate new mothers' self-efficacy levels related to breastfeeding and explore initiation and duration rates of breastfeeding. By reviewing mothers' feedback, collecting their input, synthesizing data, improving educational offerings, and providing additional education to these mothers and healthcare providers, our society can be healthier.

Research Question or Hypothesis

The purpose of this research study was to answer the following research questions:

1. What is the level of self-efficacy for new mothers that attended a formal breastfeeding education class compared to mothers that did not attend a formal breastfeeding education class?
2. Is there an increase in initiation and duration of breastfeeding for new mothers that attended a formal breastfeeding education class compared to mothers that did not attend a formal breastfeeding education class?

It is proposed that mothers who are expecting their first baby and who attend a breastfeeding education class will be better prepared to breastfed their newborn (Artieta-Pinedo et al., 2012; Kornides & Katsantas, 2013).

Theoretical Framework

Albert Bandura's Self-Efficacy Theory served as the theoretical framework for this research study. Bandura's theory recognizes that people seem to know what to do and how to perform a task before actually trying that task. This type of learning can be beneficial because there is not any risk or punishment. Individuals acquire concepts through observational learning or vicarious learning by observing others, reading subject based literature, or formal educational offerings. Personal efficacy beliefs are measurements of confidence that an individual has about their capability to manage one's own thought, emotion, motivation, action, and environment "to produce desired effects by ones actions" (Bandura, 1997, p. 3). The greater the strength of one's personal efficacy beliefs, the greater is the likelihood of behavior initiation and maintenance. These individuals approach difficult tasks as a challenge and are eager to accomplish mastery over the challenges. When a setback occurs, these individuals push harder to accomplish their own goals and have increased perseverance when difficulties arise. On the other hand, a person with low self-efficacy avoids difficult task and are quick to give up when they infer that there are personal risks. These individuals focus on their past failed attempts and weaknesses rather than searching for solutions. Personal efficacy beliefs are specific to different behaviors so personal efficacy beliefs for one behavior cannot be easily generalized to other specific behaviors. There is a continued need to conduct

research to develop instruments that could measure an individual's confidence about their own capabilities to accomplish different behaviors (Bandura, 1986).

Personal self-efficacy theory and observational learning are the two essential themes that comprise Bandura's research called social-cognitive theory (Bandura, 1977). The ability to measure personal efficacy beliefs can provide a better understanding of Bandura's theory. He describes four principles that influence personal behaviors:

- Mastery Learning-successful practice of behaviors
- Vicarious Learning-role modeling of successful accomplishments of behaviors
- Symbolic Learning-verbal persuasion from others about one's ability to accomplish the behavior successfully (to be effective, the level of verbal persuasion needs to be slightly above one's level of confidence)
- Physiological-states associated with a behavior can be vastly influenced by conditions surrounding learning experience such as pain, embarrassment, boredom, and sleep deprivation potentially could decrease learning while interest, joy, happiness, and satisfaction of subject matter could increase learning (Cleveland & McCrone, 2005).

Definition of Terms

Operational/conceptual definitions involved in this study were:

- Perception: The way one thinks about or understands someone or specific subject matter (Merriam-Webster, 2014)
- Initiation: The process of bringing an action into practice (Merriam-Webster, 2014)
- Breastfeeding: Nutritional feeding to an infant from the breast, suckle, or nurse (CDC, 2014)
- Primigravida: “A woman who is pregnant for the first time” (Lowdermilk, Perry, Cashion, & Alden, 2012, p. 968)
- Confidence: A feeling or belief that one can do something well or succeed at something (Merriam-Webster, 2014)
- Prenatal: “Occurring or happening before birth” (Lowdermilk et al., 2012, p. 968)
- Postpartum: “Happening or occurring after birth” (Lowdermilk et al., 2012, p. 968)
- Self-efficacy: The extent or ability of one’s own belief to accomplish tasks and reach personal goals (Bandura, 1997)
- Psychometrics: Theory has been applied in the measurement of personality, attitudes, beliefs, and academic achievement (Bandura, 1997)

Summary

It was proposed by the researcher that a new mother who attends a formal breastfeeding education class would have improved initiation and duration rates of breastfeeding compared to mothers that did not attend a formal breastfeeding education class. Many investigators are exploring similar claims with conclusions that are vastly different. This research hopefully can make an impact that improves these rates and progress in clinical teaching methods that can promote an increase in successful breastfeeding.

CHAPTER II

Literature Review

A literature review for breastfeeding education was conducted using a variety of online databases including the Cumulative Index for Nursing and Health Literature (CINAHL), PubMed, SAGE Premier 2013, and the search engine Google. CINAHL was found to be the most beneficial with peer reviewed research articles on the topic of breastfeeding education. The search was narrowed down to current information and the years of 2005 to 2014 were reviewed.

Literature Related to Problem Statement

A quasi-experimental study conducted by Bigger and Long (2008) examined breastfeeding education for healthcare providers. The sample consisted of 35 participants in the control group and 35 participants in the intervention group, for a total of 70 healthcare participants. The research was conducted with an explanatory letter and questionnaire, where the experimental group attended a three day workshop and the control group did not attend an educational offering. Researchers identified the effectiveness of education and training to healthcare professionals can vastly improve breastfeeding initiation and duration rates when the healthcare staffs are saying the same thing to the patients with teaching, therefore providing continuity of care.

Crisso-Lizzo (2006) conducted an ethnographical study to discuss how physicians and nurses could promote breastfeeding to a low-income population of non-Hispanic black women. The sample consisted of 130 women who were enrolled through a state Women, Children, and Infant program from a New York metropolitan city. This research suggested that the health care professionals should direct their focus on developing trust

among clients; therefore, a continuity of care and support would be experienced throughout their pregnancies and childbirth. They were considered to be at high risk and expressed that they had not received adequate education that allowed them to make informed consents about their care and whether or not to breastfeed.

Grossman et al. (2009) used a correlational design to investigate whether exclusively educating practitioners would affect breastfeeding initiation rates in hospitals that have very low breastfeeding rates. The sample consisted of 1,180 participants from 10 community hospitals from three different cities in Massachusetts, who deliver between 500-2,000 births per year. The concept was to improve the educational offerings to mothers from the healthcare providers. The implications concluded that mothers complained by stating that out of date, incorrect, and inconsistent information they had received from medical staff (pediatricians, nurses, and obstetricians) interfered with their confidence and added more frustration. Most patients value the information they receive from their physicians and when the information conflicts, patients will resort to something easier like bottle feeding (Grossman et al., 2009). The information was collected from medical records and direct interview processes. The results of this study stated that there was an improvement after the intensive breastfeeding education to the practitioners and there was improved breastfeeding initiation rates in the observed hospitals.

A quasi-experimental study by Huang et al. (2007) evaluated the effectiveness of an online perinatal web-based breastfeeding class. The sample consisted of 120 primigravida women equally divided between a control group and experimental group. The concept was to increase knowledge to a population of women from 29-36 weeks

gestation, who were 18 years or older, and who did not have any complications of pregnancy. The control group was interviewed to assure they could read, write, listen, speak, and use the internet regularly. The experimental group planned to receive breastfeeding information for making the decision of feeding methods during their pregnancy. Clinics provided information about the maternal and infant benefits to breastfeeding, nursing techniques, and management of breastfeeding with pamphlets, videotapes, and classes. The groups received a pre-test and posttest. The results of this study stated that the control group who received their education via the web-based educational offerings, scored higher on their posttest than the experimental group. The results were scored with a Generalized Estimating Equations (GEE) model. This is a non-parametric method with statistical calculations that were performed using Statistical Packages for the Social Sciences (SPSS) package. This showed the breastfeeding rates at 3-5 days, 2 weeks, 4 weeks and 6 weeks as 48.3%, 45%, 31%, and 26.7% respectively with the control group. With the experimental group the breastfeeding rates were 38.3%, 20%, 20%, and 20% per the above defined time frames. The control group also expressed satisfaction with the ability to view the web-based materials at their own pace and not being tied to a classroom setting.

Lin, Kuo, Lin, and Chang (2008) conducted a quasi-experimental study to examine the effectiveness of perinatal breastfeeding education for primigravida women. The purpose of this study was to investigate ratios of breastfeeding rates within these hospitals and for the first month postpartum of breastfeeding mothers. The sample size was established from 100 mothers who were pregnant for the first time, that were experiencing no complications of pregnancy, and at the gestational age of 36-39 weeks.

There were 46 subjects in the control group and 54 subjects in the experimental group. Participants were asked to complete the Breastfeeding Attitude Scale. The implications were to raise the rates of breastfeeding mothers who roomed in and exclusively breastfeed for the first month. The mothers who received education from the educational program, and who exclusively breastfeed also shared the bed with their infants, was 87% from the experimental group. These mothers also scored higher on the breastfeeding attitude test. From the control group, only 63% did not share their beds with their infants, who did not participate with education nor decided to breastfeed. These mothers did not score high on the post test for the breastfeeding attitude test. The results from this survey stated that there was a notable difference in the attitudes of the mothers who had received the educational offerings and did choose to breastfeed.

A descriptive study was conducted by Spears (2007) to look at attitudes of college students related to education on breastfeeding to high school and middle school students. The sample size was 515 students. Of the sample size, 189 received breastfeeding education in high school and 58 received educational offerings in middle school. The results of the survey concluded that 449 of the students were aware of the benefits of breastfeeding to both the mother and infant, and they favored breastfeeding educational advice needed to be added to the high school level curriculum. This type of educational offering could accomplish increasing knowledge that could improve breastfeeding rates in the future therefore promoting healthier outcomes to mothers and infants. The message throughout this study is the breast milk is the most complete form of nutrition and is the best for mothers and infants (Spears, 2007). Information was collected per questionnaires distributed to the students.

