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Midwifery Decision Making During the First Stage of Labour within the Malawian Context

Elizabeth Chodzaza

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Doctor of Philosophy

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Declaration

I hereby declare that this thesis is my own work and no portion of work referred to in this thesis has been submitted in support of an application for any other degree or qualification from this or any other university or institute of learning.

Elizabeth Chodzaza

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Dedication

I dedicate this thesis to my late father, Mr Sipale Bikausi Mkwende, who did all he could to bring me up and prepare me for this challenge. With his bold spirit, interest in having his children educated, paternal support and pursuit of his ambitions, dad has been an inspiration and role model. Unfortunately he departed 2 months before I embarked on this journey. Oh! How I wish he lived to witness the fruits of his hard work.

Abstract

Abstract

Background: Concerns have been well documented about women either dying or developing severe morbidities from prolonged and obstructed labour. These concerns have noted that maternity care during labour has not been of a sufficient standard to improve the outcome for women giving birth in Malawi. This ‘failure to save’ women remains, despite assertions that obstructed and prolonged labour can be prevented through appropriate decision making during the progress and management of labour. Midwives in Malawi form the majority of maternity healthcare workers and an important aspect of their decision-making role is to assess the progress of labour when caring for women in labour. To date, there has been limited exploration of either midwifery decision making during labour or the contextual factors that influence midwives’ decision making. The aim of this study was to explore how Malawian midwives make decisions during the first stage of labour in a hospital setting and to identify the contextual factors that influence their decision making.

Design and Method: Using a qualitative ethnographic research approach, 27 participant observations, 26 follow-up interviews and document reviews comprised the data collection. Nine Malawian nurse-midwives who worked at a tertiary (n=5) and a secondary referral hospital (n=4), with a mixture of qualifications and experiences, participated. Each nurse midwife was observed three times with subsequent follow-up interviews. Interviews were conducted in a vernacular language, audio-taped, transcribed, translated into English and back translated into vernacular language. Qualitative data analysis software, NVivo 10, was used to assist with data management for the analysis. All data was analysed using the principle of theme and category formation.

Findings: Three major themes were identified

- contextual factors influencing midwifery decision making
- the role of cue acquisition
- the role of the partograph during care of women in the first stage of labour.

Integration of the themes has led to the development of a proposed conceptual model of ‘supporting normality’ during the first stage of labour, which suggests that the midwives strived to make decisions during the care of women in labour with the aim of supporting the normal physiological processes of labour.

The first theme illustrates that for Malawian midwives, decision making is a complex and contextually dependent undertaking. In everyday practice, decision making was influenced by multiple and competing factors but the midwives developed strategies to manage and control the context of their practice and facilitate decision making.

The role of cue acquisition comprised a six-stage subprocess illustrating the ways in which midwives utilise assessment data to reason and make decisions during the care of women in labour. These processes involved the midwives building a case for each woman’s labour progression by piecing together segments of information they obtained. This process was striking when there was uncertainty in a woman’s progress of labour as they used deductive thinking by cross-checking data obtained across the labour progression span. There was a constant forward and backward moving of thought processes supported by actions that uncovered real case-building evidence for informing decisions about whether to intervene or not.

The model further indicates the role of the partograph, which alerted midwives to the presence of progress or non-progress of labour. Although the partograph acted as an adjunct to the midwives’ decision making that could indicate opportunities for early intervention in labour if labour appeared not to be progressing, the midwives were sometimes cautious about its interpretation.

This thesis has expanded on current theoretical knowledge of decision making by elaborating on the processes midwives employ to make decisions as they care for women in labour. It also illuminates the impact of contextual factors on decision making, and elucidates various strategies midwives use to advance their professional role. The emerging conceptual model provides implications for future midwifery practice, education and policy both in Malawi and worldwide.

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Abbreviations and Acronyms

AIDS	Acquired immunodeficiency syndrome
COMREC	College of Medicine Research Ethics Committee
ENM	Enrolled nurse-midwife
GDP	Gross domestic product
HIV	Human immunodeficiency virus
MDG	Millennium development goal
MMR	Maternal mortality ratio
MOH	Ministry of Health
NDM	Naturalistic decision making
NMCM	Nurses and Midwives Council of Malawi
NMT	Nurse-midwifery technician
NSO	Malawi National Statistical Office
RNM	Registered nurse-midwife
TBA	Traditional birth attendant
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNPFA	United Nations Food Programme
USA	United States of America
WHO	World Health Organisation
WRA	White Ribbon Alliance

Glossary

Active phase of labour is the occurrence of regular painful contractions with a cervical dilatation of more than 4 cm, it should not last longer than 12 hours (Fraser and Cooper, 2009).

Augmentation of labour is the process of stimulating the uterus to increase the intensity of contractions after the onset of spontaneous labour. It is commonly used to treat slow progress of labour when poor uterine contractions are identified to be the primary cause (WHO, 2014).

Cephalopelvic disproportion occurs when there is a misfit between the size of the foetal head and the pelvis. This means it is difficult or impossible for the foetus to pass safely through the pelvis (WHO, 2006).

Cervical dystocia is defined as failure of the cervix to dilate further.

Deductive reasoning is the process of drawing inferences from facts, knowledge, experience and analyses in order to arrive at a valid judgement (Raynor *et al.*, 2005).

Deviation of labour from normal is when the progress of labour deviates from the alert and action lines on a partograph allowing recognition of the poor progress of labour.

First stage of labour is the period from the onset of uterine contractions to full dilatation of the cervix (10cm) (Macdonald and Magill-Cuerden, 2012).

Inductive reasoning is a logical process in which the premises seek to supply strong evidence for the truth of the conclusion. It draws inferences from observations in order to make generalizations (Raynor *et al.*, 2005).

Latent phase of labour is the onset of regular painful contractions with cervical dilatation up to 4 cm, it should not last longer than 8 hours (Fraser and Cooper, 2009).

Maternal complications are acute conditions that may cause maternal deaths (Koblinsky *et al.*, 2012). According to the United Nations Children's Fund/WHO/United Nations Population Fund (1997, p. 103) 'complicated cases' include antepartum or postpartum hemorrhage, prolonged or obstructed labour, postpartum sepsis, complications of abortion, pre-eclampsia/eclampsia, ectopic pregnancy, and ruptured uterus'.

Maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes (Hogan *et al.*, 2010).

Maternal morbidity is an overarching term that refers to any physical or mental illness or disability directly related to pregnancy and/or childbirth. These are not necessarily life-threatening conditions but they can have a significant impact on the woman's quality of life (Koblinsky *et al.*, 2012).

Maternal mortality ratio (MMR) is the number of maternal deaths during a given time period per 100,000 live births during the same time period (MOH, 2009a).

Normal progress of labour depends on the normal functioning of a combined series of physiological processes. When all these processes advance simultaneously to their natural conclusion the labour is said to progress normally. These processes include effective uterine contractions, cervical effacement and dilatation, descent of the presenting part, maternal stability and physiological stability.

Normal labour and birth is defined by the World Health Organisation (WHO, 1996, p.4) as "spontaneous in onset, low-risk at the start of labour and remaining so throughout labour and delivery. The infant is born spontaneously in the vertex position between 37 and 42 completed weeks of pregnancy. After birth, mother and infant are in good condition."

Obstructed labour means that, in spite of strong contractions of the uterus, the foetus cannot descend through the pelvis because there is an insurmountable barrier preventing its descent (WHO, 2006).

Partograph is a tool used to record all information and observations made on a woman in labour. It gives a graphic progress of labour in relation to the passage of time (WHO, 2006).

Prolonged labour- Prolonged labour is most often defined as onset of regular, rhythmical painful contractions accompanied by cervical dilatation where labour is longer than 24 hours. This definition has been in terms of management to refer to prolonged stage of labour, i.e. 'prolonged latent phase of labour' or 'prolonged active phase of labour'. Latent phase being the onset of regular painful contractions with cervical dilatation up to 4cm, and should not be longer than 8 hours. Prolonged active phase is regular painful contractions with cervical

dilatation of more than 4cm should not last longer than 12 hours without full assessment in a facility able to offer management and treatment of complications (WHO, 2006).

Chapter 1 : Introduction

“If midwives were without highly developed decision making skills, the lives of mothers and babies would be at risk and midwifery would not be a profession. Midwives would be helpers, relegated to the peripheral of health care provision” (Sullivan 2005 p. 169)

1.0 Introduction

Labour and birth are complex physiological, sociological and psychological processes (Macdonald and Magill-Cuerden, 2012). These are natural processes that are considered very safe in a woman’s life, and the birth of a baby is a joyful occasion for a woman and her family. Nonetheless, the processes of labour and birth are by no means risk-free (Henderson and Macdonald, 2004, Macdonald and Magill-Cuerden, 2012). For some women in some parts of the world, particularly in underdeveloped countries such as Malawi, the reality of giving birth is often grim. For those women, the process of labour and birth is often marred by unanticipated complications or even the death of a mother or baby.

Worldwide, childbirth-related complications such as prolonged and obstructed labour remain significant causes of maternal mortality (WHO, 2010). While the risk of dying during pregnancy, labour and birth is now very rare in developed countries, women in Malawi are still experiencing death due to childbirth-related complications often associated with prolonged and obstructed labour (MOH, 2005, 2010, Ratsma *et al.*, 2005). The WHO (2012) suggests that more than 3,000 women will die every year in Malawi due to childbirth-related complications. Remarkably, prolonged and obstructed labour remains a significant cause of maternal mortality and morbidity (Fenton *et al.*, 2003, Mathai, 2009).

Nevertheless, the WHO (2006) asserts that maternal mortality and morbidity related to prolonged and obstructed labour are to a large extent preventable because the interventions to prevent or manage them are well known. Early diagnosis and appropriate treatment of slow labour progress are the strategies necessary to prevent prolonged and obstructed labour and its sequelae, and to achieve satisfactory foetal and maternal outcomes (WHO, 2006, Orhue *et al.*, 2012). The accurate identification of cues that indicate labour progress is deviating from the norm, and the ability to manage labour is an essential feature of clinical decision making. A variety of reports such as those from the WHO (2006), Maternal and Neonatal Health

(MNH, 2002), Nurses and Midwives Council of Malawi (NMCM, 2002), Sullivan (2005), Raynor and Bluff (2005), Hussein *et al.* (2007), Fistula Care and Maternal Health Task Force (2012) and Orhue *et al.* (2012) have all placed emphasis on timely and accurate decision making during labour and birth as a viable strategy to improve foetal and maternal outcomes.

In Malawi, midwives play an important role in the support and care of women during labour and birth and are regarded as autonomous practitioners in the care of women at these times (NMCM 2002, Hussein *et al.*, 2007). The decisions midwives make while supporting and caring for women during labour and birth are extremely important and influence a variety of labour and birth outcomes. To that end, decision making is generally thought to function as “the blood supply of the midwifery profession” as it defines the profession, guides good practice, and influences the actions of the practitioners (Sullivan, 2005, p. 169). Thus, this thesis seeks to understand how Malawian midwives make decisions as they care for women during the first stage of labour and identify the contextual factors that influence midwifery decision making. Greater understanding of midwifery decision making during the first stage of labour would contribute towards scaling up good midwifery practices in order to reduce the incidences of prolonged and obstructed labour and achieve the targets with respect to maternal health.

In this Introduction I explain the key concepts that are used throughout the thesis. In section 1.1 I identify how I became interested in this area of midwifery practice and in section 1.2 I provide the rationale for my thesis. This is followed by the context for the study in section 1.3. Then the aim of my doctoral inquiry in conjunction with the research questions is presented in section 1.4. Finally, in section 1.5, I provide an overview of the organisation of the thesis with a synopsis of the contents of each chapter to facilitate my readers, followed by a summary of Chapter 1 in section 1.6.

1.1 Key Concepts

The process of labour and birth has been traditionally divided into stages. The first stage of labour is defined as the period from the onset of labour, i.e. the onset of regular and painful uterine contractions with corresponding dilatation of the cervix, until the onset of second stage of labour, i.e. full dilatation of the cervix (Macdonald and Magill-Cuerden, 2012). The first stage of labour is the longest of all the stages where critical decisions have to be made

based on both maternal and foetal conditions and labour progress. During the second stage, there is descent and birth of the foetus. Expulsion of the placenta and membranes takes place during the third stage (Henderson and Macdonald, 2004). However, the demarcation of the stages of labour has its origins with the concern of time duration of each stage and its relation to childbirth complications. Physiologically, the first stage of labour only exists as an abstract concept, socially constructed to help the examination of one aspect of the childbirth process in detail and help in provision of care (Macdonald and Magill-Cuerden, 2012). However, Macdonald and Magill-Cuerden (2012) argue that this approach has the capability to silence the woman and discredit her description of labour events. The recent understanding is that labour is a continuum process from onset to completion, which is characterised by physiological and psychological behaviours at various points within the continuum (Downe and McCourt, 2008).

Approaches to management of the first-stage management of labour are usually categorised into two types – active and physiological management (Fraser and Cooper, 2009, Macdonald and Magill-Cuerden, 2012). Active management is associated with the medical model of care and involves interventions in the normal physiological processes of labour, these generally include the use of oxytocin to augment labour, caesarean section and the artificial rupture of membranes (Tracy, 2006). Physiological management is normally associated with the midwifery model of care which generally involves limited interventions in normal physiological processes (Romano and Lothian, 2008). The midwifery model of care suggests trusting the birth process by connecting with the woman, normalising individual women's labour processes and acknowledging the uniqueness of each woman's labour and birth experience (Rooks, 1999, Freeman *et al.*, 2006, Downe, 2004).

Within Malawi, midwifery practice is characterised by active management of labour. Over the decades, approaches to the management of the first stage of labour aim to promote safe childbirth through careful monitoring of labour progress, and foetal and maternal conditions among other physical and psychological aspects of care (NMCM, 2002, MOH, 2009a, Macdonald and Magill-Cuerden, 2012). Midwifery care involves assessing and monitoring progress of labour during the first stage of labour, identifying physiological progress or decline of labour and initiating interventions to promote desirable outcomes (Fraser and Cooper, 2009, Macdonald and Magill-Cuerden, 2012). When learning about labour, midwives in Malawi are introduced to notions of time at the outset which is consistent with

the biomedical model understanding of labour and birth that anticipates pathology in an effort to treat it as early as possible. Nevertheless, there is a substantial inter- and intra-professional debate about the advantages of such an approach to women with uncomplicated labour and birth. This medicalised approach is believed to pathologise women's uniqueness as abnormality and the intention is to correct the abnormality with interventions (Downe, 2004). In addition, Buckley (2003) and Downe (2004) argue that this approach introduces limits and expectations that women's labour and birth process will 'fail'.

In an attempt to improve maternal and neonatal mortality and labour outcomes, several reports advocate the use of the partograph (Appendix A) as a decision-making tool through documenting, monitoring and interpreting data during the care of women in labour (WHOa, 1994b, MNH, 2002, WHO, 2006, Fistula Care and Maternal Health Task Force, 2012). Conversely, more recent work has challenged the rigid approach of using the partograph (Lavender *et al.*, 2006, Zhang *et al.*, 2010b). The argument is that using prescribed parameters of normal creates the temptation to make all women fit within predetermined criteria for normality (Fraser and Cooper, 2009). In addition, when using such a tool, the focus is on the gathering and interpretation of the objective data; taking insufficient account of intuition which is known to provide a legitimate source of knowledge in relation to the care of women in labour (Orme and Maggs, 1993, Davis-Floyd and Davis, 1996, Mok and Stevens, 2005, Siddiqui, 2005, Walsh, 2010, Jefford and Fahy, 2015). A detailed exploration of the partograph with its limitations is given in more detail in Chapter 3.

The decision about how to care for women during the first stage of labour mainly rests with the midwife. While other health professionals may interfere with the physiological management of the first stage of labour, midwives in Malawi play a significant role in providing care to women in labour and implementing the decisions made (Hussein *et al.*, 2007).

In this section the key terms used within this thesis have been explained. Additional clinical terms are provided in the Glossary, to which the reader can refer. In section 1.2 I present how my interest in studying midwifery decision making developed.

1.2 Personal Reflection on the Research

The idea to conduct this study stemmed from the passion I have developed for the midwifery profession, both as a practitioner and as a midwifery lecturer. Therefore, my personal interest in the study introduces an element of subjectivity at the outset. This made me conscious of the fact that I should maintain a strong reflexive stance and present a 'true' picture of midwifery decision making during the first stage of labour (Madden, 2010). Reflexivity, therefore, became one of my approaches towards ensuring rigor to enhance trustworthiness of the study findings. I have explained further in Chapter 4 about the reflexive stance I adopted, my self-awareness, and the transparency of my thoughts, decisions and actions. In this section of Chapter 1, I include some information on my background. The aim is to illuminate how I came to this research topic, and unveil my understanding and preconceptions of the phenomena under study.