Conceptual Literature Review

A review of the literature produced an article by Cleveland and McCrone (2005) related to the development of the Breastfeeding Personal Efficacy Beliefs Inventory using Bandura's Self-Efficacy Theory. The tool was designed to calculate a woman's confidence about breastfeeding and determine the support of breastfeeding promotion research with the use of Albert Bandura's Self Efficacy Theory. To create the tool, a survey was randomly mailed to 700 female students who were enrolled in a university. The analyzed results were concluded from 479 returned surveys. "Because self-efficacy beliefs are related to successful behavior attainment, interventions to change self efficacy beliefs can make a significant contribution to the number of women choosing to breastfeed their babies and increasing breastfeeding duration" (Cleveland & McCrone, 2005, p. 126) The utilization of this information can assist in the improvement and success of breastfeeding, improved maternal and infants health, and increased duration of breastfeeding.

Strengths and Limitations of Literature

The literature supports the importance of breastfeeding to both the mother and newborn. Many researchers define the benefits and challenges that present with breastfeeding. This research investigated ways of improving breastfeeding rates worldwide.

There are limitations of the research due to there is not an exact tool that can measure the effects of breastfeeding education with the initiation and duration of breastfeeding. Also, there are limitations with the inconsistencies in the advice that patients receive from family, peers, and healthcare providers including nurses,

obstetricians, pediatricians, and lactation consultants. Future research may demonstrate to society that breastfeeding is widely accepted. It is also limited due to fewer older women influencing younger generations to breastfeed. A lower number of family role models and society's opinion and disapproval of breastfeeding in public are other potential barriers to breastfeeding. Breastfeeding is slowly becoming more accepted due to laws that have set guidelines that allow women to breastfeed in public places. Also hospitals revising policy and procedures that are promoting breastfeeding practices: no pacifiers, no supplementation with formula unless medically indicated, educating staff, and promoting rooming-in where the infant remains with the mother as much as possible.

Summary

The literature provided a background on "breastfeeding education" that can be used to develop new research, in which to explore mothers' responses to difficulties they encountered and areas that can be improved with breastfeeding education. The goal is for breastfeeding initiation rates and duration to be improved. The reviewed literature had gaps in knowledge in which it did not include the mothers' perspective in areas that would have assisted them in their breastfeeding journey, therefore it would be informative and would benefit the future children.

CHAPTER III

Methodology

Breastfeeding can present many challenges to new mothers. The purpose of this study was to investigate the self-efficacy of breastfeeding mothers and the relationship between participation in breastfeeding education and initiation and duration of breastfeeding among primigravida women. The following chapter presents the design, setting, sample, methods, protection of human subjects, data collection, and data analysis procedures.

Research Design

This research study used a quasi-experimental research design to compare the breastfeeding self-efficacy of mothers that attended a formal breastfeeding class compared to mothers that did not.

Setting

This research study took place in a 209 bed rural for profit hospital in the southern United States. The hospital has approximately 1,000 deliveries each year. The hospital offers formal breastfeeding classes once a month to all mothers free of charge. The hospital employs a Lactation Consultant that is responsible for assisting with training the staff and mothers with breastfeeding techniques. Many of the nurses have completed a breastfeeding continuing educational course to become certified lactation advisors who also can assist mothers with their breastfeeding needs. It is hospital policy for all breastfeed infants to begin breastfeeding within the first one to two hours after delivery. This is considered to be the “golden hour,” which is defined as the first hour after delivery and the best hour to breastfeed because the infant is more receptive to

breastfeeding. As quoted by Sears (2014, “The first hour after birth is one of the most important times for mammalian bonding - a time for you and your baby to connect. The moments after birth are the best time for you both to recover from the challenges of labor, to bond, and to establish breastfeeding” (para. 1). This hospital supports rooming-in and offers support to mothers to look for signs of hunger from the newborn.

Sample

A convenience sample of 20 new mothers that were breastfeeding at the time of discharge served as participants in this study. Inclusion criteria for new mothers were that they must be primigravida, 18 years or older, and breastfeeding at the time of discharge. Participants were divided into a control group and experimental group. The control group consisted of mothers that did not attend a formal breastfeeding education class prior to delivery and the experimental group consisted of mothers that did attend a formal breastfeeding education class prior to delivery.

Protection of Human Subjects

Permission to conduct the research was obtained from the research facility and the University. This study was deemed exempt due to minimal risk to participants. Participants participated in a telephone consent (Appendix A) procedure prior to participating in the study. Participants were told that participation was voluntary and that they may discontinue their participation at any time. The participant was notified that there were no benefits for participating in the study, nor would their current or future services with the healthcare organization be compromised in any way for choosing not to participate in the study. In the event the mothers had questions related to breastfeeding, the lactation consultant was available to provide a follow-up consultation as needed.

All data results were recorded without patient identifiers. All information collected was kept confidential and cannot be traced to an individual. Data was stored in the researcher's personal locked file cabinet. All electronic data was stored on the researchers password protected computer.

Instrument

The Breastfeeding Self-Efficacy Scale – Short Form (Appendix B) was used to measure the self-efficacy of new mothers as it related to breastfeeding. Created by Dr. Cindy-Lee Dennis, the Breastfeeding Self-Efficacy scale has been used to promote self-confidence and improving breastfeeding outcomes. Dennis (2014) states:

Breastfeeding self-efficacy refers to a mother's confidence in her ability to breastfeed her infant and it predicts: (1) whether a mother chooses to breastfeed or not; (2) how much effort she will expend; (3) whether she will have self-enhancing or self-defeating thought patterns; and (4) how she will emotionally respond to breastfeeding difficulties. Breastfeeding self-efficacy is influenced by four main sources of information: (1) performance accomplishments (e.g., past breastfeeding experiences); (2) vicarious experiences (e.g., watching other women breastfeed); (3) verbal persuasion (e.g., encouragement from influential others such as friends, family, and lactation consultants); and (4) physiological responses (e.g., fatigue, stress, anxiety). It is hypothesized that health professionals may enhance a mother's breastfeeding confidence by altering these sources of self-efficacy information. (para. 2)

The Breastfeeding Self-Efficacy Scale consists of 14 questions evaluated on a 5-point Likert scale with 1 being not at all confident, 2 not very confident, 3 sometimes

confident, 4 confident and 5 very confident. Breastfeeding Self-Efficacy Scale has a reported Chronbach's Alpha of 0.96 (Wheeler & Dennis, 2012).

Participants were also asked to complete a demographic questionnaire (Appendix C) developed by the researcher. The demographic form gathered information related to age, attendance/non-attendance of a formal breastfeeding education class, ethnicity, level of education, preparation for breastfeeding, and duration of breastfeeding.

Data Collection

The Lactation Consultant assisted the researcher in contacting 20 new mothers via telephone who were breastfeeding when discharged from the hospital during the last eight months. Phone calls took place from the Lactation Consultants office at the research facility. The Lactation Consultant and researcher conducted a conference call with each individual new mother. The Lactation Consultant obtained informed consent from the patient. If the patient agreed to participate, the researcher then administered the demographic form and the Breastfeeding Self-Efficacy Scale to the participant, and concluded with the debriefing statement (Appendix D).

Data Analysis

Data analysis was performed using the Statistical Packages for the Social Sciences (SPSS) 21.0. Data was analyzed using descriptive statistics and independent samples *t* test. All results were compared and summarized. The data was sorted for the appropriate research validation, reliability, and correlated from the participant's responses.

Summary

Breastfeeding education is an important element in promoting early initiations and longer durations of breastfeeding. Breast milk is the most optimal form of nutrition for newborns, which also provides a great opportunity for the maternal-infant bonding. By viewing mothers' concerns, collecting their input, synthesizing all the data, improving educational offerings, and providing additional education offerings to both new mothers and healthcare providers, we can promote a healthier society (CDC, 2014).

CHAPTER IV

Results

The purpose of this study was to investigate the self-efficacy of breastfeeding mothers and the relationship between participation in breastfeeding education and initiation and duration of breastfeeding among primigravida women. This chapter presents the statistical analysis of the findings.

Sample Characteristics

A total of 20 participants completed the study. Within the sample, 10 pregnant women between the ages of 24 and 39 years ($m = 29.9$) attended a breastfeeding class. The educational background consisted of 20% ($n=2$) with some college, 30% ($n=3$) with a Bachelor's degree, and 50% ($n=5$) with a Master's degree. Of the participants, 30% ($n=3$) reported feeling "prepared" for breastfeeding before delivery and 70% ($n=7$) felt "somewhat prepared" for breastfeeding before delivery. All (100%) of the participants in the group were Caucasian.

In comparison, the average maternal age for the participants who did not attend a breastfeeding class ($n=10$) was 25.7 years with the maternal age range of 19 to 33 years of age. Within this group, participants 90% ($n=9$) were Caucasian and 10% ($n=1$) were Native American. The educational background indicated that 20% ($n=2$) were high school graduates, 10% ($n=1$) were currently enrolled in college, 20% ($n=2$) had Associate's Degrees, 40% ($n=4$) had Bachelor's Degree, and 10% ($n=1$) had a Master's Degree. Of this group of participants, 60% ($n=6$) stated they used multiple methods to prepare to breastfeed, including reviewing booklet, pamphlets, and the internet and 40% ($n=4$) received advise from family, friends, or a lactation consultant. Of this population

20% (n=2) felt very prepared to begin breastfeeding at delivery, 50% (n=5) felt somewhat prepared, 10% (n=1) was undecided if she was prepared, and 20% (n=2) did not feel prepared at all at delivery.

Research Question #1

1. What is the level of self-efficacy for new mothers that attended a formal breastfeeding education class compared to mothers that did not attend a formal breastfeeding education class?

A Pearson correlation coefficient was calculated examining the relationship between the participant's level of self-efficacy and participation in formal breastfeeding. The Pearson correlation coefficient was positive but was not statistically significant ($r(18) = .250, p > .05$) indicating no relationship between the participant's self-efficacy score and participation in formal breastfeeding education.

Between the groups, participants' responses were similar on each question of the Breastfeeding Self-Efficacy tool. Results are displayed in Figures 1-14. A description of the questions is displayed in Appendix B.

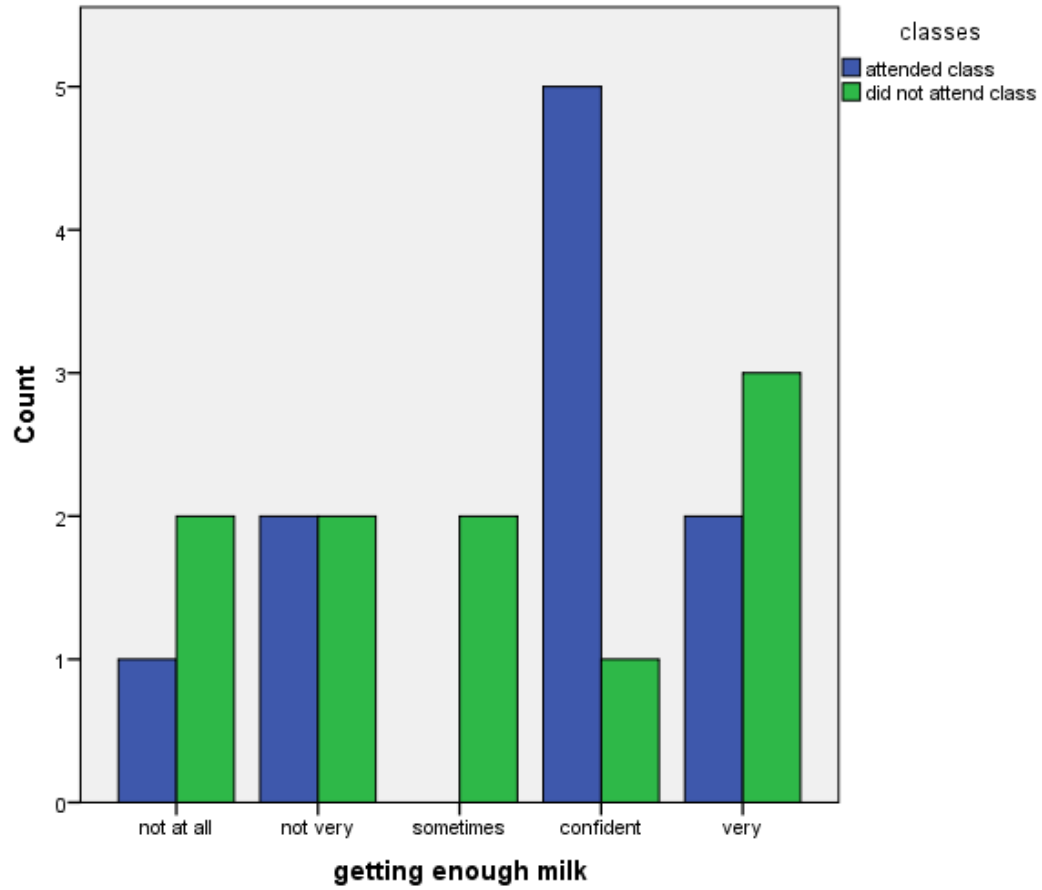


Figure 1. Participants' Response to Question 1.

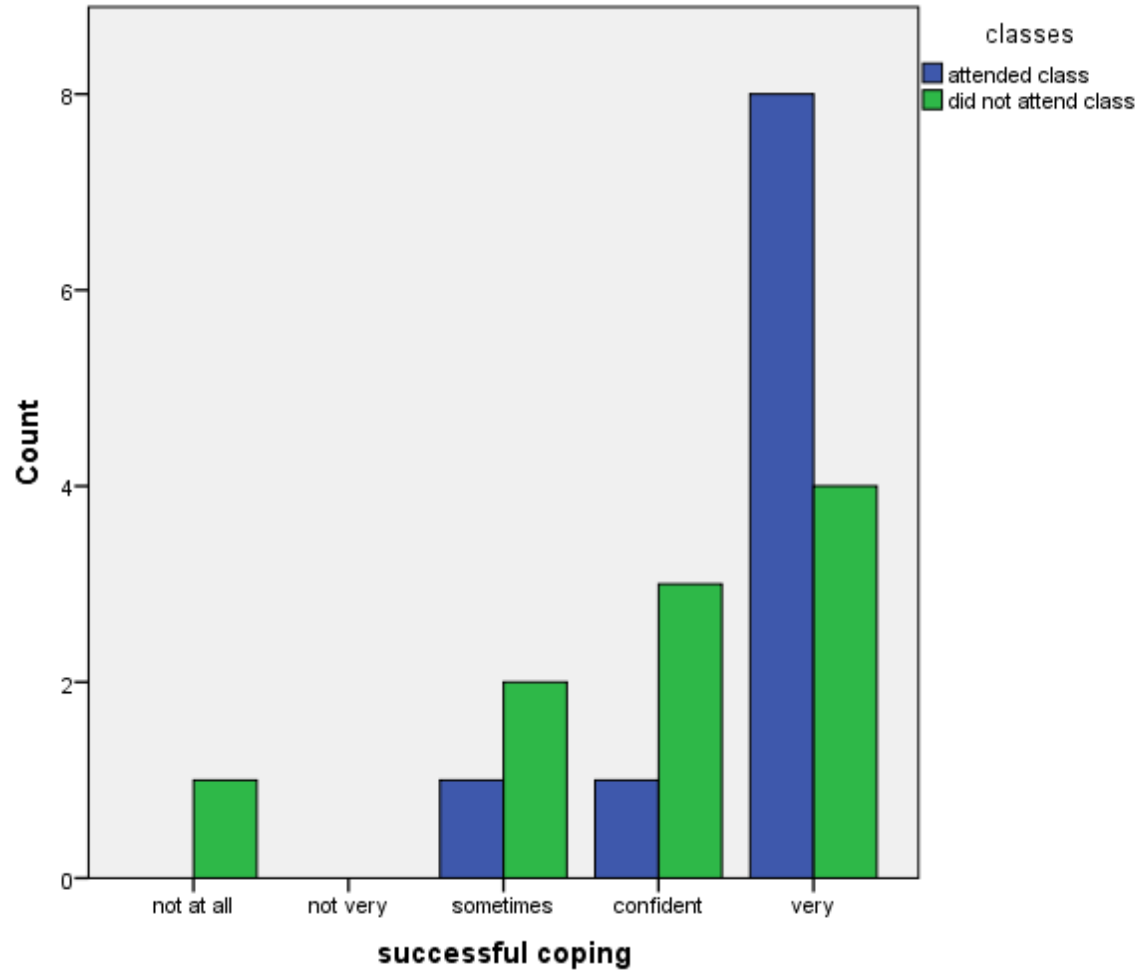


Figure 2. Participants' Response to Question 2.

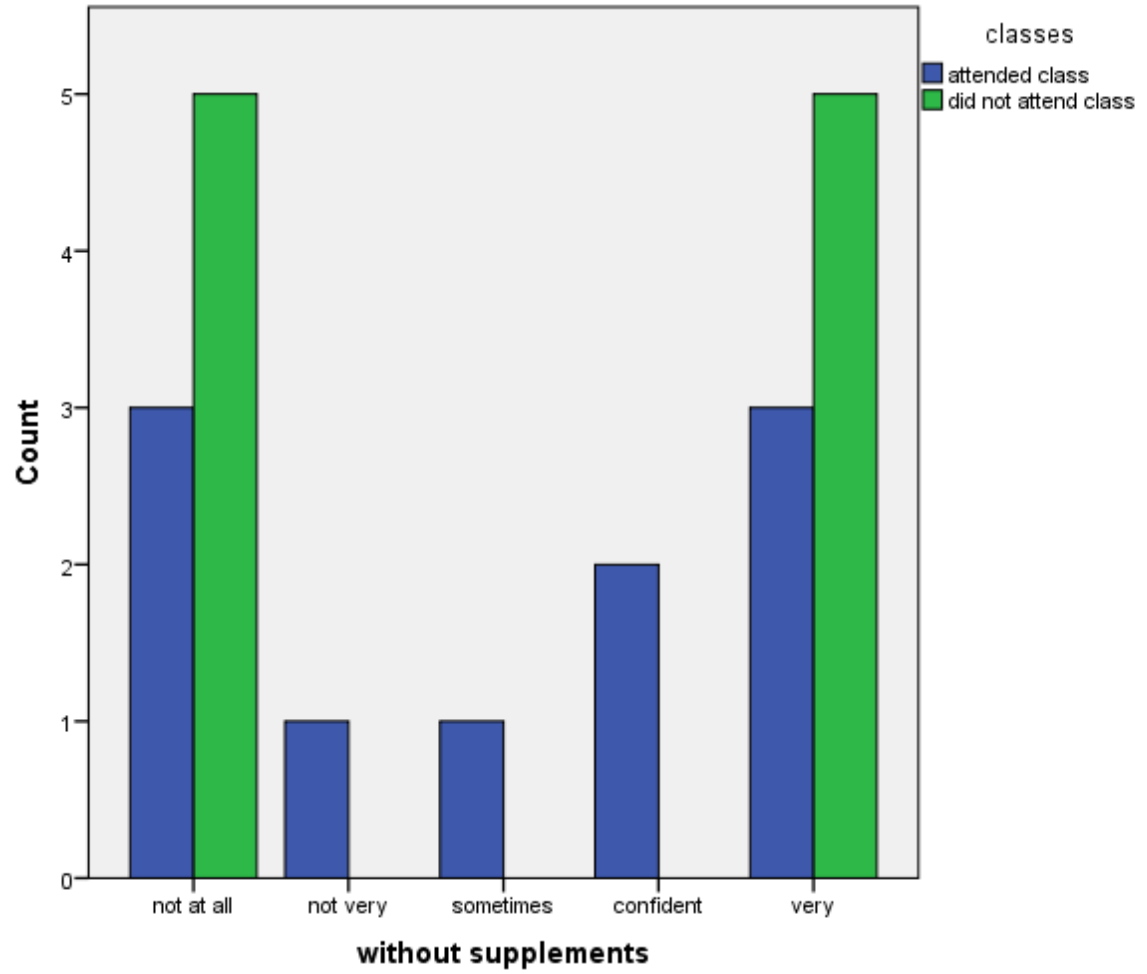


Figure 3. Participants' Response to Question 3.