I became interested in midwifery practice, particularly in the labour ward, at the beginning of my midwifery profession. I have worked in various labour and delivery units since I graduated from my nursing and midwifery training in 1992. Since my first posting following graduation as a midwife, I have worked in three different maternity wards for a total of 12 years, more specifically in labour wards as a registered midwife and as the registered midwife in charge of the ward.

I moved to Kamuzu College of Nursing in 2004 where I work to date as a midwifery lecturer. Over the years I have developed a passionate belief in women's health needs. I believe every preventable maternal death is a tragedy and working towards reducing obstetric complications, which account for most women's deaths during pregnancy and childbirth, is an act of respect to human rights. After joining the Nursing and Midwifery College, I had the opportunity to study for a Master of Philosophy degree in International Community Health. During this study, I had the chance to understand further, issues related to midwifery care and management. My research topic was 'to examine the quality of care rendered to women who suffer major childbirth complications causing maternal mortality in Malawi'. Findings of this research illuminated poor quality of care rendered by midwives to women in labour, causing major childbirth complications. From this research, I became aware that issues relating to the identification and management of women with childbirth complications can also be better understood through an exploration of care rendered to low-risk women in labour. Therefore, I

considered it proper to investigate how Malawian midwives care for low-risk women in labour focusing on how they make decisions as labour progresses and how they use the partograph as a decision-making tool.

Another opportunity to conduct the study arose when I was offered a Commonwealth scholarship to pursue a PhD in Nursing Studies at the University of Edinburgh. While in the United Kingdom (UK) I conducted a literature review surrounding the use of the partograph in the care of women during labour. The review of the literature revealed that correct use of the partograph permits midwives to display information of labour in a graphic way and relate them with the ideal profile against passage of time. This enables easy identification of abnormal labour progress, indicating the need for early intervention and thus prevention of obstetric complications such as prolonged and obstructed labour (WHO, 1994a, Lavender and Malcomson, 1999, WHO, 2006). However, a number of studies conducted to assess the quality of partograph use showed a high incidence of its use with substandard monitoring and poor documentation of both maternal and foetal parameters (Azandegbe *et al.*, 2004, Nyamtema *et al.*, 2008, Ogwang *et al.*, 2009). This showed that the partograph was inadequately utilised to inform midwifery decisions; raising questions on how midwives notice undesirable labour progression, what factors influence midwives' intrapartum judgement and decision making, and how they use the partograph as a decision-making tool during management of labour. Therefore, I realised that the midwifery discipline may not be adequately informed regarding the complexity of decision making among midwives and this gap in knowledge prompted me to explore this area further.

1.3 Context for the Study

When designing this study, I analysed the literature on decision-making in midwifery and in broader disciplines. Within healthcare research, the literature reflects extensive decision-making research in the fields of both nursing (Benner, 1984, Thompson and Dowding, 2002a, Tanner, 2006, Thompson and Dowding, 2009) and medicine (Elstein and Bordage, 1988, Klein *et al.*, 1993). There has been much interest recently in the field of midwifery decision making and its relevance to the outcome (Cheyne *et al.*, 2006, Rattray *et al.*, 2011, Styles *et al.*, 2011, Scholes *et al.*, 2012, Young, 2012, Cioffi, 2012, Jefford and Fahy, 2015, Patterson *et al.*, 2015). While decision making has recently been studied broadly in midwifery, there are few studies engaged in clinical decision making during labour and birth (Cheyne *et al.*,

2006, Jefford and Fahy, 2015, Patterson *et al.*, 2015). Despite the recognition of the importance of this research, the above studies have rarely focused on how midwives formulate their decisions regarding the care they give to women during the first stage of labour. Besides, previous researchers have not considered the context and the factors that influence midwifery decision making during labour. A review of the literature revealed the need to consider decision making as entrenched in decision–action rounds where circumstances change and where decisions and actions influence each other (Higgs *et al.*, 2008). For instance, Orasanu and Connolly (1993) defined the features of decision making in dynamic environments (e.g. healthcare settings) that often complicate the decision-making task. Such characteristics include decisions that take place in uncertain and dynamic environments, with incomplete and ambiguous information to be considered, and decision making in consultation with others where individual and organisational objectives and rules must be taken into consideration.

The literature review also revealed that systematic data on Africa, and Malawi in particular, are largely absent. The limited data available on midwifery decision making are from the western perspective (e.g. Australia and the UK). Findings from previous midwifery decision-making research from the western perspective provided insight into midwifery decision making during labour and birth. However, when locating this topic within the context of contemporary Malawian midwifery, its emphasis on the use of the partograph, as well as human and infrastructural challenges, branded its own context for Malawian midwives decision making during the first stage of labour. Although midwifery decision-making research findings from different parts of the world may share similarities, there are some distinctions between the two perspectives. Midwifery practice operates in different social, cultural, technological, political and economic contexts that make direct comparisons difficult within the midwifery field as decision-making processes may equally differ. This makes the area still fertile for further research and underscores the need for the proposed study. The findings of the proposed research will contribute to the existing body of midwifery knowledge, specifically addressing issues of decision making from an African sociocultural perspective. Challenges for midwifery care in Malawi are different from those experienced in western countries and there should be a body of knowledge to this effect.

The review of literature reflects that decision-making theories share a common deficit (see Chapter 3), they are inadequately detailed to guide midwifery decision making. Most existing

research on midwifery decision making has been based on surveys, and recall interviews were based on small samples where midwives were expected to recall their decision-making processes as they responded to their concerns about a situation at hand. These studies did not consider how the midwives arrived at their decisions and what factors influenced their practice. All these gaps raised further questions about what influenced the decisions that the midwives made. Therefore, the lack of controls on previous decision-making research make it impossible to draw meaningful conclusions from the results.

Therefore, these gaps in evidence demanded a comprehensive study with an innovative method; one where the contextual factors taking place in the labour ward environment are explicated and how midwives make decisions about labouring women under their care is elucidated. As far as I am aware, midwifery decision making during the first stage of labour has not been investigated within the Malawian context, which is what influenced me to undertake this exploratory study of the Malawian midwives' decision making to learn how they cope with the multiple and competing contextual factors within the Malawian labour wards. In this thesis, I wish to contribute to this under-researched area by illuminating the phenomenon of midwifery decision making during the first stage of labour, along with identifying contextual factors that influence this process.

1.4 Research Aim and Questions

As already mentioned, my intention at the outset of this research was to understand midwifery decision making during the first stage of labour in a hospital setting. Addressing this issue may lead to greater understandings of the midwifery decision making that have the potential to improve the quality of care rendered to women during the first stage of labour.

On this basis, adopting a qualitative ethnographic approach, I sought to answer the following research questions.

1. What assessment and management decisions do midwives make regarding labour progress during the first stage of labour?
2. What is the role of the partograph in midwifery decision making regarding assessment and management of progress of labour?

3. What are the contextual factors that influence midwifery assessment and management regarding labour progress during the first stage of labour?

1.5 Outline of the Thesis

In Chapter 1 I have introduced the study and some key concepts related to the study. The research aim and questions with an outline of the development of my interest in studying midwifery decision making have been presented. This chapter also provides contextual information about midwifery decision-making research. I have indicated what I set out to achieve in this study, and how it was achieved.

In Chapter 2 I provide general background information about Malawi focusing on the population, economic status, health status, healthcare delivery system, nursing and midwifery training and regulation of the profession. I explore the issue of maternal mortality and its causes, paying particular attention to obstructed labour which is a significant cause of maternal and perinatal mortality and morbidity in Malawi.

In Chapter 3 I provide a critique, analysis and synthesis of the literature. The review draws from both theoretical and empirical literature and is presented in two sections. In the first section, there is a focus on critically reviewing the theoretical underpinnings of the published studies on midwifery decision making. In the second section, I contextualise the research by presenting a critique and analysis of the existing literature on the development of the labour progress paradigm. I give a historical review of the research, concepts and ideas that have led up to the contemporary management of labour and birth. Synthesising the literature, I argue that there is a lack of robust evidence about how midwives make decisions and the factors that influence decision making, from this the research focus, are thus developed.

The purpose of Chapter 4 is to present the methodology and methodological issues related to this particular piece of work that seeks to understand midwifery decision making during the first stage of labour. I have argued that a qualitative ethnographic approach is an innovative method to the study of midwifery decision making that addresses the significant methodological limitations of the preceding studies in terms of real-world research which addresses ecological validity.

Chapter 5 presents two vignettes representing the findings of the study. I describe the world that midwives inhabit in a Malawian context. In my case, the vignettes represent what I saw, heard and interpreted and I aimed to produce a rich description detailed enough to enable the reader to identify with the participants in this thesis.

In Chapters 6 and 7 I present findings of the study. In Chapter 6 the contextual factors impacting on midwifery decision making during the first stage of labour are presented. This sets the scene for the decision-making context for the midwives and the impact this has on their decision making, giving the reader a clear picture of the setting under which midwifery decision making takes place. I have shown how the midwives demonstrated the capability of handling the environment; being mindful of the influence and better able to rationally interact with and handle contextual factors to protect and enhance the normal care processes of labour. By developing strategies to deal with contextual issues, midwives were able to provide professional care to support the normal physiological processes of labour.

The findings regarding how the midwives enacted their midwifery care and formulated decisions during the care of women in labour are presented in Chapter 7. I introduce the reader to the six stages that emerged through my analysis and through which midwives reasoned when caring for women in labour. The ‘role of cue acquisition’ is identified as a six-staged midwifery reasoning process of Malawian midwives during the first stage of labour. These six sub-processes illustrate how Malawian midwives utilise assessment data obtained from a woman in labour. Midwives drew upon their fundamental skills in the assessment of labour progress; drawing out salient assessment details to inform their decisions and support normal processes of labour.

In Chapter 8, I present an analysis of the study by drawing all the major themes from the findings together through the development of a conceptual framework illuminating the interrelationships of the core concept of ‘supporting normality’. This conceptual framework explains how Malawian midwives enact their care to formulate and implement decisions during the care of women in the first stage of labour. The conceptual framework is discussed with reference to the relevant literature.

I present the conclusion of the thesis in chapter nine by reflecting on the research, outlining the implications and recommendations of the research findings for midwifery practice, education and policy. I provide recommendations for future research at the end of the thesis.

1.6 Summary of Chapter 1

In this chapter I have provided direction to my readers to facilitate their journey, following my footsteps into this research inquiry. It has focused on introducing the research project, presenting the research aim and questions and presenting the professional and personal impetus for undertaking the study. Chapter 2 gives the background to the research study and information on its sociocultural context.

Chapter 2 : Background Information to the Study

2.1 Introduction

In this chapter I present a brief background to Malawi, the study context. In section 2.2 the geography of the country is described, while details about its population are given in section 2.3, and section 2.4 presents information about the country's economic status. A discussion then follows on the country's health situation in section 2.5 and the healthcare delivery system is outlined in section 2.6. The status of human and material resources is provided in section 2.7. Section 2.8 details the education and training for nurse-midwives, this is followed by a discussion on the regulation of the nursing and midwifery professions in section 2.9. Finally, a summary of the chapter is given in section 2.10.

2.2 Geography and Administration

Malawi is a small, land-locked country south of the equator in sub-Saharan Africa (Figure 2.1). The Republic of Zambia borders it to the west and northwest, the United Republic of Tanzania to the north and northeast, and the Peoples Republic of Mozambique to the south, southeast and southwest (NSO, 2010).

The country is 901 kilometers long and ranges in width from 80 to 161 kilometers. It has a total surface area of 118,484 square kilometers of which about 94,276 square kilometers is land area. The remaining area is composed of Lake Malawi, which is about 475 kilometers long and runs down Malawi's eastern boundary with Mozambique (NSO, 2010).

Malawi has a sub-tropical climate; the rainy season runs from November to May and the dry season from May to November. The weather is cold and dry from May to August and from September to November the weather becomes hot. Rainfall and temperature vary depending on altitude and proximity to the lake (NSO, 2010, CIA, 2012).

The country is divided into three administrative regions, the Northern, Central and Southern Regions, and further into 28 administrative districts. Six districts are in the Northern Region, nine are in the Central Region and thirteen are in the Southern Region (Figure 2.1). Administratively the districts are subdivided into traditional authorities; presided over by chiefs. Each traditional authority is composed of villages which are the smallest administrative units and are presided over by village headmen (NSO, 2010).

2.3 Population and Demographic Characteristics

Malawi had an estimated population of 13,187,632 million people in 2008 with an annual population growth rate of 2.8% (NSO, 2010). The country has a total fertility rate of 5.7 births per woman (NSO, 2014). The country is densely populated relative to the rest of sub-Saharan Africa. The population is largely young with those aged 15 years and below making up 45% of the population (NSO, 2008). Females constitute 51% of the total population, of these 42.2% are in the reproductive age group of 15 to 49 years.

Educational attainment for men is higher than women; 20% of men have never been to school as compared to 30% for women (NSO, 2010). The overall literacy rate for Malawi is 64%. The literacy rate for men is higher at 69% compared to women at 59% (NSO, 2008). These low literacy levels, coupled with dominant cultural diversity, have an influence on the lives of Malawians, as well as their healthcare seeking behaviour and acceptance of new developments in the fields of health, education and agriculture (MOH, 2011).

2.4 Malawi's Economic Profile

The economy of Malawi is based primarily on agriculture which accounts for 30% of the gross domestic product (GDP). The economy is predominantly agriculture based, depending on major exports of tobacco, tea, sugar and coffee that contribute to more than 90% of its export earnings (NSO, 2010). The rest comes from economic assistance from the International Monetary Fund, the World Bank and individual donor nations. Malawi is rated as one of the poorest countries in the world with a GDP of about US\$4.7 billion and GDP per capita is US\$310 (The United Nations Development Programme (UNDP) Population Human Development Report 2007/2008). More than half (52.4%) of the Malawian population live below the poverty line (NSO, 2010).

A total of 85% of the population lives in rural areas, mostly in small-farm households. Sixty five percent of the population is defined as being poor, surviving on less than a dollar per day and unable to meet their daily consumption needs; over half a million of the population is food insecure. The poverty is high because of low productivity, limited and difficult access to land, and poor health status (NSO, 2010). Furthermore the National Statistical Office (NSO,

2010) highlights the profile of poverty in Malawi that 65.5% of women are poor as compared with 57.9% of men.

2.5 The Health Status of Malawi

Malawi health indices are among the worst in the world, mostly because of preventable causes of morbidity and mortality that constitute the major disease burden. Table 2.1 compares the indices for Malawi with the UK to enable the reader to recognise the significance of the indicators in Malawi. The table shows an enormous difference in the demographic situation between Malawi and the UK.

Table 2.1: The Malawi Health Profile

	Malawi	The UK
Life Expectancy (number of years that a person may expect to live)		
Male	58	79
Female	61	83
Adult Mortality Rate (number of deaths in a given period)		
Male	257	88
Female	208	55
Maternal Mortality Rate (per 100,000 live births)	510	8
Total Fertility Rate (births per woman)	5.4	1.9
Contraceptive Prevalence Rate (percentage of women or whose sexual partners are practicing contraception)	46.1	84
Neonatal Mortality Rate (number of neonates dying under 28 days per 1,000 live births)	23.2	7.9
Infant Mortality Rate (number of deaths of infants under one year old per 1,000 live births)	44.2	3.9
Under-five Mortality Rate (the probability of a child dying before reaching the age of five per 1,000 live births)	67.9	4.6

Source: Adapted from World Health Organisation statistics (WHO, 2015)

2.5.1 HIV Status

Human immunodeficiency virus (HIV) prevalence among adults aged 15 to 49 is estimated at 10.6% and this shows little evidence proposal of decline; the country continues to face a severe HIV epidemic. Of the estimated 900,000 people infected with HIV, approximately 56% and 23% are women and children respectively. It is anticipated that 90,000 new infections will continue to occur each year in the absence of stronger prevention efforts, of which at least 23% will be as a result of mother-to-child transmission (MOH, 2007).

2.5.2 Maternal mortality globally and in Malawi

2.5.2.1 Global overview

About 800 women die from pregnancy or childbirth-related complications around the world every day (UN, 2015). Worldwide, the maternal mortality ratio (MMR) went down from 380 maternal deaths per 100,000 live births to 210 maternal deaths per 100,000 live births in 2013 (WHO, 2014, UN, 2015). This represents a global fall of 45% from 1990 to 2013, with every region of the world experiencing a fall in maternal mortality of at least 37% (WHO, 2014, UN, 2015). The levels of maternal mortality differ significantly among the major regions of the developing world. The highest reduction during this period was in eastern Asia (65%) while the lowest decline was in Latin America and the Caribbean (40%). Sub-Saharan Africa experienced a 49% decline in MMR. This indicates progress made by countries towards achieving the Millennium Development Goal (MDG) number 5 of improving maternal health.