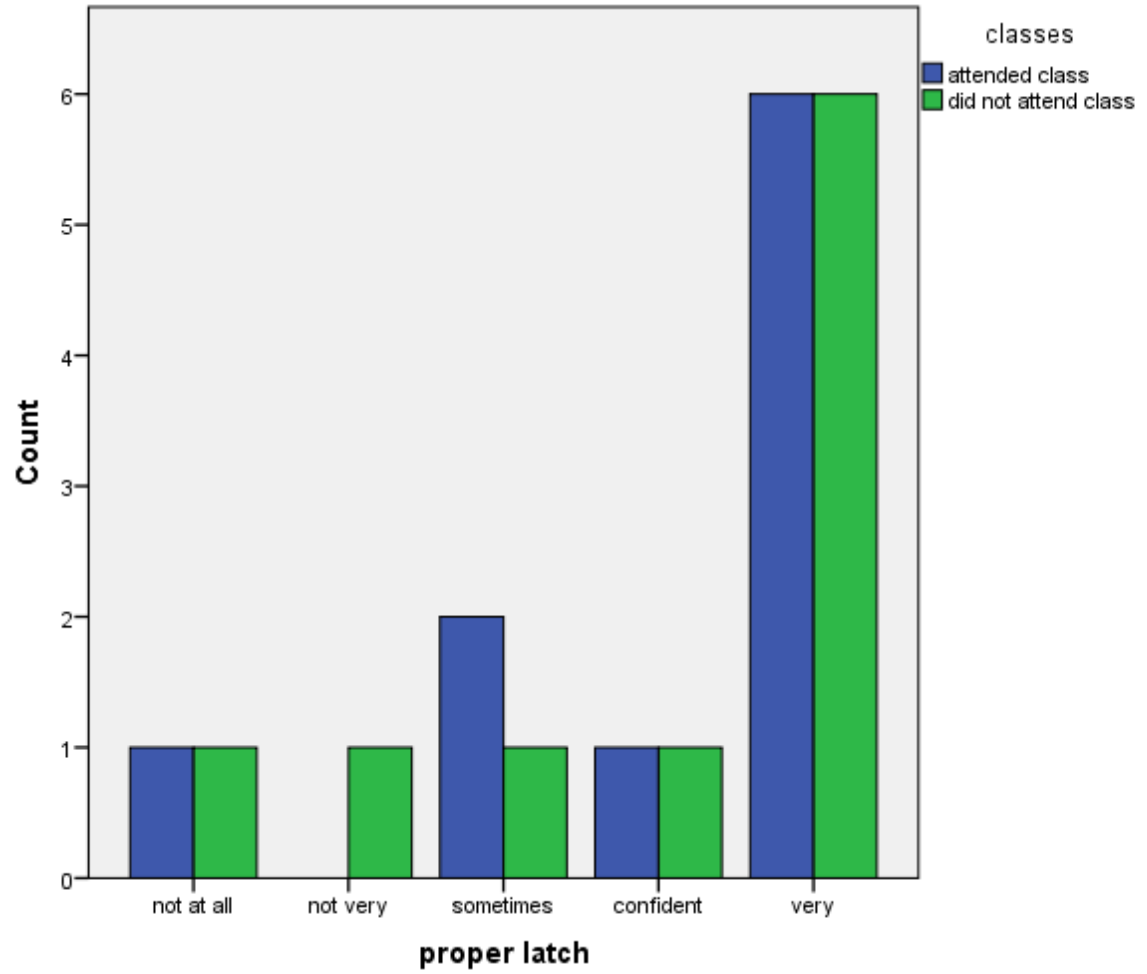


Figure 4. Participants' Response to Question 4.

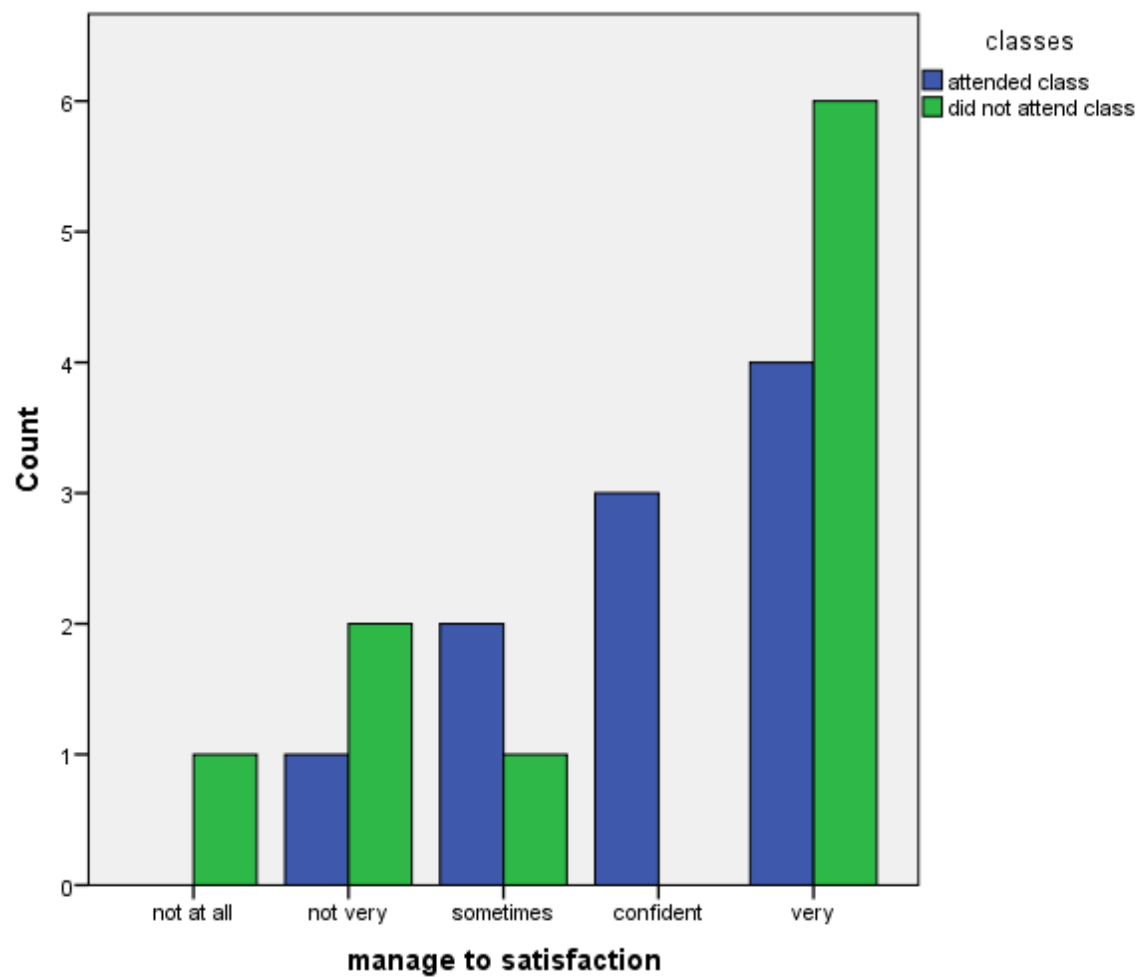


Figure 5. Participants' Response to Question 5.

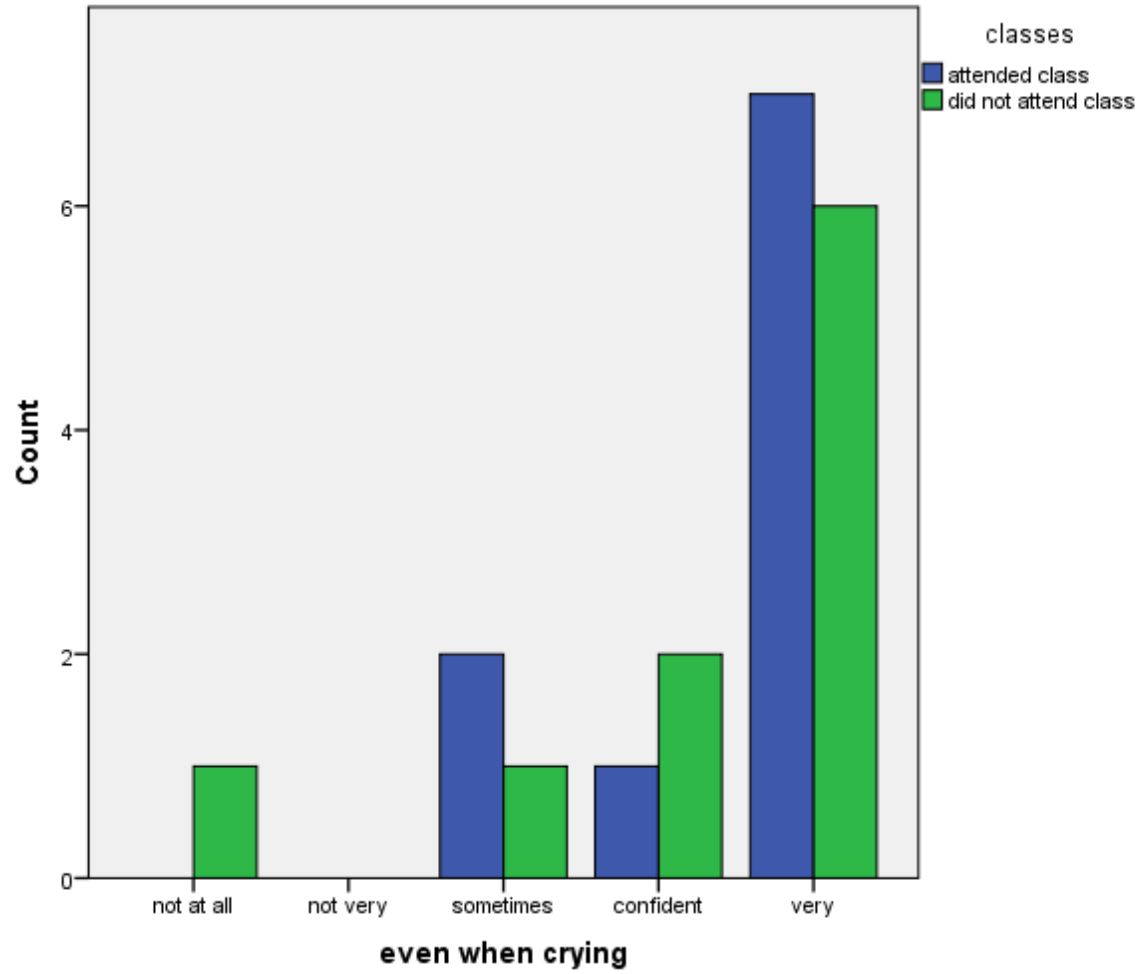


Figure 6. Participants' Response to Question 6.

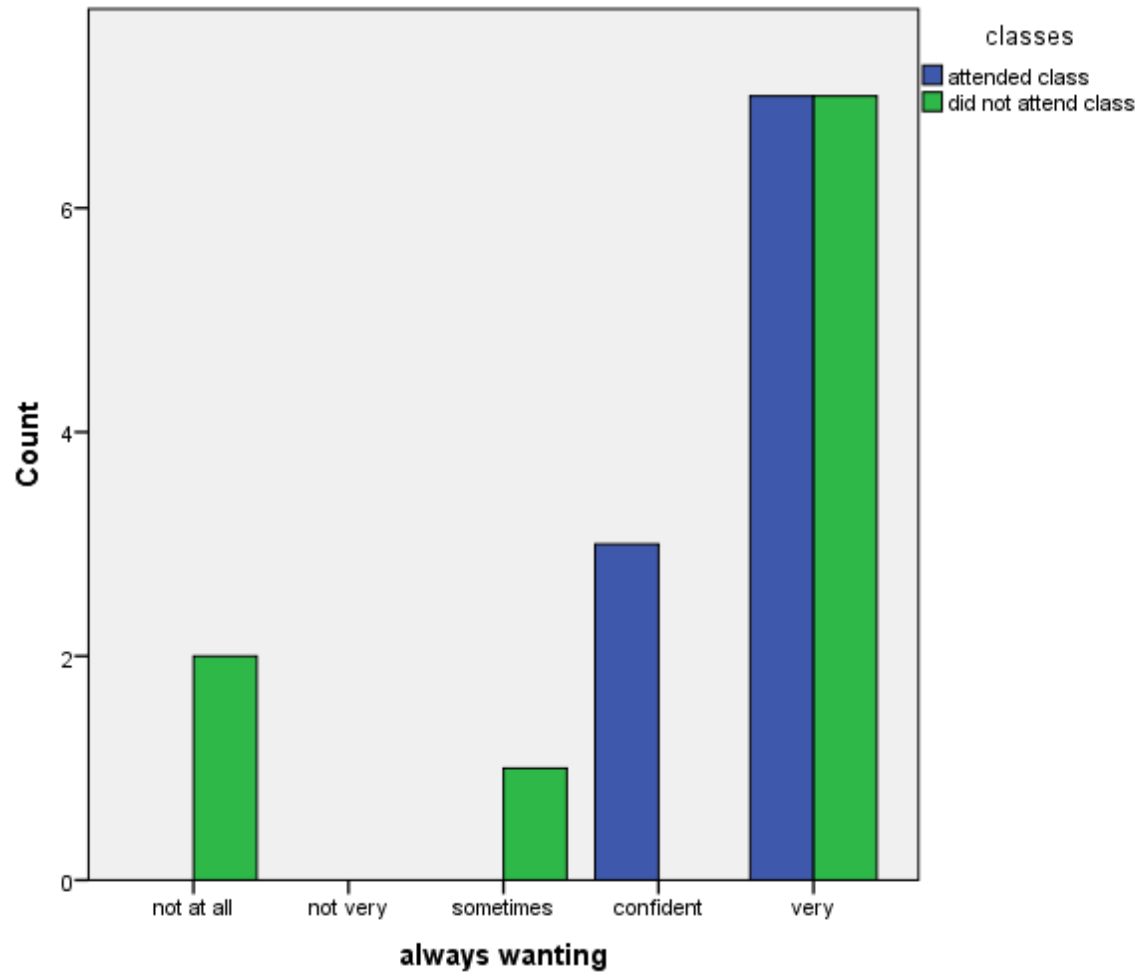


Figure 7. Participants' Response to Question 7.

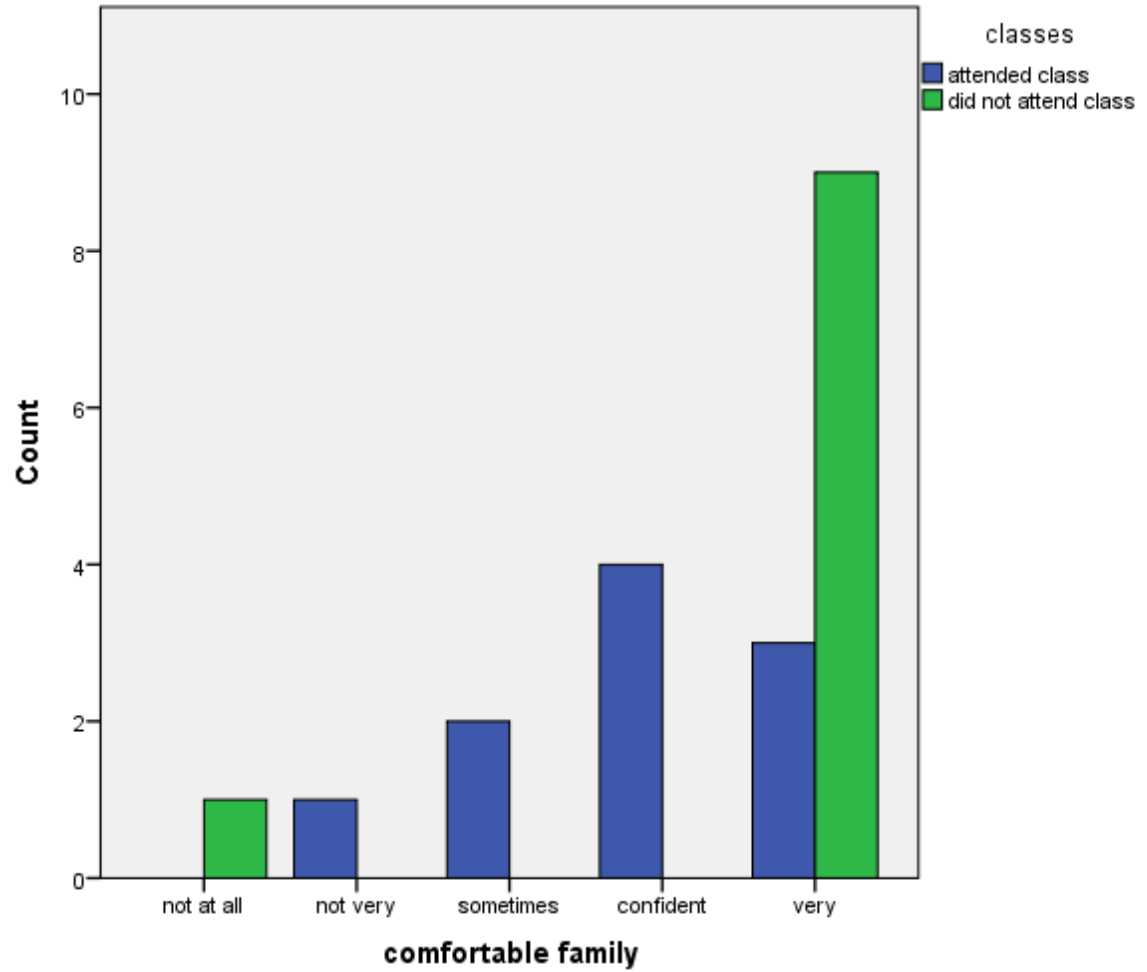


Figure 8. Participants' Response to Question 8.