Though progress in reducing the MMR is undeniable, this decline is not enough to meet the maternal health MDG target 5A of reducing 75% of the global MMR by 2015 (UN, 2015); many women are still dying either during pregnancy or from childbirth-related complications. Global figures hide huge disparities between and within countries and developing regions still account for most of these deaths where the MMR is about fourteen times higher than in the developed regions (UN, 2015). The 2013 MMR in developing countries was 230 deaths per 100,000 live births versus 16 deaths per 100,000 live births in developed countries. In addition, the estimated lifetime risk for maternal mortality in high-income countries is 1 in 3400 compared to low-income countries where the risk is 1 in 52. Maternal deaths are highest in sub-Saharan Africa and southern Asia which together accounted for 86% of deaths

globally in 2013 (UN, 2015). In addition, the World Health Organisation (WHO 2012) reflects that an African woman has a higher risk of dying compared to other countries. The probability of a woman dying from maternal causes in sub-Saharan Africa is 1 in 40, compared to 1 in 130 in Oceania, 1 in 160 in South Asia, 1 in 290 in South Eastern Asia and 1 in 3800 among developed countries (WHO, 2012). Furthermore, the WHO (2012) highlights statistics that show that maternal morbidities and illnesses are significant in countries with high mortality. For every maternal death, approximately twenty other women suffer lifelong injury or illness as a result of childbirth that can affect them for the rest of their lives (WHO, 2012). Such outcomes are a critical marker of countries' commitment to improve maternal health (WHO, 2007, 2012). These statistics reflect inequalities in access to healthcare services and highlight the difference between the rich and the poor (WHO, 2010). Additionally these figures indicate the low value attached to some women's lives.

2.5.2.2 Maternal Mortality in Malawi

Malawi's maternal mortality, currently estimated at 574/100,000 live births (NSO, 2014), poses a significant public health challenge. However, Malawi has made steady progress in improving maternal health and maternal mortality (Hogan *et al.*, 2010). Although the MMR had increased sharply from 620/100,000 live births in 1992 (NSO, 1992) to 1,120/100,000 live births in 2000 (NSO, 2002), the 2004 Malawi Demographic Health Survey indicated that the MMR had then declined to 984/100,000 live births (NSO, 2004) while the NSO, (2014) has shown further reductions in more recent years.

Much as there has been progress, the indicator is still unacceptably high and does not meet the government target. The current end line MDG survey conducted in Malawi indicates that the country has failed to achieve MDG 5 (NSO, 2014). The target for Malawi was to have a MMR of about 155/100,000 live births by the year 2015 (NSO, 2011). Thus, the current ratio is way below the MDG target. Therefore, the country needs to strengthen and scale-up good clinical practices in order to achieve the targets with respect to maternal health.

2.5.3 Causes of maternal mortality

Women are dying from pregnancy or child birth related complications worldwide (WHO 2010). The main complications that account for 80% of all maternal deaths are excessive bleeding (mostly after child birth) (21%), unsafe abortion (13%), pre-eclampsia and eclampsia (12%), sepsis (8%), obstructed labour (8%). The rest of the deaths are caused by

diseases such as malaria, and acquired immuno-deficiency syndrome (AIDS) during pregnancy (WHO 2010).

Similarly, evidence in Malawi suggests hemorrhage, ruptured uterus, prolonged and obstructed labour and sepsis as major causes of maternal deaths (MOH, 2005, Ratsma et al., 2005, MOH, 2010). Most of these causes happen during progression of pregnancy, labour and birth or, during postpartum period (WHO, 2010). Remarkably, prolonged and obstructed labour is a significant cause of maternal mortality and morbidity in Malawi as highlighted in the following section.

2.5.3.1 The burden of obstructed and prolonged labour in Malawi

Prolonged and obstructed labour accounts for 4% of maternal deaths in Malawi (MOH, 2010). In addition, prolonged and obstructed labour accounted for 63% and 45% of indications for caesarean delivery in 2003 and 2010 respectively (Fenton *et al.*, 2003, MOH, 2010). Dangerously, this complication also predisposes women to rupture of the uterus, maternal infection and hemorrhage (Fenton *et al.*, 2003, WHO, 2006, Mathai, 2009). These complications are also the leading causes of maternal mortality in Malawi (MOH, 2005, 2010, Ratsma *et al.*, 2005). Furthermore, many authors such as the WHO (2006), Fenton *et al.* (2003) and Mathai (2009) assert that for those women who survive prolonged and obstructed labour, the sequelae of difficult labour (anemia, infertility and obstetric fistula) may be overwhelming and foetal outcome is also poor.

The literature further reflects that information about the extent of prolonged and obstructed labour is incomplete and fragmentary (WHO, 2006, Mathai, 2009). In addition, reported incidences vary widely and there is an underestimation of deaths related to prolonged and obstructed labour because the deaths are generally classified under other complications associated with prolonged and obstructed labour such as sepsis or hemorrhage of ruptured uterus (WHO, 2006, Mathai, 2009). Disappointingly, vital registration information is often lacking in settings where prolonged and obstructed labour and maternal deaths are most common, rendering significant under-reporting of these conditions (Mathai, 2009).

Nevertheless, various reports such as WHO (2006), MNH (2002) and Fistula Care and Maternal Health Task Force (2012) suggest that efficient and effective clinical decision making regarding progress of labour during the first stage of labour is key to the prevention

and treatment of prolonged and obstructed labour and other complications caused by long labour. This is a critical intervention towards reducing maternal and perinatal mortality and morbidity. Evidence further reflects that at least 15% of all pregnant women will develop sudden serious complications and require access to lifesaving obstetric services (WHO, 2007).

2.6 Healthcare Delivery System

2.6.1 Organisation

Healthcare services in Malawi are provided by three main agencies. The government, through the Ministry of Health (MOH) provides about 60% of healthcare services; the Christian Health Association of Malawi (CHAM) provides 37% and the Ministry of Local Government provides 1%. There is a small contribution from the private-for-profit health sector limited to the urban areas as well as health services provided by private companies, private practitioners, commercial companies, the army and the police (MOH, 2010).

Basically, health services are provided at three levels: primary, secondary and tertiary. At the primary level, services are delivered through rural hospitals, health centres, health posts, outreach clinics and community initiatives such as drug revolving funds (NSO, 2010). Health services at community level are provided by cadres such as health surveillance assistants, community based distributing agents and village health committees.

District and CHAM hospitals provide secondary level healthcare services to back up the activities of the primary level. There are five zonal health support offices in Malawi and each one has district hospitals to look after and report to the MOH. At tertiary level are central hospitals that provide health services in various regions of the country. Currently, there are four central hospitals in Malawi. The central hospitals provide services similar to those at secondary level, along with a range of specialist services (MOH, 2010).

Healthcare resources are unevenly distributed and inadequate. Only 46% of the population has access to a formal health facility within a 5km radius, and only 20% of the population lives within 25km of a hospital (MOH, 2006). Access is worse in rural areas.

Malawi's health system is grossly under-resourced. Per capita expenditure is approximately US\$12, which is inadequate for delivery of basic primary healthcare (MOH, 2007). All maternity-related services (i.e. normal delivery, assisted vaginal delivery, caesarean delivery, blood transfusion, etc.) are offered for free in government facilities. Christian Health Association of Malawi services are not normally free of charge, however, of late service agreements between the government and CHAM have resulted in these services being offered free of charge in some CHAM facilities (MOH, 2010).

2.6.2 Hospitalisation of childbirth

The United Nations (UN, 2012) advocates increasing the proportion of births attended by a skilled provider to decrease maternal and perinatal mortality in low-income countries. The main strategy for MDG 5 is to have 90% of births taking place with a skilled birth attendant (UN, 2012). The WHO (WHO *et al.*, 2004 p. 1) defines a skilled birth attendant as a person “with midwifery skills (for example, doctors, midwives and nurses) who has been trained to proficiency in the skills necessary to manage normal deliveries and diagnose or refer obstetric complications.” Traditional birth attendants (TBAs) either trained or not, are excluded from the category of SBAs (WHO *et al.*, 2004).

Malawi was one of the first countries that signed up to the Campaign for Accelerated Reduction of Maternal Mortality in Africa in 2009 whose objective is to accelerate actions aimed at the reduction of maternal mortality in Africa (Sarelin, 2014). In addition, as a member state of the WHO, Malawi is a signatory to the Ouagadougou declaration on primary health care and health systems in Africa: achieving better health for Africa in the new millennium (WHO, 2008). Therefore, Malawi reaffirmed her obligation to primary health care (PHC) as a strategy for delivering health services, and as an approach to accelerate the achievement of the MDGs.

Following these obligations, hospitalisation of childbirth has been an increasing phenomenon in Malawi. Currently, the percentage of births attended by a SBA has increased from 55.6% in 2000 to 87.4% in 2015 (NSO, 2014). However, the current Malawi MDG end line survey conducted in 2014 shows that the country continues to have a high MMR of at least 574 deaths per 100,000 live births, which remains above the 2015 MDG of 155 per 100,000 (NSO, 2014).

In 2007, the Malawi MOH banned out-of-facility births with TBAs. The WHO (1992, p.4) defines a TBA as “a person who assists the mother during childbirth and who initially acquired her skills by delivering babies herself or by working with other TBAs”. Traditional birth attendants are often older women and are generally illiterate (WHO, 1992). The agenda to ban TBAs was pursued as part of the initiative to promote safe childbirth. It was observed that the country's high MMR was partly due to lack of skills on the part of TBAs. The argument was that TBAs provide services of poor quality due to low literacy, poor supervision and their old age. According to Ngozo (2011), TBAs were not able to recognise obstetric emergency cases quickly and were failing to provide measures to prevent transmission of HIV from mothers to their newborn babies. As a result, the Malawi Government took the decision to ban TBAs as healthcare practitioners.

Therefore, women in Malawi are obliged to seek skilled birth attendance through customary legal mechanisms and TBAs who continue to practice are penalised. Chiefs at village level have the responsibility to ensure that TBAs are not assisting women to give birth. A woman who gives birth with a TBA can be fined by the chief (MOH, 2007). To this end, the Sexual and Reproductive Health and Rights policy clearly states that TBAs “shall not conduct deliveries as they have been given new roles” (MOH, 2009b, p.10). However, TBA services are a significant aspect of care because they clearly relate to the beliefs and practices of a pregnant woman from a traditional and African orientation. Arguably, the prohibition of TBAs from practising has an impact on social norms for childbirth and normalising practices of facility-based birth.

Although it was anticipated that stopping TBAs from practising would help mothers to utilise the country's hospital facilities, almost half of all childbirths still occur outside medical facilities (Face of Malawi, 2011). Traditional birth attendants tend to be highly respected in rural areas and a significant number of women in Malawi prefer to seek their services. Therefore, TBAs are still practising in secret thereby raising suspicions of unreported maternal deaths related to complications (Bradley *et al.*, 2015).

2.7 Human and Material Resources

The health sector in Malawi is challenged by a human resource crisis especially in relation to doctors, nurses and midwives (Muula and Maseko, 2006, WHO, 2008). Consequently, this

critical shortage of health professionals has negatively impacted on the delivery of pressing health issues (Palmer, 2006). The medical doctors work in general and specialised practice but their numbers for the size of the population in the country are relatively low with a physician density of 0.2 per 10,000 population (WHO, 2011). The average physician density for the African region is 2 per 10,000 population (WHO, 2011). Their role is supplemented by a mid-level cadre which includes clinical officers and medical assistants. To this end, Malawi's clinical services, like those of many other African countries, rely heavily on non-physician clinicians called clinical officers (Chilopora *et al.*, 2007). This cadre was introduced in 1976 in order to cope with the ever-increasing demand for healthcare. Clinical officers are trained and recruited as substitutes or temporary cadres until the number of medical doctors increases (Muula, 2009). They are below the level of a fully qualified medical doctor and are trained locally for a period of 3 years. They are licensed to practice independently and perform major emergency and elective surgery. They also constitute a key category of health workers who provide obstetric care to women in Malawi and they perform the bulk of emergency obstetric operations at district hospitals (Chilopora *et al.*, 2007).

Nurse-midwives provide the majority of primary healthcare and form the backbone of the health service in Malawi. The WHO (2011) highlights that there are 3,896 nurses and midwives in the country which is a nurse-midwife density of 2.8 per 10,000 population, while the average in the African region is 11 per 10,000 population (WHO, 2011). By contrast, the UK has 165,317 physicians that is a physician density of 27.4 per 10,000 population, and 621,755 nurses and midwives, which is a nurse-midwife density of 103.0 per 10,000 population (WHO, 2011).

Although midwifery is a key element in sexual, reproductive, maternal and newborn healthcare in Malawi, there is data limitation such that different figures are reported in various reports. For instance, the White Ribbon Alliance (WRA, 2014) in Malawi points out the NMCM's recommended ratio of one midwife for every five women, and that currently there is one midwife for every ten women. However, the Council's data only includes registered midwives and may include midwives who are registered with the Council but not practicing (WRA, 2014). Thus, a detailed analysis is required to precisely determine the number of practicing midwives in Malawi.

The shortage of skilled personnel has been aggravated by high turnover due to various factors including high mortality attributed to HIV and AIDS-related illnesses, attrition as a consequence of retirement and resignations, and the brain drain of skilled people who depart to industrialised countries, particularly the UK (of 108 nurses leaving Malawi in 2003, 90 went to the UK (Caffrey and Frelick, 2006).

The Malawi government has been determined to deal with the shortage of skilled personnel. It worked with the international community to launch an emergency human resource programme in 2004 (MOH, 2004). The 6-year programme (2004 to 2006) initially aimed at scaling up staffing levels with targets to be reached. This plan focused on a huge scale up of pre-service training of healthcare cadres and substantial gains have been made. However, vacancy rates still remain high and fall below the emergency human resource programme targets, with shortfalls against projected posts of 72% for clinical officers, 53% for registered nurse-midwives (RNM) and 60% for nurse-midwife technicians (NMT) (MOH, 2010). Therefore, health professionals, particularly in the rural areas where 85% of the population lives (NSO, 2010) continue to face challenging work environments characterised by high workloads, lack of essential resources and health technologies, and inadequate supervision or managerial support. These factors combine to severely compromise health workers' abilities to deliver adequate quality care and are among the causes of disrespectful intrapartum care. The consequences of staff shortages for emergency obstetric and neonatal care are evident. Maternal death reviews in Malawi have shown that health-worker factors are some of the major contributors to maternal death (Kongnyuy *et al.*, 2009, Thorsen *et al.*, 2014) and significant contributors to poor outcomes for labouring women (Bradley *et al.*, 2015).

In addition to shortages of health professionals, shortages of medicines, equipment and supplies have also been reported to be a major problem throughout Malawian hospitals (Lufesi *et al.*, 2007). A Malawi government report showed that key medicines are out of stock over 50% of the time (Carlson *et al.*, 2008). The shortages are mostly as a consequence of low budget allocation and poor distribution from the central medical stores (Carlson *et al.*, 2008).

2.8 Education of Nurse-Midwives in Malawi

Nurse-midwives form the majority of health workers, acting as a backbone of the healthcare system as they manage nearly 95% of health centres. There are two categories of nurse-

midwives in Malawi, the professional nurse-midwife known as a RNM, and the enrolled nurse-midwife (ENM) or NMT. Training of enrolled nurse-midwives has been phased out and this cadre has been replaced with NMTs, but many ENMs are still present in the health system.

Currently, professional nurse-midwives in Malawi are trained through a 4-year integrated programme for the degree of Bachelor of Science in Nursing and Midwifery. Both nursing and midwifery components are integrated into the curriculum with the aim of producing graduates who are both nurses and midwives. This was in response to the country's high MMR which was at 984 deaths per 100,000 live births in 2004 (NSO, 2004).

Initially, professional midwives in Malawi were required to train first as a registered nurse and then as a registered midwife. Thus the graduate midwife would have completed 4 years of university education (Bachelor of Science in Nursing) and an extra year of midwifery. Before starting the fifth year of midwifery training, the prospective student midwife was expected to pass a licensing examination as a general nurse. Prior to 1993, RNMs were trained at diploma level for 4 years (3 years as a general nurse and 1 year as a midwife). Training of RNMs at diploma level continues at other nursing colleges in Malawi where nursing and midwifery has been integrated into one programme.

The registered nurse-midwife in Malawi is licensed to provide antenatal care, assist women in giving birth including twin deliveries, deliver malpresentations, perform vacuum (ventouse) extraction and manual removal of placenta, resuscitate an asphyxiated baby through intubation, suture first and second degree tears, give parenteral fluids including antibiotics and blood, insert intrauterine devices for family planning and carry out manual vacuum aspiration for incomplete abortion (MOH, 2004). Registered midwives are also expected to provide leadership in the provision of midwifery services in collaboration with other healthcare workers (NMCM, 2012).