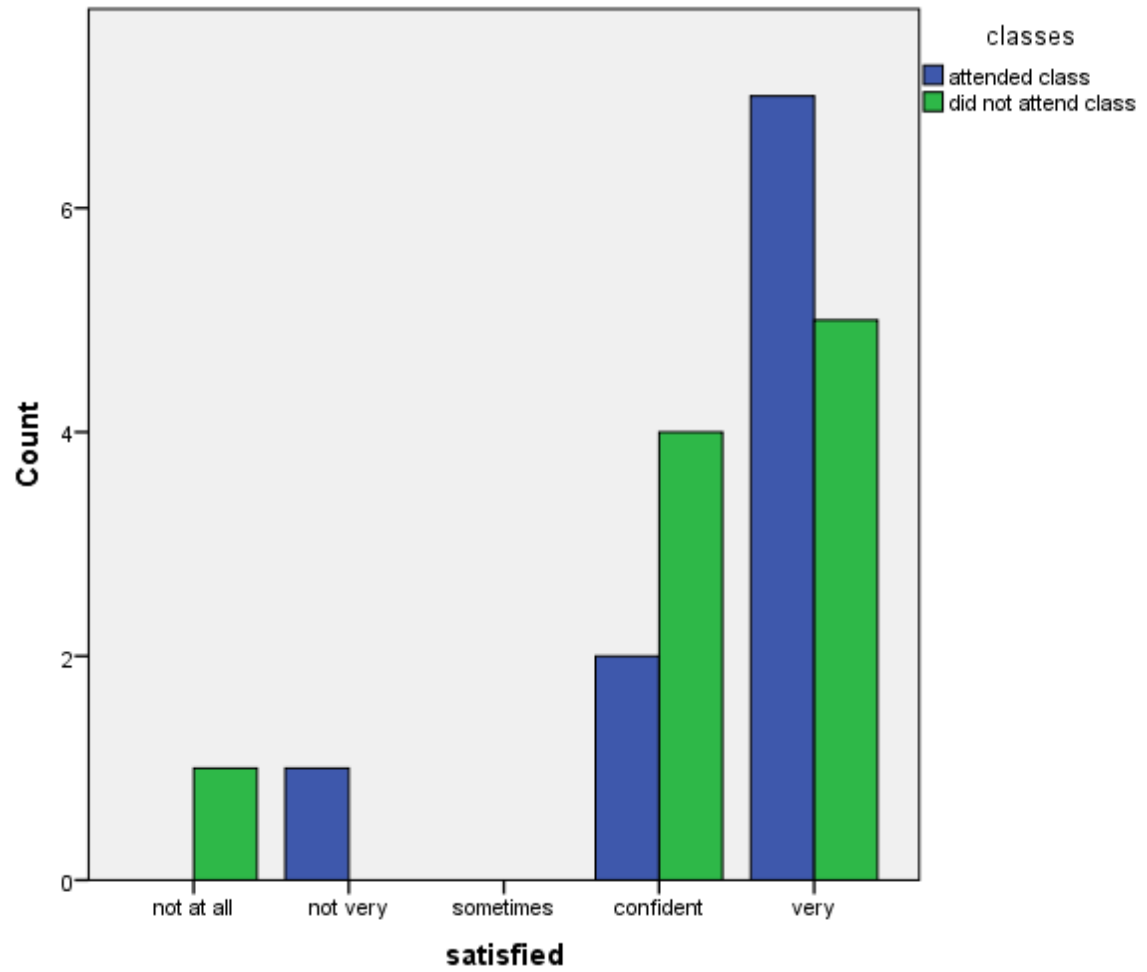


Figure 9. Participants' Response to Question 9.

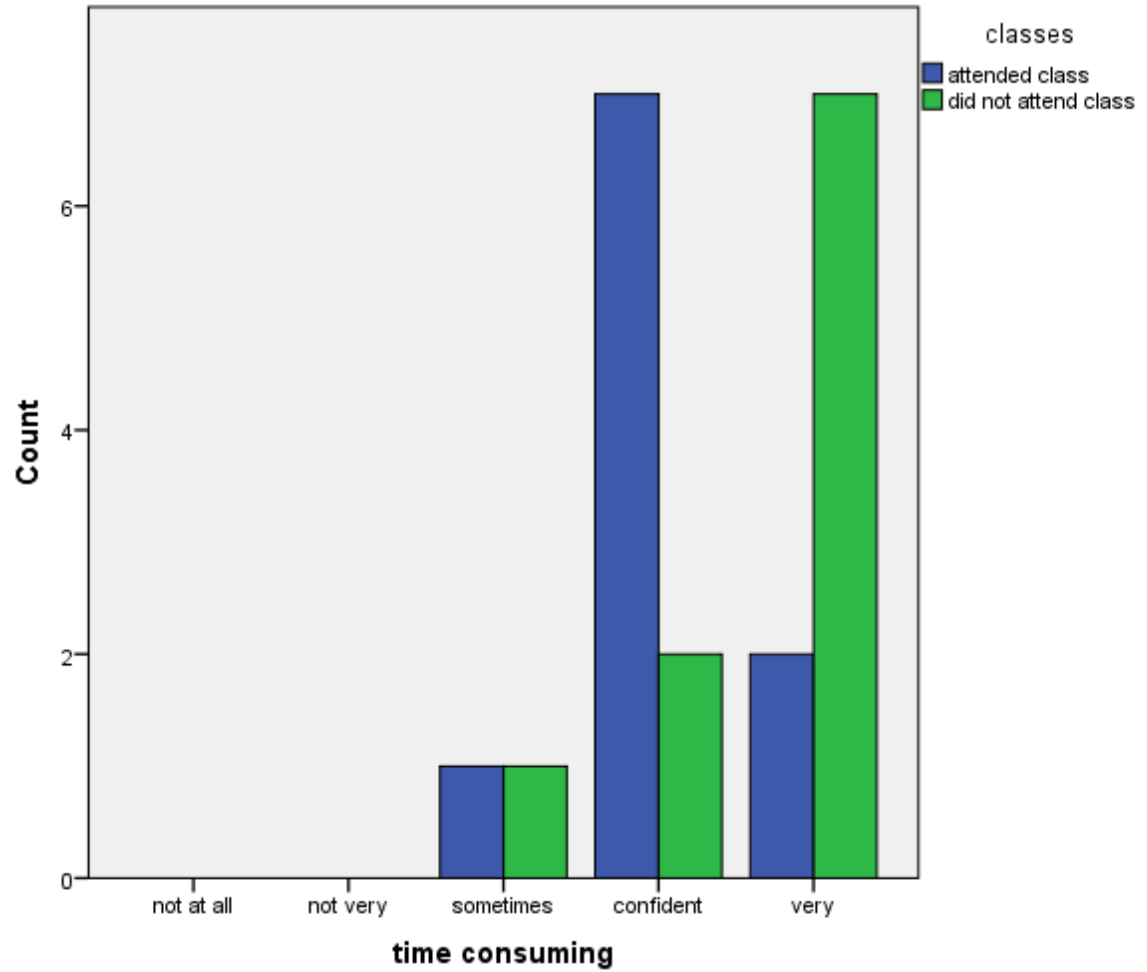


Figure 10. Participants' Response to Question 10.

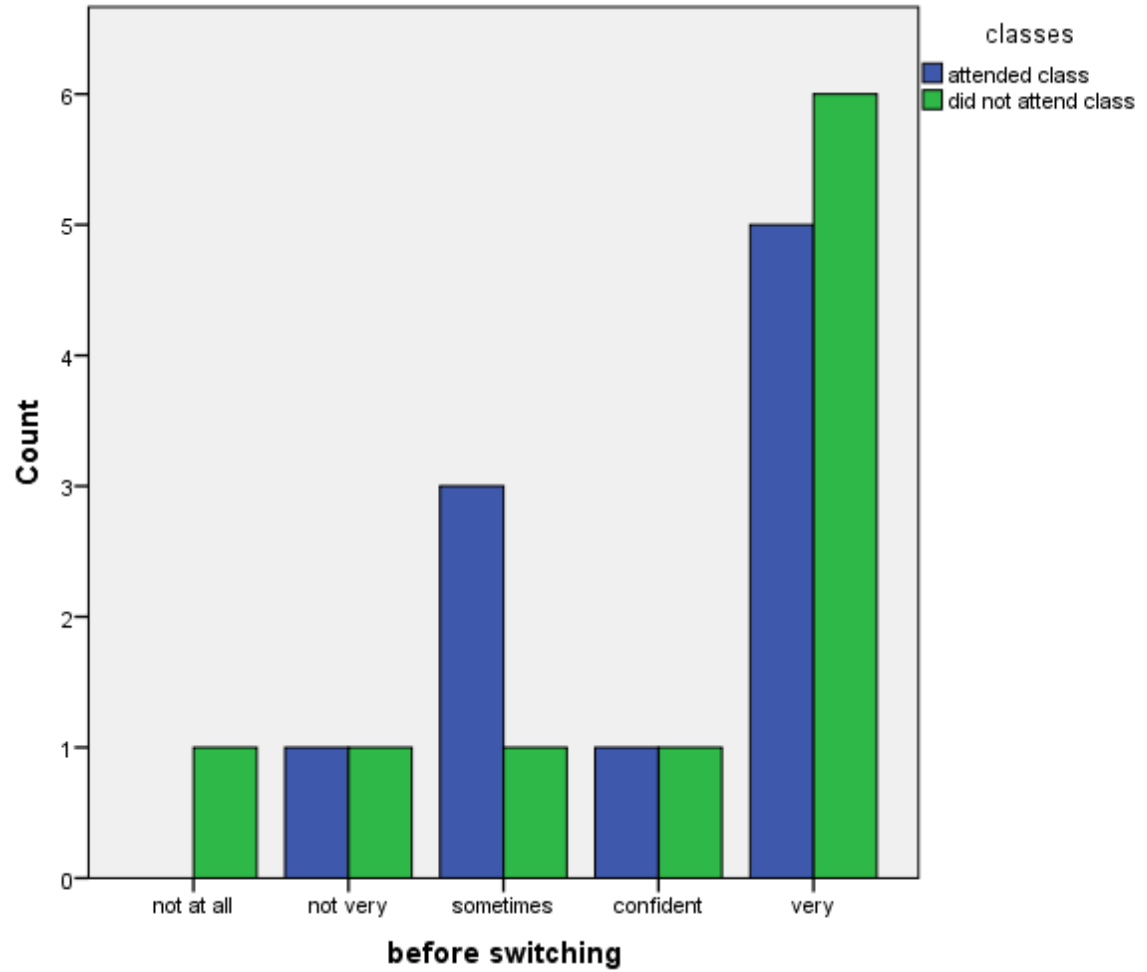


Figure 11. Participants' Response to Question 11.