The second category of nurse-midwives in the country is the NMTs who are trained in CHAM training institutions. The Christian health association health training institutions produce about 80% of the NMTs. The training is either for 3 disjointed years (2 years nursing and 1 year midwifery), or a continuous 3-year integrated nursing-midwifery curriculum. Several other institutions provide training for NMTs, most of which are run by the CHAM

(Nove, 2011). The NMTs serve primarily in rural and deprived areas and are essential to the healthcare delivery system. Arguably, this distribution reflects some degree of discrimination, as it suggests that women in these areas are less well cared for.

The focus for NMTs training is on the provision of basic midwifery care under the guidance and supervision of a RNM. Currently, the syllabus for this category has been revised to include skills such as assisting women with malpresentations to give birth, conducting vacuum extraction, and manual vacuum aspiration and intubation. These skills have been included because most NMTs provide midwifery care alone in health facilities where most rural women give birth (Hussein *et al.*, 2007).

As identified in section 2.4, a total of 80% of the Malawi population lives in rural areas and this population faces challenges to access health services due to geographical and infrastructure problems. In light of these problems, the Malawi government started an 18-month training programme for a new cadre of midwives – community midwife technicians. The rationale for introducing this new cadre of midwives was to increase skilled attendance at birth, particularly in rural areas in order to reduce the high levels of maternal and neonatal mortality rates.

However, this new cadre of midwives does not replace the banned TBAs; community midwife technicians are also prohibited from assisting women to give birth, and there is no infrastructure for community midwife technicians to practice close to their communities. They are expected to refer mothers for a facility-based birth. Their responsibilities comprise home visiting, ensuring sanitation, collecting vital information and maintaining a village register (Bustero and Hunt, 2013). Arguably, the strong emphasis on surveillance and collecting vital data regarding the health status of the women is congruent to the bio-power ideal that approaches the human body not directly in its biological dimension, but as an object that can be manipulated and controlled. To this end, the training of community midwife technicians can be seen as an example of the subtle power given to local agents of behaviour change. However, there is need for the government to provide an appropriate infrastructure to this cadre of midwives so that women can experience childbirth within their communities. Meanwhile, the community midwife technicians do not seem to fulfil the role of increasing skilled birth attendance in rural areas.

Nurse-midwives enjoy the high status and prestige of independent practitioners. There is recognition that the nurse-midwife is educated to provide a wide range of maternal and child health services (Hussein *et al.*, 2007, Bradley *et al.*, 2015). Due to the shortage of medical doctors, clinical officers and medical assistants, the government has created an enabling policy environment in the regulation of the nursing and midwifery professions. The high standards of training enable the nurse-midwife to function in a wide range of settings. For example, at district hospitals, midwives undertake the functions outlined according to the scope of practice established by the NMCM. The midwife undertakes the care of all women in labour; managing pregnancy and labour complications and making various clinical judgements and decisions based on the situation.

2.9 Regulation and Status of the Midwifery Profession

The Nurses and midwives council of Malawi is the sole regulatory body of nursing and midwifery education, training, practice and professional conduct of nursing and midwifery personnel in the country. The overall objective of the Council is to develop, maintain, monitor, evaluate and control the profession of nursing and midwifery thereby contributing to the national goal of raising the health status of Malawians. Its mission statement is “The Council exists as a regulatory body mandated by the Nurses and Midwives Act 1995, to ensure the delivery of safe, effective and ethical nursing and midwifery care by all registered midwives and nursing midwifery technician practitioners in Malawi. The mandate empowers the council to contribute to policy formulation, prescribe professional education and training requirements; regulate, monitor and evaluate services based on standards of nursing and midwifery education, practice and professional conduct” (NMCM, 2005, p.4). Therefore, regulation is implemented through the setting of the syllabus to be followed by all nurse-midwifery training institutions including the university and the administration of licensing examinations to graduates who have successfully completed their training. This examination assesses acquisition of prescribed competencies as well as safety to practice independently. The Council also prescribes the scope of practice for each category of nurse-midwife (NMCM, 2008). In addition, the NMCM also has a disciplinary and registration function.

2.10 Summary of Chapter 2

In this chapter I have presented the background information about the study context in Malawi focusing on its geography and administration, population and its demographic characteristics and economic profile. An exploration of the health status of Malawi is included, with particular focus on maternal mortality and its causes, which provides an understanding of the problem of prolonged and obstructed labour. I have also explicated the status of human and material resources for the healthcare services with particular attention to the shortage of staffing in various healthcare professions, and explained the education and role of different practitioners involved in maternity care. The regulation and status of the midwifery profession in Malawi are also explained. The following section provides a comprehensive review of the literature with regard to decision-making in relation to midwifery care.

Chapter 3 : Literature Review

3.1 Introduction

In Chapter 2 I presented the background context for understanding Malawian midwives' decision making during the first stage of labour. In Chapter 3 I critically analyse the literature on midwifery decision making and consider how it informs our current understanding of decision making in clinical contexts and its relevance to the first stage of labour. Largely, the main body of literature from which this thesis draws is the literature on the theoretical approaches underlying studies on midwifery decision making. I aim to present the reader with the evidence base related to a range of decision-making approaches that clearly illustrate different ways in which clinical decisions can be made. I then explore their relevance to healthcare settings and highlight where they are applicable to midwifery practice.

In relation to the contextualisation of the study within midwifery practice, I have provided a critical analysis of the existing literature which will help to clarify ideas important for understanding assessment and management decisions during the care of women in the first stage of labour. Alongside the analysis of these contextual issues, I present and critique the empirical studies related to midwifery decision making during labour and birth. This body of literature points to a knowledge gap in relation to midwifery assessments and management decisions during the care of women in contemporary maternity settings.

Overall, the literature review for this thesis has been conceptualised into three broad areas

- approaches to understanding decision making
- decision making in uncertain and complex situations
- labour assessment and care decisions during the first stage of labour.

I begin the chapter by providing an account of the literature review process in section 3.2. In section 3.3 I explore the concept of clinical decision making, what it means and its significance. This is followed in section 3.4 by a critical analysis of the literature surrounding the approaches to understanding decision making. In this section, nine published reviews of the midwifery decision-making literature are analysed. One of these studies illuminates a prescriptive approach to decision making (Ratray *et al.*, 2011), while another by Scholes *et*

al. (2012) focusses on a descriptive approach. Two studies review hypothetico-deductive reasoning (Danerek and Dykes, 2005, Cheyne *et al.*, 2006), and four studies focus on the use of intuition in midwifery (Davis-Floyd and Davis, 1996, Olsson and Adolfsson, 2011, Page and Mander, 2014, Jefford and Fahy, 2015). Finally, one study analysed in this section (Jefford *et al.*, 2012) provides useful evidence on the use of woman-centred decision making in midwifery.

The evidence about decision making in uncertain and complex situations is presented in section 3.5 where I analyse thirteen studies. This section is presented under the approach of the cognitive continuum theory, where I analyse one study in the literature that illustrates tenets of the cognitive continuum theory (Patterson *et al.*, 2015). Regarding naturalistic decision making, I critique a study with a focus on situation awareness in midwifery (Cioffi *et al.*, 2010). The review then draws on eleven studies which illustrate the complex nature of the maternity care settings (Walker, 1976, Kitzinger *et al.*, 1990, Crabtree, 2004, O'Connell and Downe, 2009, Dykes, 2009, Jefford *et al.*, 2010, Mselle *et al.*, 2013, Zhang *et al.*, 2014, O'Donnell *et al.*, 2014, Kirkup, 2015, ten Ham *et al.*, 2015) with a focus on various factors that influence midwifery care and the subsequent decisions made during the care of women in maternity settings.

A critique of the literature surrounding the concepts and ideas that have led to the contemporary management of labour and birth then follows in section 3.6. Six studies were reviewed in this section. Three were structured around the use of the partograph as a management tool during the care of women in labour (Lavender and Malcolmson, 1999, Lavender *et al.*, 2007, Lavender *et al.*, 2011). Two studies provided evidence relating to midwifery assessment of labour using maternal behavioural cues (Winter, 2002, Duff, 2005) and one research study (Mead, 2004), focussed on midwifery care decisions during labour. Finally, in section 3.7, I conclude the chapter with a summary of the literature reviewed and the identification of gaps in the existing midwifery knowledge base relating to decision making during the first stage of labour. These gaps are used as justification for the current research study and its conduct. Next, in section 3.2, I illustrate the process of searching and reviewing the literature.

3.2 Searching and Reviewing the Literature

3.2.1 Clarifying terminology

There is some evidence in the literature of misunderstanding about the meaning of the term ‘decision making’ within the healthcare context. The literature on clinical decision making reflects the use of different terms to mean the same phenomena: clinical reasoning (Higgs *et al.*, 2008), clinical judgement, clinical inference and critical thinking (Hammond, 1966), and diagnostic reasoning (Tanner, 2006) to explain decision making. This view was echoed by Thompson and Dowding (2009) who acknowledge that there is a link between judgements and decisions in healthcare practice and that these can be discussed as a single entity. Decision making involves both processes and outcomes (Raynor and Bluff, 2005). Processes describe how judgements and decisions are made while outcomes reflect the quality of the judgement (Thompson and Dowding, 2009). In support of this Hastie and Dawes (2001) point out that decision making concerns the process of choosing a course of action while judgements are components of the decision-making process involved with assessing, estimating and making inferences. Therefore, it is important to define clinical decision making to avoid confusion and be aware of the interchangeability of terms when others refer to the same phenomena. For the purpose of this thesis, and with due recognition of the interchangeable use of the terms within the field of decision making, to avoid confusion I will use the term ‘clinical decision making’ to encompass the process of how decisions are made, rather than decision outcomes.

3.2.2 Process of the literature review

Searching and reviewing the literature was an ongoing process during the research and consisted of two stages. The first review was conducted during the research proposal development. I aimed at identifying gaps in the research on the subject under study, developing the research questions and selecting an appropriate methodology for the study. During this stage I reviewed the theoretical perspectives underpinning existing studies on clinical decision making and critiqued available, relevant research on midwifery decision making. I identified gaps in the knowledge on the actual practice of decision making as employed during midwifery practice, in particular there is a lack of knowledge relating to the contextual factors that influence midwifery decision making. No study was identified which examined the ways in which midwives engage in decision making in response to these contextual issues. In addition, no empirical studies exploring midwives’ decision making during the first stage of labour were found. The literature search indicated that there is very limited data on this area of research from the African perspective and none for Malawi. The dearth of literature in midwifery decision-making research posed a significant challenge. It

has been difficult to include adequate midwifery decision-making literature to offer a useful, comprehensive representation of the state of knowledge in the field of midwifery decision making. In response to this challenge I drew upon the literature that considered factors that impact on the quality of maternity care. This existing evidence base helped to establish a basis for further investigation into midwives' decision making during the first stage of labour. I conducted the second stage of the literature review towards the end of the study. The aim was to locate the findings of the study within the related publications. The review of the literature was an iterative process.

3.2.3 Search strategy

I utilised a variety of ways of searching the literature to optimise the width and depth of this review. I used the following databases to inform my review of the literature: CINAHL, MEDLINE, ISI Web of Knowledge, PsycINFO, MIDIRS, Cochrane Library and DiscoverEd of the University of Edinburgh. Concerning the aim of the study, I developed search strings under three broad subject areas: decision making, the first stage of labour and midwifery (Figure 3.1).

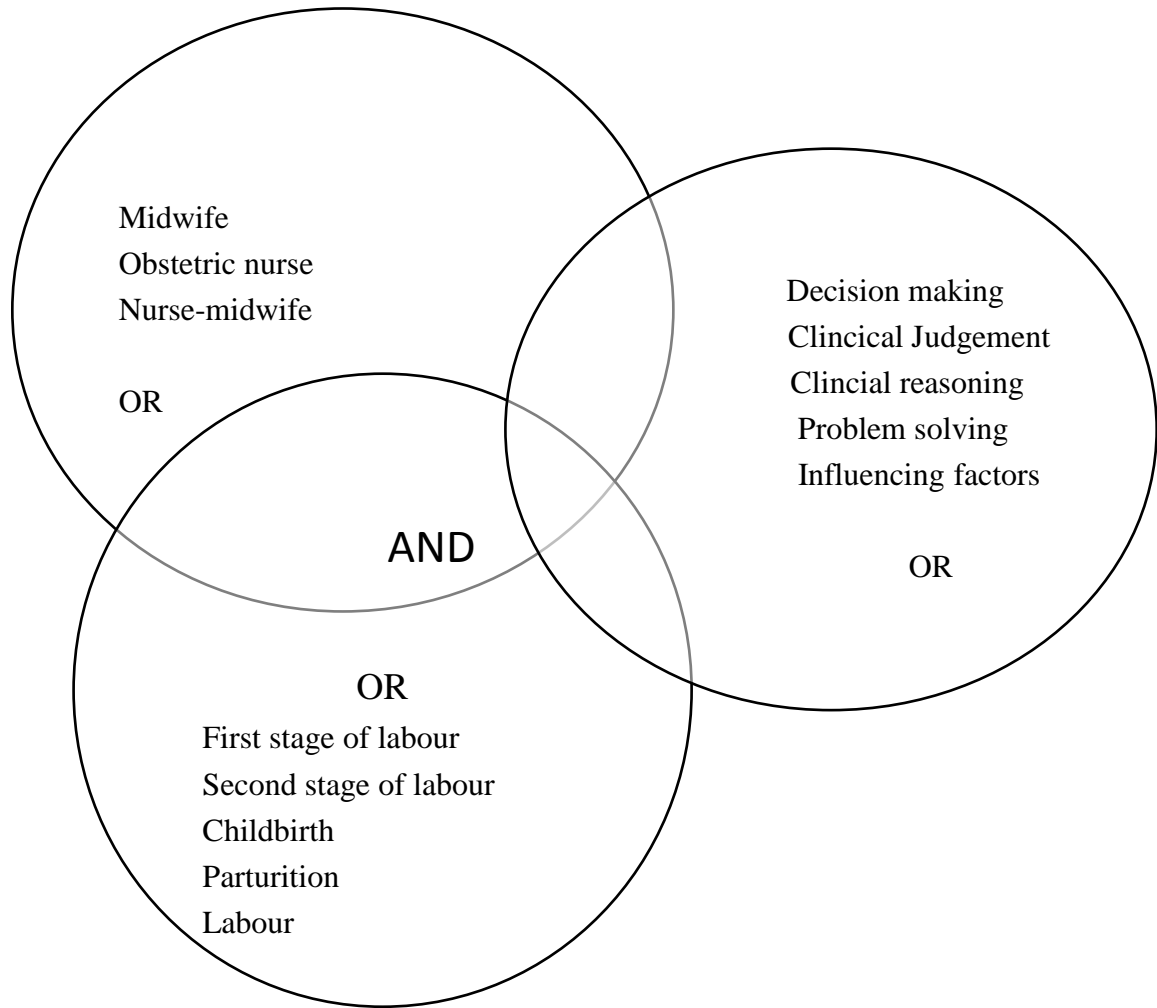


Figure 3.1: Key Word Strings Used for the Literature Search

I used the Boolean operators AND and OR to help in clarifying the literature search (Figure 3.1). I developed a strategy consisting of subject headings and text words for each of five key terms: decision making, clinical judgement, clinical reasoning, problem solving and influencing factors. These were combined with words such as midwife, obstetric nurse, nurse-midwife and/or concepts such as first stage of labour, second stage of labour, childbirth, parturition and labour. I performed a search of Grey literature to identify the relevant research studies and articles. I also identified a good number of sources for the literature review through the ancestry method (Polit and Beck, 2008). This involved using citations from books and chapters within books to track other relevant literature sources. I obtained related policy documents and reports through the professional midwifery websites such as The International Confederation of Midwives and The Nursing and Midwifery

Council. To enable greater insights into decision making, I used relevant citations from audits, research editorials, commentaries and literature reviews identified from these searches.

While these searches yielded a large number of studies, many yielded little or no information about midwifery decision making, most of them were not relevant to this study (Appendix B). The majority of studies looked at other areas of decision making, not midwifery decision making during labour and birth, for example, decision making within the fields of nursing, physiotherapists and medical decision making. I excluded all these studies because clinical decision making in midwifery is different from these other professions, it aims to achieve woman-centred care with midwives acting autonomously and involving women in decision making (Raynor and Bluff, 2005). I included research studies that linked to student midwives, qualified midwives and those healthcare workers practicing within the field of midwifery, but are categorised as nurse-midwives in their country. The review identified a dearth of research undertaken in midwifery and, more specifically, during labour and birth. All these studies were qualitative in design. Appendix B offers a summary of the reviewed research articles. As discussed earlier, throughout the journey of performing the research project and writing the thesis, I have continued to add studies to the review. The overall analysis has led to a total of twenty-eight studies being included.

3.2.4 Search criteria

Research on theoretical perspectives on decision making can be traced back to the 1950s (Elstein and Bordage, 1988). Therefore, I did not place a time limitation on the review of the theoretical perspectives of studies on decision making that were regarded as seminal work. The review revealed a paucity of literature on midwifery decision making from a Malawian and African context. The literature used to support this study is mainly derived from international sources and more specifically from the UK, USA, Australia, and New Zealand. I used literature sources from around the 1970s to date. I reviewed two studies that were exceptional. They were more than 20 years old, but I used them because they were quite relevant and significant. The studies reflected similar issues to the contemporary maternity care practice in Malawi.

3.2.4.1 Inclusion criteria

- Journal articles with full text.
- Meta-synthesis and systematic reviews.
- Research reports related to quality of midwifery care and decision making.
- Professional and government policy documents and reports.
- Articles, books and reports published in English.
- Relevant and accessible digital theses.

3.2.4.2 Exclusion criteria

- Anecdotal records.
- Articles published in languages other than English.
- Studies pertaining to nursing and medical decision making.

3.3 The Concept of Clinical Decision Making

Decision making is a subject of interest to many disciplines such as psychology, economics, law, political science, medical informatics, etc. (Arkes and Hammond, 1986, Patel *et al.*, 2002, Thompson and Dowding, 2005). Despite its importance in clinical practice, decision making in midwifery remains under-researched (Jefford *et al.*, 2010, Masterson, 2010). The overall aim of this thesis directed the focus of the review of the literature towards articles relating to research in midwifery decision making, its aim being ‘*To understand midwifery decision making during the first stage of labour in a hospital setting within the Malawian context*’. In this study, I examined how midwives make decisions during the first stage of labour, in other words, their care-reasoning processes, rather than the quality of the decisions made. The review, therefore, focused on decision-making processes rather than decision-making outcomes. This review appraises various decision-making theories, application of these theories to the care of women during the first stage of labour and gaps in the literature pertaining to the clinical decision-making process in midwifery practice during the first stage of labour.

Clinical decision making is a fundamental and integral part of healthcare professionals’ work (Thompson and Dowding, 2002, Mok and Stevens, 2005). It can be defined as a situation in

which a choice of action is made among other possible options (Baumann and Deber, 1989), or as the cognitive process of reaching a decision (Raynor and Bluff, 2005). Midwives and other healthcare professionals make a decision about the data to collect about a woman in labour, understand and interpret this data in order to provide appropriate care. The literature suggests that clinical decision making processes must be understood within the contexts in which it takes place (Sullivan, 2005, Ciofi, 2012). Midwifery occurs in a context that is complex, despite this, midwives are expected to account for the decisions they make as they care for women in labour (NMCM, 2002, Muoni, 2012). Therefore, midwifery decision making can only be understood completely in context, when the various organisational factors are also incorporated into the decision-making process. To this end, Tiffen *et al.* (2014 p. 401) have refined the definition of clinical decision making as “a contextual, continuous, and evolving process, where data are gathered, interpreted, and evaluated in order to select an evidence-based choice of action”. In the following text, I present a critique of the various approaches to understanding clinical decision making.

3.4 Approaches to Understanding Clinical Decision making

The approach to decision making by professionals has been conceptualised in various ways by many theorist over the past 50 years (Elstein and Bordage, 1988). Psychologists have studied the subjects of human judgement and decision making for over half a century and these studies have led to the development of different approaches that are equally effective for investigating judgement and decision making in healthcare settings including midwifery practice (Mok and Stevens, 2005, Jefford *et al.*, 2011). Within healthcare research and midwifery itself, the use of theory to guide decision research studies has been employed over the years. Literature reflects a plethora of research related to how medical staff (Elstein and Bordage, 1988, Klein *et al.*, 1993), nurses (Thompson and Dowding, 2002a, 2002b, Tanner, 2006, Thompson and Dowding, 2009) and midwives (Rattray *et al.*, 2011, Cioffi, 2012, Scholes *et al.*, 2012, Jefford and Fahy, 2015, Patterson *et al.*, 2015) have used theory to guide decision research. However, as explained in the preceding text, a broad review of all literature in terms of decision making is outside the scope of this thesis.

Research conducted on clinical decision making informs practice and enhances clinical effectiveness (Raynor and Bluff, 2005, Ciofi, 2012). Knowledge on clinical decisions has

largely been derived from classical decision making research that has used normative, prescriptive and descriptive approaches (Thompson and Dowding, 2002a, Chapman and Sonnenberg, 2003, Baron, 2004, Tupara, 2008, Cioffi, 2012). These three approaches come from different disciplinary backgrounds: psychology and behavioural science, statistics, mathematics and economics, operations research and management science (Bell *et al.*, 1988, Cioffi, 2012). They are described as traditional approaches to decision making (Patel *et al.*, 2002, Chapman and Sonnenberg, 2003).

Normative approaches

The normative framework for decision making focusses on what people ought to do if they need to be rational decision makers (Bond and Cooper, 2006, Edwards *et al.*, 2007). Emphasis is placed on rationality, logic and application of evidence-based decisions (Thompson and Dowding, 2009, Standing, 2010). The normative perspective focusses on systematic processes used by clinical practitioners to identify the correct diagnosis and select the most appropriate intervention from the available options. The main focus is on how good a 'judgement' or decision is without considering how the decision was made (Standing, 2010).

Prescriptive approaches

Prescriptive approaches take the normative approach a step further in seeking to improve decision making by examining how individuals make their decisions (Thompson and Dowding, 2002a, Edwards *et al.*, 2007). Prescriptive theories prescribe how decisions ought to be made to facilitate timely and accurate decisions and have better outcomes (Thompson and Dowding, 2009). The assumption within this approach is that human beings are not good decision makers and it proposes the need for decision-making aids to facilitate accurate and rational decisions (Bekker *et al.*, 1999). The model is therefore associated with the use of frameworks, guidelines and algorithms designed to enhance particular decision tasks (Standing, 2010, Thompson and Dowding, 2009). The work of Rattray *et al.* (2011) has offered prescriptive solutions (such as clinical-decision-making systems) as a trigger to help with timely and correct decisions in the use of foetal monitoring in low-risk labouring women. In an Australian grounded theory study, Rattray *et al.* (2011) examined midwives' decision making related to the use of continuous electronic foetal monitoring on low-risk, labouring women. The researchers used semi-structured interviews with five midwives from two regional Queensland hospitals to gather the data. Three midwives had more than 5 years

midwifery experience and two had less than 5 years' experience. Key findings of the study showed that the midwives made the decision to implement continuous electronic foetal monitoring at two key points during labour care: the first was during the midwives' initial assessment of the woman and foetus, and the second when the midwives categorised the women as high or low risk. There were various factors identified which influenced decision making, including trust and staff workloads within a context of risk management and medical dominance. Also, women were minimally involved in the decision-making process about foetal monitoring and they only received partial information prior to cardiotocography being implemented. Rattray *et al.* (2011) proposed a woman-centred, foetal monitoring, decision-making pathway to guide decision making about foetal monitoring. Even though interviewing the midwives provided information on some aspects of the midwives' decision-making process related to use of cardiotocography on low-risk women, there is a danger that some elements of their practice and experience may have been forgotten due to elapsed time. Conducting observations with the midwives during their clinical practice may have improved the study by ensuring that the data collected during interviews with midwives showed the reality of their clinical practice. This may have enriched the study findings.

Descriptive approaches

Descriptive theories try to describe how people think and how decisions are made (Edwards *et al.*, 2007, Thompson and Dowding, 2009). Decision making using a descriptive model is influenced by factors such as the complexity of the task, the amount of time available, individual personality and values and group relationships (Baron, 2004). Baron (2004) asserts that conducting descriptive research helps us identify that people are out of line with a suggested normative rule. The work of Scholes *et al.* (2012) used a descriptive approach to decision-making theory to explore a study of how thirty-five midwifery students responded to a simulated postpartum haemorrhage in the UK. Utilising a patient actress, the researchers identified considerable variation in clinical management of the situation among the students. Students had problems prioritising care actions where more than one response was required to a clinical cue, and they failed to utilise mnemonics as heuristic devices to guide their actions. The students were also reluctant to engage in inductive and deductive cycles to formulate a decision. However, while using simulation might be beneficial as an important safe environment for conducting research on student midwives' decision making in emergency situations, this is not considered the ideal mode of assessing their responses or their ability to manage an emergency situation since they were not examined in an authentic

environment. This would have affected the students' actions and is a limitation to the findings. Therefore, these findings may not reflect the complex situations of real-world practice where numerous factors work concurrently. This is particularly so during the first stage of labour where some decisions are required in complex situations that are strongly influenced by the context. The study by Scholes *et al.* (2012) did not consider the broader influence of the context.

A further understanding of such considerable variation in management, the failure to prioritise actions and failure to make decisions must be fully clarified. This feature of midwifery decision making can best be explored from the viewpoint of the midwives making the decisions in the real clinical settings. This approach would let a researcher find out the midwives' thought processes and uncover their responses.

The classical decision making theories integrate the concept of rational decision making and scientific reasoning process that focus on a single decision event conducted under context-restricted laboratory conditions (Beach and Lipshitz, 1993). These theories help analyse the options and determine statistically optimal solutions (Klein *et al.*, 1993). However, it is argued that application of the classical decision making theories has questionable ecological validity because they do not accommodate the experiences of the decision maker (Woods, 1993). It is further argued that the designs for laboratory contexts are not for imprecise tasks or time-pressured situations (Beach and Lipshitz, 1993, Klein *et al.*, 1993, Chapman and Sonnenberg, 2003).

Consequently, 'real world' decision making may not be adequately addressed with the classical decision making approaches alone (Beach and Lipshitz, 1993, Patel *et al.*, 2002). More specifically, clinical decision making occurs in contexts where the situations are complex and time pressured, and information is limited (Thompson and Dowding, 2001, Muoni, 2012). These characteristics are the foundation of the naturalistic decision making (NDM) theory, an approach that enables the complexities of decision making in real contexts to be studied (Zsombok and Klein, 2009). I explore decision making in complex and uncertain situations further in section 3.5. Table 3.1 outlines some examples of decision-making approaches currently used in healthcare facilities.

Table 3.1: Overview of Examples of Decision-making Models Used in Healthcare Settings

Paradigms	Approaches	Models from various paradigms
Classical decision making theories	Descriptive	Hypothetico-deductive reasoning
	Normative-descriptive	Cognitive continuum theory
	Prescriptive-descriptive	Social judgement theory
Interpretive phenomenology		Intuitive humanistic theory
Naturalistic decision making theories	Descriptive	Recognition-primed decision model

3.4.1 Hypothetico-deductive reasoning

Decision making in normal and usual circumstances has been explained using hypothetico-deductive reasoning (Elstein *et al.*, 1978, Dowie and Elstein, 1988). Information processing theory is the seminal work behind hypothetico-deductive reasoning (Elstein *et al.*, 1978) and dominated the decision-making literature until the 1980s (Elstein *et al.*, 1978). Hypothetico-deductive reasoning is the principal and most influential descriptive model in medical, nursing and midwifery decision making (Elstein and Bordage, 1988, Thompson and Dowding, 2002a, Mok and Stevens, 2005, Thompson and Dowding, 2009). According to information processing theory, human thinking is limited because of the limited capacity of human memory (Newell and Simon, 1972). Therefore, the goal of information processing theory is to define precisely the processes that a particular subject will use to solve problems. Hypothetico-deductive reasoning involves the generation of hypotheses identified from clinical information followed by the testing out of the hypotheses through further examination (Higgs *et al.*, 2008). This process is described as clinical reasoning within hypothetico-deductive reasoning. There are four different stages of clinical reasoning as identified by Elstein *et al.* (1978), these are:

- data collection
- hypothesis generation
- cue interpretation

- hypothesis testing and evaluation.

Clinical reasoning

Clinical reasoning is a crucial illustration of hypothetico-deductive reasoning, once thought to be the exclusive domain of medical practice, illustrating the difference between ‘non-scientific’ professions like midwifery from medicine (Foucault, 1972, Turner, 1996). Medicine postulates that a doctor needs medical knowledge and clinical reasoning to make good clinical decisions; ensuring that clinical decision making is based on logical thinking and not intuition (Jefford *et al.*, 2011). To this end, Lawson (2000) highlights that both reasoning and sense data must be considered when making good decisions. Higgs *et al.* (2008) see ‘clinical reasoning’ as a context-dependent approach to thinking and decision making in professional practice, that guides actions and includes knowledge, cognition and metacognition. However, Mong-Chue (2000) claims that in midwifery, knowledge alone is not sufficient for making decisions and it requires a balance between knowledge, the pregnant woman’s wishes and the midwife’s clinical experiences.

Thompson and Dowding (2002b) suggest that the medical clinical-reasoning stages form part of the nursing and midwifery decision making processes. For example, the broad scientific method of hypothetico-deductive reasoning is contained within the following midwifery decision-making frameworks identified in the literature.

- The International Confederation of Midwives’ (ICM, 2002) framework for decision making in midwifery care.
- The framework of midwifery clinical reasoning during the second stage of labour by Jefford and Fahy (2015).
- The midwifery management process (NMCM, 2002, MOH, 2009) used in Malawi.

Table 3.2 outlines the medical reasoning framework and the clinical reasoning steps involved in these midwifery frameworks.

Table 3.2: Comparing and contrasting models of clinical reasoning in medicine and midwifery

Medical clinical reasoning (Estein <i>et al.</i>, 1978)	Midwifery framework for clinical decision making (ICM, 2002)	Clinical reasoning in second stage of labour (Jefford and Fahy, 2015)	The midwifery management process (NMCM 2002, MOH, 2009a)
Cue acquisition.	Collect information from the woman, from the woman's and the infant's records, and from any laboratory tests.	Cue acquisition.	Assessment (obtaining subjective and objective data).
Hypothesis generation.	Identify actual or potential problems based on the correct interpretation of the information gathered.	Cue clustering.	Formulation of a midwifery diagnosis.
Cue interpretation.	Develop a comprehensive plan of care with the woman and her family based on the woman's or infant's needs.	Cue interpretation.	Planning care
Hypothesis evaluation.	Carry out and continually update the plan of care within an appropriate time frame.	Generating multiple hypotheses.	Implementing care
	Evaluate the effectiveness of care given with the woman and her family, consider alternatives if unsuccessful.	Focused cue acquisition.	Documentation
		Ruling in and ruling out hypotheses.	Evaluating care, considering alternatives if unsuccessful.
		Making a diagnosis.	
		Evaluating treatment options relevant to the diagnosis.	
		Prescribing and implementing treatment plan.	
		Evaluating treatment outcomes.	
		Using intuition to aid decision making.	
		Linking intuition to cues and reasoning.	

All these four decision-making frameworks provide explicit and systematic approaches to decision making. In addition, the steps can be tested, taught and provide a consensual decision to be made that is justified by the data (Standing, 2010, Jefford *et al.*, 2011), however; they all follow a linear process. Thus, neither of the models reveals the difficulty of real-world decision making, and, therefore, may not resonate as models to completely explicate the decision-making method used with women during the first stage of labour.

Gathering of cues is frequently stated in midwifery textbooks and documents underscoring the significance of assessment to ascertain and promote physiological labour progress (NMCM, 2002, Henderson and Macdonald, 2004, Fraser and Cooper, 2009, ICM 2011, Macdonald and Magill-Cuerden, 2012). However, a review of the literature has revealed a dearth of midwifery studies to provide conclusive evidence of midwives' use of hypothetico-deductive reasoning in clinical practice. This section explores the literature that is available on this topic. Included in this part of the review are two studies that illuminate the use of cues in midwifery decision making during pregnancy, labour and birth (Danerek and Dykes, 2001, Cheyne *et al.*, 2006).

The study by Danerek and Dykes (2001) examined the meaning of midwifery problem solving when faced with a difficult situation in the absence of medical help among Swedish midwives. Seven midwives, each with at least 5-years work experience of both antenatal and delivery-ward work, participated in the study. The researchers utilised in-depth interviewing and the data was analysed using thematic analysis. Danerek and Dykes (2001) identified the following factors as necessary for effective decision making: listening, assessing, making fast decisions, possessing knowledge and experience, using intuition, being able to identify a problem and find a solution, engagement, purposefulness, concentration, consideration and control. Initially the midwives gathered cues through listening, observing and assessing the women. They generated one or more hypotheses from the data and they acknowledged drawing from their theoretical knowledge and experiences to interpret the cues. However, the midwives' intuition contributed to their decision-making accuracy as they knew how and when to act based on their interpretation of the cues (Danerek and Dykes, 2001). This led to the midwives having feelings of being in control of the unfolding critical clinical situation, excluding any social and environmental influences. While the findings from this study are informative, they do not adequately reflect the reality of the clinical settings and how decision making digresses from the linear process. Besides, the researchers do not give

concrete examples of the midwives' engagement with hypothetico-deductive reasoning. Therefore, the midwives may have used heuristics based upon pattern matching and past experiences. This may lead them to miss some of the crucial steps in clinical reasoning such as hypothesis formulation and testing. This problem is at the core of this research study where an ethnographic approach will be utilised to analyse the midwives' decision making in authentic labour and delivery settings.