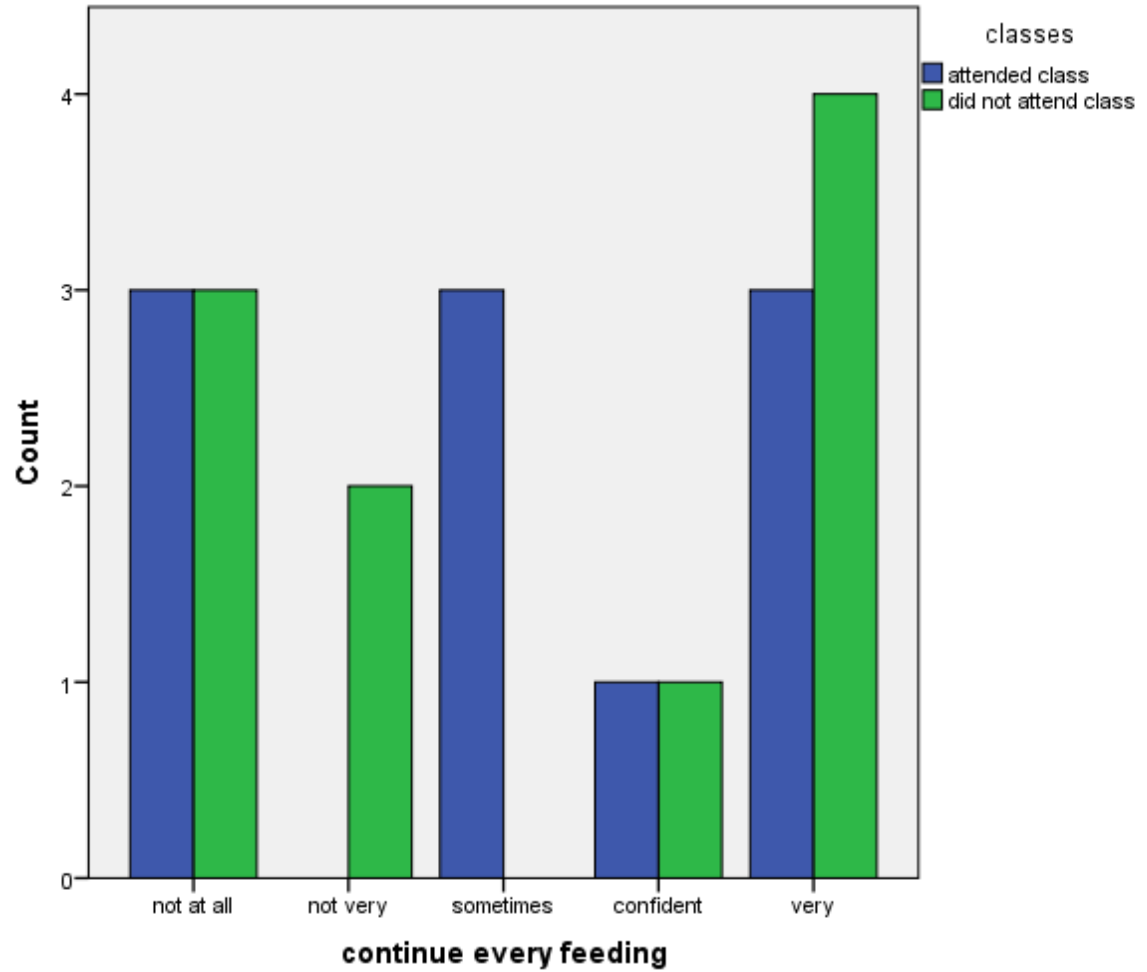


Figure 12. Participants' Response to Question 12.

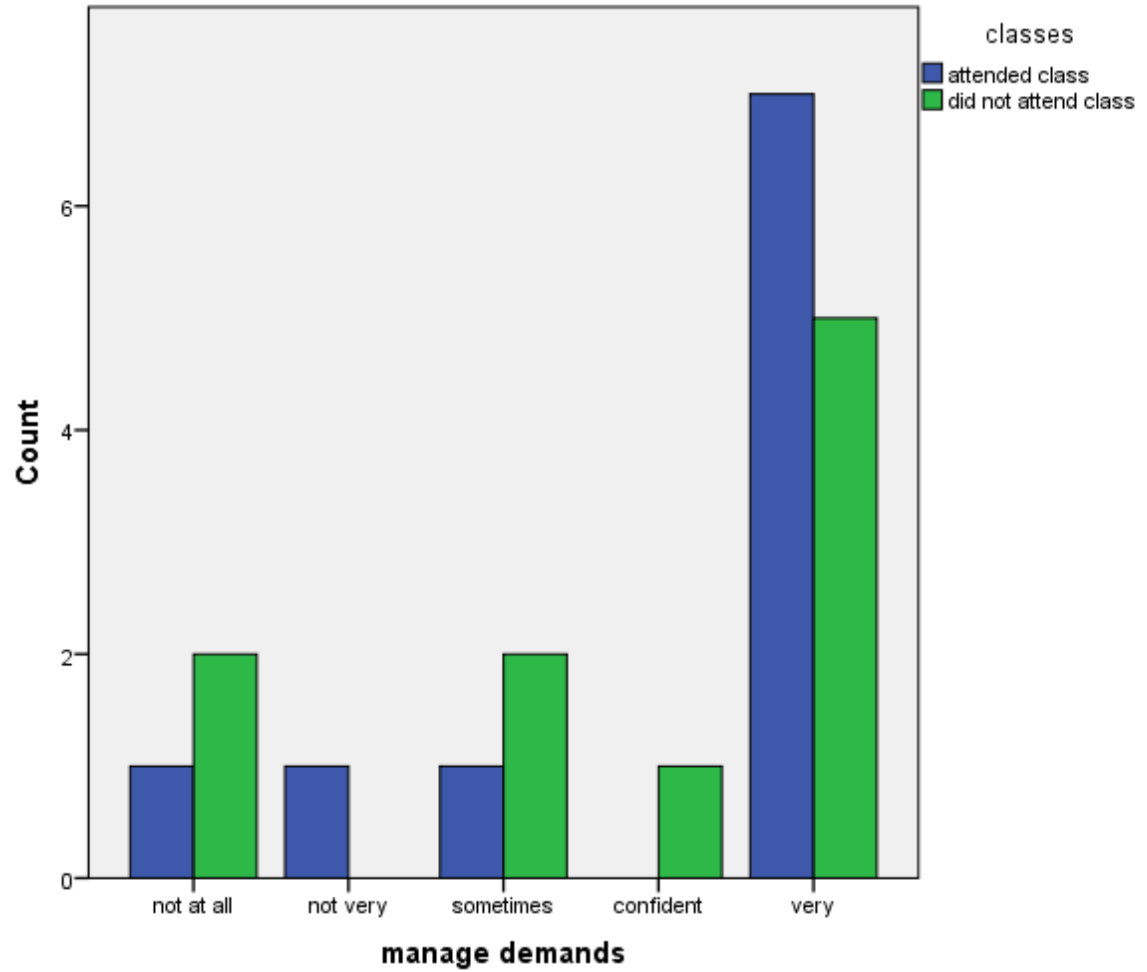


Figure 13. Participants' Response to Question 13.

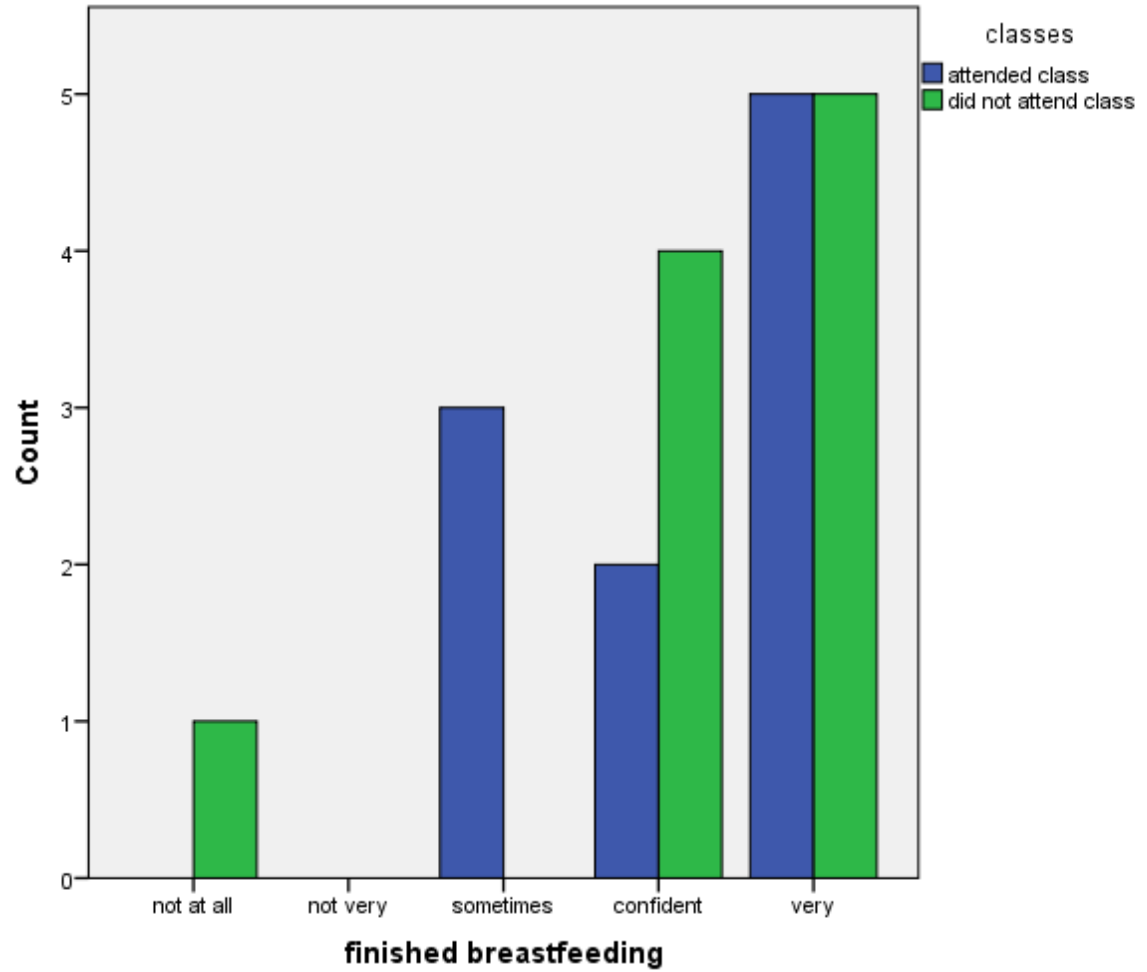


Figure 14. Participants' Response to Question 14.

Research Question #2

2. Is there an increase in initiation and duration of breastfeeding for new mothers that attended a formal breastfeeding education class compared to mothers that did not attend a formal breastfeeding education class?

Descriptive statistics were used to analyze the duration of breastfeeding between the two groups. Of the 10 participants that attended a formal breastfeeding class, 70% (n=7) continued to breastfeed after their delivery and verbally confirmed a plan to breastfeed for at least one year. Of the participants, 10% (n=1) breastfed for two weeks and initiated formula feeding due to a return to work. Ten percent (n=1) of the participants breastfed for approximately three weeks and was instructed to cease breastfeeding from the pediatrician, due to reflux in the infant. Of the participants from this group, 10% (n=1) breastfed for eight weeks and began supplementing with formula; however, she planned to continue to use pumped breast milk but complained about a decrease in her breast milk supply. She was advised from the lactation consultant that she could increase her supply by increasing pumping times and verbalized understanding of the instruction.