Midwives' decision making about the diagnosis of active labour was the focus of a Scottish study by Cheyne *et al.* (2006). Utilising thirteen midwives, the researchers conducted two focus group discussions that identified similar themes on information cues that could be separated into two categories: those arising from the woman and those from the institution. As identified in Danerek and Dykes' (2005) study, midwives' decision making was found to be mainly based upon a linear collection of cues that were used to generate hypotheses. The midwives first sought cues such as those related directly to the diagnosis of labour through assessing the woman's labour features. When the midwives arrived at a diagnosis, they took secondary cues into account that included the woman and her family's expectations as well as those specifically related to the daily contextual environment of the organisation. The findings revealed that the midwives had to negotiate many organisational factors related to the pressures of increased workload, lack of beds and shortage of staff. Other organisational factors were the clinical guidelines and the need to justify their actions to others. Cheyne *et al.* (2006) suggest a model of decision making which is divided into two different stages: the diagnostic judgement and the subsequent management decision. The study illuminates on factors influencing decision making and reflects the complexity of decision making in midwifery practice. Nevertheless, the use of focus group discussions with midwives to identify midwifery decision making may lead to a constructed approach rather than a reflection of the actual midwifery practice in the clinical context (Mason, 2002). Besides, there is a lack of evidence on how midwives make decisions employing hypothetico-deductive reasoning during the provision of care to women. These arguments highlight the importance of projects like this one, which aims to advance knowledge of midwives' decision making during the first stage of labour, and specifically in the context where midwifery decision making is undertaken.

The hypothetico-deductive approach is a significant approach to consider regarding midwifery decision making during the first stage of labour as it requires the healthcare worker to compare different data generated from various sources. The approach assists practitioners to deal with complex decisions with little cognitive effort due to its precise steps and pragmatic approach to clinical decision making. Also, it helps practitioners make consensual decisions and justify those decisions (Jefford *et al.*, 2010, 2011). However, although hypothetico-deductive reasoning contains explicit reasoning processes, which provide a systematic approach to making midwifery decisions, it follows a linear path and processes might not always be linear. Neither Elstein's (1978) nor Malawi's midwifery management process (NMCM, 2002, MOH, 2009), nor Jefford *et al.*'s (2015) models reflect or describe the difficulty of the real-world research and therefore may not resonate well as paradigms to fully elucidate midwifery decision making during the first stage of labour. There is, therefore, a recognisable gap in the literature as to how midwives in labour wards integrate the ordered set of steps within complex labour ward situations. This demands further exploration. To this end, the hypothetico-deductive approach's limitation in the 'real world' of clinical practice is the basis for considering a different, methodologically superior, approach such as ethnography to guide a study with a focus on examining midwives' decision making. In the following section I critique the intuitive-humanistic perspective of decision making.

3.4.2 The notion of intuition and expertise

In a different approach to the hypothetico-deductive method analysed in the preceding text, the literature presented here illustrates the notion of intuition as a feature in decision making (Benner, 1984, Lamond and Thompson, 2000). The model is primarily linked with nursing and notably attributed to the work of Benner (1984), in her study investigating the decision-making approaches by novices and experts in clinical settings. The intuitive perspective purports that there are limits to the use of rational strategies of decision making because they do not fully explain practical situations in their complexities, and that experience and skill are prerequisites for a skill to be transformed to a higher level (Benner, 1984).

The literature reflects that the main idea notion of intuition is that decision making in nursing is based on almost unconscious level of judgment and that practical wisdom and intuitive thinking obtained through experience play an important role in decision making (Thompson,

1999, Traynor *et al.*, 2010). However, this understanding brings a debate into the realms of midwifery as a profession based on ‘art’ and ‘science’. While Benner *et al.* (1996) argue that intuitive judgement should not be separated from science, Ruth-Sahd (2014) acknowledges that intuition and pattern matching are useful aids to good judgement. Intuition would be a good aid to judgement only when used as a prompt that would lead the decision maker to engage in analytical reasoning and the use of correct cues that may lead to formulation of accurate decisions. In addition, Jefford and Fahy (2015) contend that using intuition, where reasons for action cannot be consensually validated, would undermine the status of midwifery as a profession.

Many authors contend that intuition is an important type of midwifery knowledge and has been given legitimacy as a sound approach to decision making (Orme and Maggs, 1993, Davis-Floyd and Davis, 1996, Mok and Stevens, 2005, Siddiqui, 2005, Walsh, 2010, Jefford and Fahy, 2015). To this end, Davis-Floyd and Davis (1996) and Siddiqui (2005) point out that midwives value scientific knowing but they also include multiple subjective ways of knowing as legitimate knowledge, and believe that more than one knower can be authoritative. The work of Belenky *et al.* (1997), published in their famous book titled *Women’s Ways of Knowing*, has provided an extended theory of knowledge which has identified ways of knowing that are specifically associated with women. The authors have contributed to our understanding of knowledge as a socially constructed phenomenon and one in which women’s voices can play an important role.

While searching the literature it became evident that research into midwives’ decision making encompassed intuition as a legitimate way of thinking. Included in this section are four studies that were identified in the literature where intuition appeared to present an additional dimension in influencing clinical decision making (Page and Mander, 2014, Olsson and Adolfsson, 2011, Jefford and Fahy, 2015, Davis-Floyd and Davis, 1996).

In relation to the phenomena of uncertainty, Page and Mander (2014) investigated Scottish midwives’ perceptions of intrapartum uncertainty when caring for women in low-risk labour. The researchers recruited nineteen midwives with varying clinical work experiences who were practising in a range of maternity settings. Data were generated from in-depth interviews and focus-group discussions. The findings demonstrated the impact of uncertainty on midwifery decision making. The midwives recognised the point at which labour deviated

away from the normal and this constituted ‘intrapartum uncertainty’. Utilising their inner knowledge and feelings, the midwives identified the boundary to normality which was regarded as the border of what they would accept as normal in labour and this shaped their clinical judgement and decision making. The study also identified threshold pressures such as the ethos of the practice setting, the perceived level of support and the midwife’s relationship with the woman that influenced their decision making to tolerate the uncertainty. The researchers acknowledge that the depth of the interviews conducted with the midwives compensated for the small number of participants in the study who were purposefully selected based on their knowledge and expertise in coping with uncertain situations. However, using observations would provide a nuanced understanding of the real world of midwifery practice and the organisational complexity of midwifery work processes and decision making. Therefore, this review provided the rationale for the ethnographic approach proposed for the study in this thesis.

Similar to the study by Page and Mander (2014), a study by Olsson and Adolfsson (2011) also demonstrated that intuitive thinking plays a key role in decision making during midwifery practice, and it appears to present an additional dimension to the process. Utilising interviews with ten Swedish midwives, Olsson and Adolfsson (2011) explored how midwives experience their work of creating a sense of security and providing good midwifery care to expectant parents. The midwives’ ages ranged from 37 to 63 years and they had varied work experiences from 10 to 37 years. One of the major themes identified from the analysis of the study was the ability of the midwives to trust their inner sensibility and intuition. Olsson and Adolfsson (2011) found that intuitive feelings acted as an important and motivating factor in their work that enabled them to trust themselves and their competence in order to analyse a situation, make a decision and formulate a solution. The midwives’ ability to understand the clinical situation and their use of the intuition was directly related to the level of their experience. This finding is akin to Ruth-Sahd’s (2014) assertions that intuitive judgement is a good aid to judgement, especially when it is used as a prompt that would lead the decision maker to engage in analytical reasoning and the use of correct cues that may lead to the formulation of accurate decisions.

In contrast to the studies by Payer and Mander (2014) and Olsson and Adolfsson (2011), one study identified in the literature identified the use of intuitive judgements and saw it as an authentic feature of the clinical decision-making process (Jefford and Fahy, 2015). Jefford

and Fahy (2015) interviewed twenty-six practice midwives to understand the extent to which midwives engage in clinical-reasoning processes. The findings revealed the impact of intuition on how midwives make decisions during childbirth. The researchers found that some midwives demonstrated analytical clinical-reasoning abilities while some midwives used non-analytical decision making without adequately checking against assessment data. These findings reveal that midwives do not use any single approach when making decisions. However, Jefford and Fahy (2015) argue that using intuition must never replace the clinical reasoning that promotes transparent decision making. These differences leave the processes that midwives use when they make their decisions an area that is yet to be fully explored and explained using a real-world study design such as the ethnographic approach proposed in this study.

The weakness of this research study is that data was derived from midwives' memories of their decision making during the second stage of labour. Their recollections would perhaps be unreliable, as the midwives might not remember everything. This approach therefore threatens the reliability and validity of the data (Mason, 2002). This evidence gap underscores the area of midwifery decision making in practice that is not yet fully understood. This suggests that the design of this study could have been improved by using a robust qualitative interpretative approach such as ethnography, and utilise real time observations to evaluate further midwifery decision-making processes. This approach would have added to the richness of the data collected.

As with the three studies analysed in the preceding text, the next study relates to intuition as another kind of knowledge that is deeply embodied in midwifery (Berg, 2005). Davis-Floyd and Davis (1996) study brought to attention midwives' utilisation of and reliance on intuition as a guide to action and decision making during homebirths. The researchers conducted interviews with twenty-two American midwives who were recommended as having 'good stories' including some midwives who felt compelled to join the session and narrate their own experiences. In addition to the interviews, twenty stories were generated from workshop participants, during which all the midwives present were asked to share any experiences with intuition that they felt were important. The findings showed that the midwives, in the context of their holistic model of birth and health care, listened to and followed their 'inner voice' during birth, rather than operating only according to protocols and standard parameters for 'normal birth'. Intuition, in the view of these midwives', emerged out of their own inner

connectedness to the deepest bodily and spiritual aspects of their being, as well as out of their physical and psychic connections to the mother and the baby (Davis-Floyd and Davis, 1996).

The rigour of this study was weak because of poor dependability since the data obtained consisted of midwives' self-selected events from the past: the passage of time could have affected the accuracy of the accounts because the midwives' descriptions may not have been what actually happened. In addition, the representative nature of the interview sample is questionable as some of the participants voluntarily joined in to form part of the original sample. This approach may introduce biases that may have influenced the findings since the appropriateness of the additional sample may not consist of participants who best represent or have knowledge of the research topic (Morse *et al.*, 2002).

Even though the literature recognises the use of intuition in midwifery practice, questions remain unanswered concerning how midwives use intuition and how they can develop and improve its use to help with the care of women in labour. The role of intuition in caring for women in labour has yet to be clarified sufficiently. It is not known, for example, whether intuition can be deliberately selected as a decision making technique and used to respond efficiently in certain situations during the care of women in labour. Investigating the concept of intuition would require a researcher to understand cognitive processes, viewing the world from the different midwives' viewpoints to let this notion to emerge. This gap calls for an interpretive study approach of being present in the clinical setting, allowing numerous actions and interactions of midwives caring for women during the first stage of labour to be captured in real time.

In the preceding sections I have analysed the evidence which suggests that midwives' clinical decision making can be understood using a range of approaches, but, epistemologically, none of these models resonates with the philosophy of the midwifery profession which places the woman at the centre of the decision making process (Page, 2009). The literature suggests that midwifery is a woman-centred discipline that needs more than cognitive clinical reasoning to reach best practice clinical decisions (Jefford *et al.*, 2010, Jefford, 2012). I critique this in the section 3.4.3.

3.4.3 Optimal decision making in midwifery

Within a midwifery context, the primary aim is to achieve a woman-centred care with midwives acting autonomously and involving women in their decision-making process (Kennedy, 2000, Raynor and Bluff, 2005, ICM, 2011). The relationship between a midwife and a pregnant woman is arguably different from that of other healthcare professionals and patients, where the patient is regarded as an involuntary receiver of care. In midwifery, the understanding is that the majority of pregnant women are not suffering from physical illness in their pregnancy, rather they are enjoying the fulfilment of their womanhood (Mok and Stevens, 2005) and that pregnancy, labour and birth are physiological life events (Page, 2003, ICM, 2011, Hastings-Tolsma and Nolte, 2014). This concept of wellness as opposed to illness is seen as essential to how a woman is supposed to be involved in a partnership with the midwife in the decision-making process. However, a minority of pregnant women may experience some complications and critical illness that may alter this shared decision-making relationship and the woman may become dependent on the health professional's skills and knowledge (Mok and Stevens, 2005, Jefford *et al.*, 2010).

The evidence in this section is valuable and relates to women-centred decision making. However, the review of the literature revealed limited evidence. The ICM (2002) framework for midwifery decision making outlined two steps where a woman should be involved in decision making. This framework does not clearly reflect that decision making is woman centred, nor how the woman would be involved in making decisions about her care. A doctoral study conducted by Jefford (2012) in Australia reflected concepts of involving a woman in decision making during her care, I analyse this in the following section.

In a doctoral thesis to examine the necessary and sufficient conditions for optimal midwifery decision making during second stage labour in Australia, Jefford (2012), using a post-structural feminism approach, collected data from interviews with twenty-six midwives. The midwives were asked to provide both a negative and a positive decision-making story. The study findings showed that good clinical reasoning and good midwifery practice produce optimal midwifery decision making during second stage labour. However, Jefford (2012) found only five cases of optimal midwifery decision making during second stage labour. This was attributed to the fact that the research was based on the second stage of labour when the woman could not be the final decision maker because of her condition and this was not

essential during this time. The researcher developed a model of midwifery decision making where she arguably claims that midwifery needs more than good clinical reasoning to reach optimal decisions. Midwives take a woman-centred approach to care and should make independent decisions if and when the woman is unable to participate fully in decision making.

Jefford's (2012) framework does not reflect the difficulty of the real world and as a result may not be a good model to explain the midwifery decision-making approach during the first stage of labour. In addition, the focus on the midwife–woman partnership model in other contexts is far from being equal (as intended by the model) because of contextual conditions such as midwives' increased case load where midwives have a very short contact time with the women in labour. Midwives may meet women in labour for the first time on their pregnancy journey and women are most often cared for by more than a single midwife. In addition, the woman is also the focus of other healthcare workers such as the medical professionals involved in her maternity care. This area of practice requires further exploration using a real-world study approach to clearly explicate how midwives embrace the philosophy of woman-centred care in clinical practice.

3.4.4 Summary of section 3.4

The concept of decision making has been examined using various approaches for over half a century. In the preceding sections, I have explicated different models that explain the processes that occur when decisions are being reached. The models reviewed so far use hypothetico-deductive reasoning that describes a linear process of decision making. This model does not reveal the uncertainty and difficulty of the clinical practice areas. Epistemologically this model does not resonate with the real world of midwifery care. The intuition model has attempted to explicate decision making in practice. Studies have been undertaken to explore these approaches, however, very few studies were identified to explain fully midwifery decision making during the first stage of labour.

The review also identified that a woman-centred, decision-making approach in midwifery would be effective when a continuity of care model of midwifery is used where the midwife forms a reciprocal relationship with the woman and explores and clarifies the midwife's and woman's needs, wants and decision making over a period of time (Guilliland and Pairman, 1995). Therefore, the review of the literature has revealed that none of the theoretical

approaches analysed can in themselves sufficiently account for the ways in which Malawian midwives make decisions during the first stage of labour. There is no convincing evidence that either the analytical or the intuitive humanistic approaches provide an exclusively substantial explanation for the decision-making processes of midwives during the first stage of labour. Midwifery decision making has not been explored in real practice settings that would illuminate the complexity of midwifery decision making. This represents an important gap in knowledge. Therefore in-depth insight about midwives' decision-making approaches is required where the contextual factors in play are unravelled to fully explore the phenomenon. In the following section I explore the literature concerning midwifery decision making in complex and indeterminate situations.

3.5 Decision Making in Uncertain and Complex Situations

Labour and birth are normal physiological processes, and most outcomes are usually good (Fraser and Cooper, 2009, Jefford and Fahy, 2015). Midwives provide routine care to women to ascertain that labour is progressing along its normal physiological course, and they take actions to support these physiological processes (Hastings-Tolsma and Nolte, 2014). Nonetheless, labour, by its very nature, can be associated with unexpected events. Therefore, in such situations, the decision-making process becomes more complex, midwives make decisions on whether or not the labour will progress, and they account for their decisions before implementing an intervention. Failure to assess, interpret or act on abnormal findings is a significant cause of adverse events in maternity care (Fox et al., 2014). Decision making in these indeterminate circumstances has been examined in the literature connecting hypothetico-deductive reasoning with intuition (Hamm, 1988). In the following section, I explore how linking both approaches illuminates the decision-making process in uncertain circumstances. The literature on the subject of clinical decision making in uncertain conditions is limited. Midwifery researchers have not studied this phenomenon in clinical practice as it takes place, one recent study was identified that explores how both paradigms, analytical and intuitive-humanistic, are used in midwifery clinical practice (Patterson et al., 2015).

3.5.1 The cognitive continuum decision-making process

Analysis and intuition have been traditionally regarded as opposing approaches to clinical decision making. The cognitive continuum combines both approaches in one model of

decision making by acknowledging that clinical decision making will contain both features to varying extents, dependent on where they fall on the continuum (Hamm, 1988). The guiding tenet is that the type of thinking is usually influenced by the task the decision maker is working on, and matching of the task and cognition significantly influences the correctness of the decision made (Hamm, 1988).

The cognitive continuum decision-making approach contrasts with hypothetico-deductive reasoning which illustrates how practitioners should make decisions. The cognitive continuum theory is a model in which the nature of the decision-making activity will induce a relevant thinking cognition that the decision maker will adopt (Hamm, 1988). The model specifies both surface and depth task characteristics that are likely to induce cognitive modes at different points along the continuum (Hamm, 1988, Standing, 2010). The model indicates that for ill-structured tasks, with a large number of cues and limited time, intuition is the most favoured mode of cognition. However, the majority of the tasks are a mixture of ill-structured and well-structured tasks and therefore fall somewhere in the middle of the continuum (Hamm, 1988, Hammond, 1996a, Thompson and Dowding, 2009).

Characteristics of the judgement task which command intuitive judgement include:

- the presence of several pieces of information (cues)
- presentation of information in a simultaneous and not sequential manner
- the absence of a decision rule
- the lack of adequate time to make a judgement (Hammond, 1978, Hamm, 1988).

On the other hand, task characteristics which command analytical decision-making processes are:

- fewer pieces of information presented sequentially
- high ecological validity of cues
- agreed decision guidelines which allow cues to be organised in a consistent manner
- increased time available for judgement (Hammond, 1978, Hamm, 1988).

The theory suggests that rational and non-rational modes of cognition are not mutually exclusive. Furthermore, clinicians can use either type of thinking during problem solving depending on the characteristics of the judgement situation at hand (Thompson, 1999). The theory can be helpful to nursing and midwifery students, and to clinicians, to help recognise

the kinds of cognition involved, and the relevant task that elicits specific modes of cognition. The mode of cognition can then be adjusted to make sure it corresponds to the task, thereby increasing its accuracy. The healthcare practitioners can change the task characteristics for a given situation to facilitate the form of cognition that is most likely to provide most accurate answers. Hamm (1988) suggests that there is an appropriate cognitive mode for every judgement situation. This means the wrong choice of cognitive mode leads to inaccuracy in decision making and that clinicians could use the cognitive continuum to improve their choice. While it may be difficult to consciously change modes of thinking, clinicians can alter the features of the judgement task thereby inducing more analytic cognitive modes. Hamm (1988) suggested that this could be done by increasing the time, reducing the number of cues used, removing redundant cues and applying a decision rule which structures the judgement task.

One recent study conducted in New Zealand by Patterson *et al.* (2015) used a normative approach to examine midwives' decision-making processes when transferring women with slow labour progress from rural areas to specialist care. Patterson *et al.* (2015) utilised individual and small group interviews with a purposive sample of fifteen midwives who provided lead maternity care to women in rural areas. Findings of the study revealed that midwives engaged in a more objective and probabilistic process by analysing patterns and cues as a form of confirmatory or contradictory evidence, rather than relying on heuristic strategies when they experienced discomfort or poor fit in a situation which required them to transfer a woman with slow labour. The aim was to unpick components within the decision-making process (Cioffi, 1997, 2012). The midwives seemed to be knowledgeable of the error associated with heuristics, signifying that heuristics are not enough on their own for decision making (Patterson *et al.*, 2015).

However, the design for the study by Patterson *et al.* (2015) was based on interviews with midwives who were required to recall, after the event, their decision-making processes as they responded to their concerns about labour progress. Midwives might find it difficult to accurately retrieve previous events as memory traces can be poor forms of the original percept (Koriat, 1993), leaving the processes that midwives use when they make their decisions an area that is yet to be fully explored and explained. This gap indicates the need for a well-designed study with the researcher being present in the clinical area, capturing

numerous actions and collaborations of midwives reacting to the women's labour progress in real time.

Although the cognitive continuum decision-making process resonates with clinical practice by combining both approaches (analysis and intuition), the approach is still incomplete in the context of midwifery decision making. The reason is that decisions about assessing the situation, their capabilities and the type of cognition to be used are left to the clinician (Hamm, 1988). The theory does not explain the relationship between cognition and the task regarding internal psychological processes and how the task features control these. The theory provides a general framework and not specific instructions. It does not tell clinicians exactly how to think intuitively or analytically (Hamm, 1988). By focusing on how health professionals actually make decisions, the model does not give instructions on how to make sure that practitioners can navigate appropriately between intuition and analysis modes of thinking to accomplish precise clinical decisions.

Besides, although the model reveals the complexity of clinical decision making, it does not recognise the importance of the setting where decision making is occurring, lacking a reflection of the contextual nature of decision making. It allows for the fluctuation of cognition in ambiguous or definite clinical circumstances, but the impact of various professionals, different cultures, varying levels of clinical experiences and the influence of external factors and activities occurring in the clinical setting do not seem to be considered. It is not clear how midwives engage with this approach during uncertain clinical situations in actual clinical practice. This area of decision making requires further exploration to be completely understood, mainly that of midwifery decision-making processes in unclear and challenging situations. In the section 3.5.2 I explore decision making in uncertain contexts that are the premise of NDM decision making.

3.5.2 The Naturalistic decision-making process

The ability to make effective decisions about labour progress is crucial to ensure positive labour outcomes and women's experiences (Raynor and Bluff, 2005). Context has been acknowledged as a factor affecting decision making (Benner *et al.*, 2009, Zsombok and Klein, 2009). The reality in healthcare settings is that of complex, often time-constrained situations (Orasanu and Connolly, 1993). These characteristics are the premise of the NDM;

an approach that provides for studying the complexities of decision making in real contexts (Zsombok and Klein, 2009).

The NDM approach is a descriptive approach that provides a perspective on the complexities related to clinical decision making and concentrates on the influence of context on decision making. One of the fundamental claims of this paradigm is that decision making is so contextual that 'rules of thumb' cannot be practical in complex situations (Zsombok and Klein, 2009). NDM highlights factors that impact the decision maker, namely knowledge and experience, complexity of the task at hand, and environmental factors (Zsombok, 1997, Lipshitz et al., 2001). The interplay between task complexity, personal characteristics and environment, therefore, cannot be dismissed when seeking to understand decision making.

The literature revealed scant evidence on the use of the NDM in midwifery research, although one study was identified on situation awareness in midwifery (Cioffi *et al.*, 2010). Situation awareness is of particular interest as it has been posited that novices do not have the breadth of experience to draw on and facilitate recognition of significant cues (Benner *et al.*, 2009). A qualitative study by Cioffi *et al.* (2010) utilised the NDM approach to study critical cues, related factors, and knowledge and experience used by nineteen experienced Australian midwives when deciding whether to repair the perineum following childbirth trauma. Interviews were conducted with midwives where they were asked to recall a previous case. The findings revealed the cues of bleeding and trauma with their associated specific features. In addition, they identified that woman and midwife-centred factors were considered when deciding whether or not to suture the perineum following trauma. Cioffi's (2010) study also identified that knowledge and experience supported the midwives' decision making. Sources of knowledge and experience such as a comprehensive knowledge of the anatomy of the perineum, previous involvement in workshops, and having observed highly skilled clinicians at work, were used by the midwives to help make decisions. Although researchers attempted to contextualise the study through consideration of women's factors and the midwife's capacity and work conditions, this was not undertaken in the real setting. In addition, using recalled case studies may limit the accuracy of the account and may not be similar to a concurrent account of the actual case. As identified in the studies presented earlier, the deficiencies in this study represent an important gap in knowledge and suggest an opportunity for real-time observations, particularly within the constraints of uncertain environments. The

following part of the review concentrates on the influences of contextual factors on decision making in midwifery practice.

3.5.3 The factors influencing midwives' decision making

The review of literature reflects a dearth of evidence on the factors that influence midwifery decision making. The few studies available reflect the dominant influence of the medical profession in the field of maternity care. Among the limited empirical evidence on the contextual factors that influence midwifery decision making, there are a few studies which are worth considering. I have, therefore, used a meta-synthesis conducted by O'Connell and Downe (2009), a literature review by Jefford *et al.* (2010) and a research study by Crabtree (2004) to provide evidence of the medical hegemony on midwifery practice and how this influences midwifery decision making.

3.5.3.1 Influences of the bureaucratic system on midwifery decision making

Decision making by midwives during the care of women in labour is different to that of the medical professionals. The process by which the medical professionals and midwives make decisions is fundamentally different. Arguably, the medical professionals focus on diagnosis and treatment, and approach this from a scientific perspective (Wagner, 1994, Rooks, 1999, Davis-Floyd, 2001). On the other hand, midwives use many approaches and are experts of normal pregnancy labour and birth, and they draw upon personal and emotional notions that enable them to make holistic decisions (Downe, 2004, Mead, 2004). However, the review revealed that midwives often lack autonomy and control over their practice, working in systems where medical dominance in maternity units heavily influences midwifery care (Freeman *et al.*, 2006, Jefford *et al.*, 2010). The midwifery model of care is guided by the concept of normalcy that is its philosophical backbone and provides the basis for care processes and the justification for favourable outcomes (Davis and Walker, 2010). There is debate about the value of normal labour and birth (Downe and McCourt, 2004) and there is evidence that unnecessary interventions can lead to problems for women and their babies (Tracy *et al.*, 2007).

The constraints that influence midwives' practice and their use of interventions was the focus of a meta-synthesis study by O'Connell and Downe (2009) wherein midwives aimed to

provide 'real midwifery' but they lacked the opportunity for participation in decision making because they were overwhelmed by the pressure to provide equitable care to all women and by their increased workloads. The aim of the meta-synthesis was to examine midwives' views of hospital midwifery, with an emphasis on labour-ward practices, to explore professional discourses around midwifery work in the contemporary childbirth context. The background for the study was a claim that, although midwives assert that they are experts in normal birth, evidence reveals that they usually conform to what Davis-Floyd (2001) terms a 'technocratic' approach to childbirth. O'Connell and Downe (2009) also link this to ideas of a risk society and consumerist requirements for certainty and control which symbolises modern society. O'Connell and Downe (2009) assert that midwifery provides a typical case study for such groups because in most countries midwives inhabit a possibly inconsistent position that is seen by some as minor to medical power, but which has the independence of decision making protected in their legislation. Additionally, the international midwifery body asserts that the central expertise of midwifery is to support women in realising normal childbirth (ICM, 2011).

O'Connell and Downe (2009) included fourteen studies in their meta-synthesis, eight studies were undertaken in the UK, three in New Zealand, two in Ireland and one in Norway, but despite the variations in contexts, the difficulties that affected the midwives' practice in hospitals were similar. Three overarching themes were identified: power and control, compliance with cultural norms and attempts to normalise birth in a hospital environment. Power and control refer to how the medical model of care, obstetric control, and the hegemony of the medicalised system were referred to in all of the included studies. The midwives in the studies tended to blame doctors, other midwives and even the women themselves for what is described in all of the studies as the medical model of care. Compliance with cultural norms refers to midwives' adaption to the practices of the unit, even when this differed from their preferred approach to care. They were constantly required to meet the needs of the hospital rather than the needs of the individual women in order to manage heavy workloads. Regarding the theme; attempts to normalise birth in a hospital environment, the midwives appeared to remain committed to promoting normal birth despite the perception of an oppressive medicalised environment.

Interestingly, the synthesis shows that even if midwives protested about the medicalised care, it appeared as if some midwives rather than doctors were the main inspiration for this

practice. O'Connell and Downe (2009) provide a fascinating argument of the findings, and show that the midwifery approach of working in the hospital environment appeared to be facilitated by 'street-level bureaucracy', a term coined by Lipsky (1980) in which the real determinants of midwifery practice are senior midwives and not obstetricians. According to Lipsky (1980), street-level bureaucrats are those who offer a public service which includes caring and responsibility. They are regarded as using their authority in a defensive way to accomplish an otherwise increased workload. Midwifery aims to provide individualised care, however the working environments and institutional requirements make this difficult to realise. Consequently, care is delivered through an organisation that upholds equity over individualised care. Therefore, this illustrates the different sorts of decisions that the medical profession prioritise and make, essentially those concerned with speedy diagnosis and implementation of interventions to accelerate labour. This eventually impacted on midwives' decision making. O'Connell and Downe (2009) highlight that midwives might have certain traditions about themselves, about where they wish to provide women-centred care and how to support normal birth, but they practice as if they are constrained by power dynamics in maternity-care settings which work counter to achieving this. This raises questions of the midwives' provision of autonomous individualised care and decision making in contexts that are hierarchical and medically controlled.

O'Connell and Downe (2009) utilised studies that focussed on midwifery practice in other settings such as community and independent midwives other than those practicing in labour-ward settings. This placed limitations on the reviewers by addressing existing differences related to the focus of the meta-synthesis that was labour-ward practice. The views of other midwives not practicing in a labour ward may not be representative of hospital-based labour-ward midwives, and they may have experiences that are different to those of midwives familiar with the system. I would argue that this research does not adequately inform the discipline of the complexity of midwifery practice during labour and birth and warrants further exploration in real-world labour-ward contexts.

Although using a qualitative meta-synthesis is currently considered as a 'goldmine' for evidence-based practice (Savin-Baden and Majora, 2010), however, there are problems of representation in primary qualitative research, and this may also remain a huge problem in a qualitative meta-synthesis project because the researchers in a meta-synthesis interpret at least three times the experiences of the target experiences under investigation (Sandelowski,

2006). This is because Qualitative metasyntheses are composed of researchers' transformations of primary research study findings, which are themselves composed of researchers' transformations of the data they collected from research participants. Therefore, this distance from the data and from the lived experience places the findings from a meta-synthesis as having potential representational problems. This calls for a study with a robust methodological approach such as ethnography to unpick how the medical profession influences the decision making process of labour-ward midwives.

What is compelling is that the findings from this meta-synthesis do relate to the review of the literature by Jefford *et al.* (2010) who conducted a systematic review focusing on factors that influence midwifery decision-making processes during birth. The authors observed that clinical decision making is under researched in midwifery because they only found four small studies that met the inclusion criteria in the literature review. Three studies involved qualified midwives and one involved student midwives. Two studies were undertaken in England, one in Scotland and one in Sweden. The review included studies published from 1998 to 2009. The studies related to the midwives' decision making during the birth process and included all studies that generalised to the context of birth in the review, regardless of research design. Studies that examined decision making during the antenatal and postnatal period and those that focused on studies concentrating on the development of students' cognitive skills using clinical simulations were excluded as they did not reflect on the complex context of actual practice. The studies incorporated in the review were all quality appraised.

Two major findings synthesised from the Jefford *et al.* (2010) review are that first, midwifery decision making is socially negotiated involving hierarchies of surveillance and control despite a midwife being widely acknowledged as being an autonomous practitioner. This surveillance tended to regulate the midwives' ability to function autonomously. Three of the reviewed studies indicated that midwives' confidence in their own clinical judgements and decision making was limited and that they sought approval from within a hierarchical system where the ultimate decision maker was the doctor or the health service manager. It is clear that it becomes a complex process when the decisions also have to be negotiated with the woman. Jefford *et al.* (2010) however do not discuss the earlier point in the literature review, instead, the authors point to the lack of studies on the influence of the negotiation with women in midwives' decision making during birth. The review by Jefford *et al.* (2010) is important because they also found that the decisions and resultant actions were governed by policies and practices as well as professional organisations. Second, clinical decision making

encompasses clinical reasoning as being essential to decision making, but it is not sufficient for midwives to actually implement their desired decisions. However, the findings of this review reveal a lack of documentation about how the midwives' clinical decision making was affected by the clinical environment. These deficiencies support the need for organised research to demonstrate the impact of elements of the decision-making context on midwives and how this is practically enacted in the real-world decision-making environment.