Of the 10 participants who did not attend a breastfeeding class, 60% (n=6) continued to breastfeed after their delivery and verbally confirmed a plan to breastfeed for at least one year. Of this group of participants, 10% (n=1) breastfed for three days due to she did not feel she was being successful. Twenty percent (n=2) of these participants switched to formula after six weeks of breastfeeding related to returning to work. These two participants talked with the lactation consultant who advised them that they could pump or feed more often if they decide to return to breastfeeding in the near future, both

of the participants were not sure if they would try or not, but were appreciative of the information. Of the other participants of this group, 10% (n=1) stopped breastfeeding after six weeks due to returning to school.

CHAPTER V

Discussion

The purpose of this study was to investigate the self-efficacy of breastfeeding mothers and the relationship between participation in breastfeeding education and initiation and duration of breastfeeding among primigravida women. This chapter presents a discussion of the findings.

Implications of Findings

A convenience sample of 20 female participants (aged 19-39 years) who were breastfeeding at the time of discharge, were asked to complete the Breastfeeding Self-Efficacy Scale and a 5-item demographic questionnaire. Of the 20 participants, 10 attended a formal breastfeeding education class and 10 did not. The participants that attended a formal breastfeeding class received information about breastfeeding during a two hour session at the research facility. The course was taught by a certified lactation consultant. The 10 participants that did not attend a formal breastfeeding education class stated they received information on breastfeeding from relatives, friends, the Internet, breastfeeding literature, and pamphlets received from the physician's office.

The results of the study suggested that the length of time the mother breastfed was not dependent on participation in a formal breastfeeding education course. Both groups of mothers reported similar self-efficacy scores and similar lengths of breastfeeding duration.

Application to Theoretical/Conceptual Framework

The theoretical framework of the self-efficacy by Albert Bandura is rooted in the notion that people are more likely to engage in a desirable behavior if they believe the

behavior will produce a desired outcome. They must also believe they can successfully carry out that behavior to achieve the outcome. Bandura (1986) states that "motivation, performance, and feelings of frustration associated with repeated failures determine affect and behavior relations". This model helps individuals set realistic goals and bolsters confidence in their ability to reach those goals. Examples include avoiding or stopping risky behaviors, engaging in healthy behaviors, and/or coping with challenging situations. Findings in this study were consistent with this theoretical framework.

Limitations

The limitations of this study included a small sample size, which limited generalizability to a larger population. Because the sample size was a convenience sample, generalization of the findings to primarily Caucasian, lactating women, age 19 to 39 years of age may be limiting. Reliability of subjects to disclose personal demographics and plans to breastfeed may also limit generalizability of the findings. Another limitation of this study was that the religious aspect and income barriers were not accounted for in the study. This study was conducted in one southern state and may not be generalized to other states.

Implications for Nursing

On the basis of the research results, all women of various races or ethnicities need to be studied, screened, targeted, and instructed on the benefits of breastfeeding during the prenatal period. This study indicated the population to be targeted may include those of limited educational backgrounds. Additional studies may include income levels, religious affiliations, and the pregnant population of primigravida females less than 18 years of age. Nurses may use the knowledge obtained from this and additional studies to

target increasing participation in breastfeeding among the post-partum female population ages 18-40 years of age.

In order to increase the participation in breastfeeding in post-partum women, it is important to understand the barriers and facilitators that affect the participation. More importantly, healthcare providers need to understand the unique factors that influence breastfeeding in primigravida women. In attempting to improve breastfeeding rates, issues specific to the female population must be addressed.

The literature suggested that breastfeeding often presents primigravida women with problems when patients receive inconsistent information and advice related to their care from healthcare providers. The attitude and support that is communicated from the healthcare professional about breastfeeding and the ability to assist with the process of breastfeeding will have a great influence with the patient's participation on whether or not breastfeeding will be successful (Harris & Miller, 2012). While social media and other informal resources can provide patients with information about breastfeeding, actually attending a formal breastfeeding educational class could be a helpful resource for new mothers in understanding breastfeeding techniques.

Recommendations for Future Research

Further research is needed in order to generalize this body of knowledge to the population of primagravid women at risk. Suggestions for research studies included qualitative studies to address the perception of barriers to breastfeeding in detail. Additionally, researchers should focus on the younger population of primigravida women, various ethnicities and religions, and lower socioeconomic and educational status. Results from possible qualitative studies may provide a deeper insight into

understanding more appropriate interventions to be initiated by the health care professional.

Conclusion

Using the Self-Efficacy Model by Albert Bandura as a theoretical construct, this study sought to evaluate the relationship between breastfeeding education and the duration of breastfeeding. Breastfeeding provides positive health care outcomes for mothers and infants but is not without its challenges, however continued support, education, and research will foster achievement of the Healthy People 2020 targets (CDC, 2014).

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Appendix A

Telephone Consent Form

Lactation consultant will introduce herself and the research facility.

I am calling on behalf of Rhonda Coffey, a student from Gardner-Webb University. Rhonda is asking you to volunteer to take part in a telephone survey as part of a research study about your breastfeeding experience. The purpose of this study is to evaluate the level of self-efficacy of new mothers that are breastfeeding and to determine if the attendance of a formal breastfeeding education class increases initiation and duration rates of breastfeeding.

The survey will consist of 14 questions that can be answered by responding on a scale of 1-5. The survey will take approximately 15 minutes of your time. Your participation in this survey is completely anonymous and voluntary. No identifying data about you will be recorded. The potential risks of this research are minimal and confidentiality of private health information that you share with us will be maintained to the highest level. This will not affect current and future benefits that you are receiving from this facility. You have the right to stop participation at any point during the interview if you so choose. If at any time during the survey you have a question related to breastfeeding, I as the Lactation Consultant will be able to assist you.

We expect to enroll 20 participants in this study. If you have questions or concerns regarding this research, you can contact Rhonda at 864-573-7710 or the faculty advisor, Dr. Tracy Arnold, DNP, RN, at 704 406-4359.

“Do you have any questions at this time?”

Yes If yes, answer their questions and then continue with the questions listed below.

No If no, continue with the questions below.

“Do you want to participate in this research study by answering the survey?”

Yes If yes, continue with the questions listed below.

No If no, thank you and good-bye.

By answering the following questions related to breastfeeding, I am giving my consent to participate in this research study and agree to speak with a student researcher at this time who will administer the survey to me.

Agree If agree, continue with administration of demographic data form and Breastfeeding Self-Efficacy Scale.

Do Not Agree If do not agree, then thank you and good-bye.

VERBAL CONSENT DOCUMENTATION FOR PARTICIPATION:

This consent serves as documentation that the required elements of informed consent have been presented orally to the participant or the participant's legally authorized representative.

Verbal consent to participate in this telephone survey has been obtained by the participant's willingness to continue with the telephone survey by providing answers to a series of questions related to their breastfeeding experience.

Lactation Consultant (Printed)

(Signature)

Researcher (Printed)

(Signature)

Appendix B

Research Tool

Breastfeeding Self-Efficacy Scale – Short Form

For each of the following statements, please choose the answer that best describes how confident you are with breastfeeding your new baby. Please mark your answer by circling the number that is closest to how you feel. There is no right or wrong answer.

- 1 = not at all confident
 2 = not very confident
 3 = sometimes confident
 4 = confident
 5 = very confident

		Not at all Confident			Very Confident	
1	I can always determine that my baby is getting enough milk	1	2	3	4	5
2	I can always successfully cope with breastfeeding like I have with other challenging tasks	1	2	3	4	5
3	I can always breastfeed my baby without using formula as a supplement	1	2	3	4	5
4	I can always ensure that my baby is properly latched on for the whole feeding	1	2	3	4	5
5	I can always manage the breastfeeding situation to my satisfaction	1	2	3	4	5
6	I can always manage to breastfeed even if my baby is crying	1	2	3	4	5
7	I can always keep wanting to breastfeed	1	2	3	4	5
8	I can always comfortably breastfeed with my family members present	1	2	3	4	5
9	I can always be satisfied with my breastfeeding experience	1	2	3	4	5
10	I can always deal with the fact that breastfeeding can be time consuming	1	2	3	4	5
11	I can always finish feeding my baby on one breast before switching to the other breast	1	2	3	4	5
12	I can always continue to breastfeed my baby for every feeding	1	2	3	4	5
13	I can always manage to keep up with my baby's breastfeeding demands	1	2	3	4	5
14	I can always tell when my baby is finished breastfeeding	1	2	3	4	5

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 Rhondacoffey@charter.net

Appendix C

Demographic Questionnaire

1. What is your age? _____
2. What is your ethnicity?
 - African-American
 - Asian
 - Hispanic
 - White/Caucasian
 - Other, please specify
3. What is your highest level of education?
 - 8th grade or below
 - 9th to 12th grade
 - Some College
 - Associate's Degree
 - Bachelor's Degree
 - Master's Degree
 - Doctoral Degree
4. What did you do to prepare to breastfeed?
 - Attended a class provided by the hospital
 - Reviewed a book/pamphlet information
 - Reviewed information found on the internet
 - Received advice from a family member and/or friend
 - Was advised by a hospital staff member (Nurse and/or Lactation Consultant)
 - Did not prepare before delivery
5. Do you feel you were prepared for breastfeeding before you delivered?
 - Very much
 - Somewhat
 - Undecided
 - Not really
 - Not at all
6. How long did you breastfeed after delivery? _____

Appendix D

Debriefing Statement

Thank you so much for devoting your time to answer the Self-Efficacy Breastfeeding survey.

If you have questions, please feel free to contact me at 864-590-7891 or rhondacoffey@charter.net. You may contact my thesis professor, Dr. Tracy Arnold at 704-406-4359 or at tarnold@gardner-webb.edu.