Similarly, as identified in O'Connell and Downe's (2009) meta-synthesis and Jefford *et al.*'s (2010) synthesis of the literature, a study conducted in New Zealand by Crabtree (2004) focussed on examining the meaning of normal birth in a lead maternity-care midwifery practice and on understanding the influences surrounding midwives' construction of normal birth. Crabtree (2004) also found that midwifery was practised in a contested environment that was firmly entrenched in a medically dominant model of care. The study was based on a descriptive qualitative approach with feminist underpinnings utilising semi-structured interviews. However, Crabtree's (2004) findings have brought further topics to the debate. Crabtree (2004) found that the midwives in her study were aware of the ways in which the medical ideology influenced their practice and decision making, and they sought ways to challenge, resist and frame their practice with a strong commitment to supporting women. The midwives strove to support women's choices, protected the women by being a buffer, 'shutting the door', keeping women away from medicalisation, etc. As identified in Crabtree's (2004) study, midwives in Zhang *et al.*'s (2014) study were also involved in facilitating their own professional discourse by challenging the medical model in order to advocate for normal birth.

In a recent study identifying Chinese midwives' strategies to work on their professional identity in a hospital setting, Zhang *et al.* (2014) found that in everyday practice, hospital midwives in China were working on their professional identity in relation to two definitions of the midwife. One being the external definition of 'obstetric nurse' which is bound up in the idea of risk management under the medical model of their work organisations, and the other being the internal definition of 'professional midwife' which is associated with the philosophy of normal birth advocacy in the professional discourse. The findings also revealed the use of compromising and engaging strategies among Chinese midwives to work on their professional identity in a hospital setting. A 'hybrid' identity was identified where the midwives were working on their professional identity by working both under the medical

model and under their professional role associated with the midwifery profession. Midwives perceived that their opinions were disregarded by the medical professionals, they felt a loss of control in their decision-making role during the first stage of labour and that their autonomy accounted for nothing. Instead, the midwives felt obliged to proceed with implementing decisions they disagreed with.

Both studies, Crabtree (2004) and Zhang *et al.* (2014) utilised individual interviews which may limit the strength of the evidence collected. Therefore, triangulating methods by using focus-group discussions and observations could enrich the data and promote the validity of the findings (Silverman, 2011). The studies also report that the midwives resisted medical practice to support women and promote healthy and fulfilling labour and birth experiences. However, the studies do not illuminate how the midwives pragmatically interact with and manipulate contextual factors to achieve optimal decision outcomes and this warrants consideration under real-life conditions, which is the premise of the study in this thesis. The depth of these findings would have been enriched if the study had utilised some focus-group discussions of the various strategies midwives adopted to engage in midwifery discourse.

3.5.3.2 Midwives role, medical professionals and the context of midwifery practice

The evidence considered here focuses on the midwives' role in childbirth practice. A number of studies found evidence of midwives feeling inhibited to function as a midwife because of the domination of medical practice (Walker, 1976, Kitzinger *et al.*, 1990, O'Donnell *et al.*, 2014). While these studies focused on the role of the midwife and do not directly reflect or address the factors influencing the midwives' decision making during labour and birth, they undoubtedly have an impact on the practice of midwifery and consequently decision making. The studies still have some relevance by reflecting the influence of the medical professionals on the midwives' role which implicates the midwives' status and their ability to make decisions about the care of women during normal labour and birth. The studies have given a clearer understanding of the evidence that shows how the role of the midwife can be undermined by the medical professionals and the subsequent effect on the midwives' decision making during child birth.

Walker's (1976) ethnographic study in a maternity unit in England set out to examine the role of the midwife. Using observations and interviews with forty-nine midwives and eleven medical professionals, Walker (1976) created a hypothetical situation to probe more about their relationship. The situation involved a medical practitioner walking in uninvited to an uncomplicated birth being attended by a midwife. Walker (1976) asked each of the participants what the midwife should do in such a situation. The findings of the study exposed the delicateness of the relationship between the midwife and the medical professional. The findings also revealed the assumption of responsibility by the medical professionals for the care of women being attended by midwives and without any complications. These findings relate to the differing orientations of the midwifery and medical professions to the midwifery role. Walker (1976) recounts how the medical professionals regard every labour as potential pathology until it is safely completed. Based on such an orientation, constant medical supervision of both normal and abnormal labour clearly becomes fundamentally important. The midwives in Walker's (1976) study considered care and decision making for women with uncomplicated labour as their responsibility. Their responsibility continued until a woman in labour developed a medical problem when they would seek medical assistance. Walker (1976) illustrated that the distinction between the role of the midwife and that of the medical colleagues has become blurred in the minds of some of the personnel involved in the care of women. This lack of clarity carries with it the potential for conflict because of the differing orientations of the two occupational groups (Walker, 1976).

Walker (1976) also identified areas of care about which both groups agreed on whose responsibility prevailed, such as an obstetrician being responsible for a forceps delivery. There were also areas on which they disagreed about where the responsibility lay, such as the doctor taking charge of the delivery. This study used a qualitative interpretive approach employing observations and in-depth interviews with midwives and medical professionals, an approach that provided robust results. Although this study was undertaken 40 years ago, the findings are still relevant in contemporary maternity practice as illuminated in the preceding review of literature.

Similar threads relating to how medical professionals prohibit midwifery practice and subsequent decision making were identified from research conducted some years later. In a report of a research project to evaluate a two-tier system of medical staffing (that is without

registrars) in a labour ward, Kitzinger *et al.* (1990) highlight the negotiation of roles between midwifery and medical staff in a labour-ward setting in England. Participants in the study included midwives, senior house officers and obstetricians. The researchers found that a midwife's decision-making role was enhanced in the absence of the registrar. The findings indicated that there would be more chance for the midwife to discuss issues with the consultant who is expected to be present in the labour ward most of the time. Kitzinger *et al.* (1990) uphold that this organisation of medical staffing increases the likelihood of the consultant having a more realistic understanding of the midwife's role. This contrasts with the understanding of consultants in the more usual three-tier staffing system in which midwives are regarded as inferior. However, in spite of what may appear to be a fuller appreciation of the midwife's role, the consultant appeared to be negatively powerful and influential both in policy making and in clinical settings. The findings from this study have some relevance to current maternity care despite the study being small and undertaken some 25 years ago. This may be seen in its clear demonstration of the attempt by medical staff to assume control over midwifery practice with its subsequent implications for the midwifery role and status. The findings also reveal some important manipulative skills which the midwife must practice in order to persuade junior medical staff to take appropriate action. These skills assist in the smooth running of the labour ward (Kitzinger *et al.*, 1990). Murphy-Lawless's (1991) study identified that some midwives contested the obstetric approach to labour care discretely, but this could be hard within the limitations of hospital practice. These findings agree with other studies in midwifery literature, for example the study by Kirkham (1999, p.736) who dubbed this approach as "doing good by stealth". However, Kirkham (1999) argued that the implications of midwives' activities and efforts which are hidden would only accomplish minimal professional success.

None of the studies reviewed so far were conducted in Malawi or similar contexts, and this has major implications for our understanding of this area. Although the studies by Walker (1976) and Kitzinger *et al.* (1990) were undertaken some years ago, it would appear similar issues still apply today and have some relevance to midwifery decision making in Malawi. These findings have implications for the status and role of the midwife and the midwife's ability to make decisions about the care of women during normal labour.

However, a recent study in Malawi by O'Donnell *et al.* (2014) has found some evidence of midwives feeling inhibited in making decisions, and it underscored the notion of medical

dominance over maternity care and its influence on midwifery decision making during the care of women in labour. In a mixed-methods qualitative study on the care of women in labour by Malawian midwives in district hospitals, O'Donnell *et al.* (2014) set out to explore what quality of care means from the perspective of both the women and the maternity healthcare provider in Malawi. Findings revealed that both women and other healthcare providers were unable to influence decisions made by more senior staff or management. Lack of autonomy was linked with other negative themes such as staff demotivation, frustration and lack of empowerment to make change, resulting in the provision of poor quality care.

Midwives working in labour wards specifically perceived the dominance of health professionals over care of labouring women and the midwives “lack of authority as demoralising” (O'Donnell *et al.*, 2014, p.4). Again the midwives commented that although they had adequate knowledge gained from their midwifery training for managing normal births, it is medical professionals who had the ultimate decision-making power during the care of women in labour. Therefore, midwives felt that their skills and knowledge were less valued by the medical professionals and felt undermined by this. At times, their lack of decision-making power also contributed to poor care decisions for women in labour, resulting in poor outcomes for the women when the medical staff disagreed with the midwives' management plans (O'Donnell *et al.*, 2014). This study was based on in-depth interviews with ten healthcare providers and two focus group discussions with thirty-three postnatal mothers from four major hospitals in one district in Malawi. Employing interviews and focus group discussions provided insight into the midwives' and women's views respectively; however, triangulating the methods for both groups could have strengthened the study further. In addition, a specific study conducted in a midwifery context in Malawi could extend the dimension of knowledge by looking at the impact of medical professionals on the process of midwifery decision making, this topic being the focus of this thesis.

3.5.3.3 The influences of shortage of midwifery staffing and organisational structure

There is evidence to suggest that quality of maternity care can be affected by issues of both staffing and organisational structure. Four studies presented in this section focus on the impact of midwifery staff shortages and issues of the organisational structure (Dykes, 2009, Mselle *et al.*, 2013, Kirkup, 2015, Ten Ham *et al.*, 2015). In a published report from the

Secretary of State for Health in England, Kirkup (2015) reported the findings from an investigation into the University Hospitals of Morecambe Bay NHS Foundation Trust which examined concerns raised following the occurrence of a number of serious incidents in maternity services provided by the Trust, including the deaths of mothers and babies. Expert advisors in midwifery, obstetrics, paediatrics, nursing, management, governance and ethics carried out a thorough and independent investigation of these events covering the period from 1 January 2004 to 30 June 2013. Data collection comprised a review of 15,280 documents from 22 organisations and 118 interviews. Several findings were identified, some of which were stark highlighting evidence of organisational structure affecting the quality of care that was delivered to women. The origin of the problems lay in the dysfunctional nature of the maternity service at the hospital. Specific factors which led to the unnecessary deaths of mothers and babies included substandard clinical competence with deficient skills and knowledge; poor working relationships between different staff groups such as obstetricians, paediatricians and midwives; a growing move among midwives to pursue normal childbirth ‘at any cost’; failures of risk assessment and care planning that resulted in inappropriate and unsafe care; and a response to adverse incidents that was grossly deficient with repeated failure to investigate properly and learn lessons (Kirkup, 2015). The investigators also identified an inadequate workforce and it was a challenge to achieve safe staffing levels; consequently low staffing numbers made it difficult to cope with simultaneous tasks. Such problems may be associated with national government policies; however, this led to poor morale among maternity unit staff and the resulting provision of suboptimal care. The maternity-care provision depended on locum doctors, bank and agency midwives and neonatal nurses. There were problems identified with recruitment of good-quality medical staff and retention of senior clinicians.

In as much as a midwife’s knowledge, skill and experience are vital for optimal decision making, functional organisational structure is equally important. Pregnancy and childbirth should be a positive and happy experience that ends in a healthy mother and baby. However, on those occasions when things go wrong, midwives must be able to intervene in order to provide safe, effective and responsive care using the necessary available resources (NMC, 2015). Therefore, decision making and context are reciprocal, dynamic and complex aspects of maternity care.

Similar threads relating to how organisational structure impacts on the process of maternity-care provision were found in an African study which explored challenges in the provision of quality obstetric care in Tanzania (Mselle *et al.*, 2013). Women and healthcare providers experienced poor quality caring and working environments in the health facilities. Women in labour lacked support and experienced neglect as well as physical and verbal abuse. Nurse-midwives did not have a conducive environment for the provision of maternity care, they lacked supportive supervision and supplies, and this reduced their motivation to make the right decisions and provide effective midwifery care.

The study by Mselle *et al.* (2013) was based on semi-structured interviews with 16 women affected by obstetric fistula, five individual face-to-face interviews with nurse-midwives on duty during the data collection period and focus group discussions with husbands of the women affected by fistula and community members. A total of four midwives interviewed were from a district hospital and one from a rural dispensary. The study applied specific data-collection methods to specific groups, for example data from the midwives was collected through interviews only and focus-group discussions were conducted with community members. The study may have limitations as different methods were applied to both groups. Combining methods for both groups would help in gaining deeper insight into the participant's views.

Dykes (2009) conducted a critical ethnography of postnatal care in north England using focus-group discussions and follow-up interviews with midwives and postnatal women. The midwives strongly expressed their dissatisfaction with their workplace culture where they experienced pressures of time, staff shortages and rapid client turnover. The midwives commented on the extreme business of the wards and the emphasis was on “efficient processing of and rationing of care rather than engaging in meaningful relationships” (Dykes, 2009, p.92). However, this had a profound impact upon the ability of the midwives to care and make decisions. This approach is akin to Lipsky's (1980) ‘street level bureaucracies’ where the requirements within many public-sector organisations made it impossible within the allocated time for workers to achieve their ideal conceptions of the work.

Although the study by Dykes (2009) provides insights into the impact of staff shortages on midwifery practice, this study involved hospital midwives and women in postpartum care and not midwives from a labour ward. Midwifery care could be understood in a different way

depending on the midwife's current work environment. Thus, viewpoints from a midwife working on a labour ward may be dissimilar to those of a midwife working on a postnatal ward. This gap calls for an ethnographic study approach with the researcher present in the labour ward, capturing in real time the multiple activities and interactions of midwives caring for women in labour and how they are impacted on.

A recent integrative review of the literature on the factors that contribute to the clinical decision making of nurses and midwives conducted by ten Ham *et al.* (2015) has identified findings similar to the majority of published material reviewed in the preceding section. The reviewers utilised multiple relevant sources of literature including electronic databases, catalogues and grey literature, selecting both research and non-research documents from the years 2000 to 2014 to review. Ten Ham *et al.* (2015) identified a total of thirty-eight articles that were assessed to have medium or good methodological rigour to include in the final sample which they appraised in detail. The factors that were identified from the review included nurses' and midwives' personal characteristics such as their clinical experience, and organisational and environmental factors such as severe workloads that result in insufficient time to make effective care decisions. Although ten Ham *et al.* (2015) identified a variety of factors that influence nurses' and midwives' decision making, only three out of the thirty-eight articles included decision making in the context of midwifery (Cheyne *et al.*, 2012, Oduro-Mensah *et al.*, 2013, Wu *et al.*, 2013). The reviewers contend that the findings of this study can be used by both nurses and midwives because, in some countries such as South Africa, midwifery is part of the Bachelor in Nursing Science degree. Arguably, the findings of this review fall short of elucidating the contextual factors that specifically impact on midwifery decision making, particularly in labour and delivery settings. These arguments illuminate the significance of a research study such as the one undertaken for this thesis, which aims to advance knowledge of the factors that influence midwifery decision making during labour. This thesis aims to identify midwifery context-specific factors that impact on clinical decision making using an ethnographic in authentic labour and delivery settings.

3.5.4 Summary of section 3.5

Decision making in ambiguous circumstances has been studied, and scholars have revealed that various contextual factors influence midwifery-care provision and decision making. There is still a gap in the literature review that clarifies the contextual factors and how

midwives working on labour wards manage their decision making when working in complex and uncertain situations. Owing to the scarcity of research in this field there is insufficient understanding of the factors and complexity of the contextual factors that influence the decision making process. This raises concerns when contextual factors are coupled with the evidence of suboptimal midwifery care. An epistemological stance that explores this phenomenon from the standpoint of the midwives is required. This thesis aims at exploring the midwifery decision making during care of women in labour. It is set to observe midwifery practices, their opinions, their thought processes and the influences on their clinical reasoning during care of women in labour. The proposed research study may allow us to gain a better understanding of the phenomenon and what factors influence the care of women during the first stage of labour.

In the preceding sections, I have analysed the literature on the approaches used in midwifery decision making. I identified a small number of studies in the midwifery literature that have explicitly engaged in this subject. In the next section I turn the discussion to a critique of the existing literature on perspectives of labour care in midwifery.

3.6 Contextualisation of the Research: Evidence for Midwifery Labour Care Decisions in First Stage of Labour

Following on from analysing the decision-making theories underpinning this study, I now analyse the existing literature on perspectives of labour care which help clarify ideas important for understanding assessment and management decisions during the care of labouring women in hospital settings. In section 3.6.1 I discuss the partograph and provide a critical analysis of the empirical evidence related to its use as a management tool during the care of women in labour. A critique then follows in section 3.6.2 on the research that has been influential in the field of labour care starting with Friedman's (1955, 1956a) work on the partograph. His texts have had a significant impact on the perception of labour and its time limits, and subsequently on the provision of care for women in labour. In section 3.6.3 I analyse the evidence related to midwifery assessment of labour in the contemporary practice. A critique of the research on midwifery-care decisions during labour is provided in section 3.6.4, followed by a summary of Chapter 3 in section 3.7.

3.6.1 The partograph: a tool to monitor progress of labour

The partograph is a widely utilised tool to inform judgements and decisions during the care of women in labour. It works as a tool to warn of arising complications during the progression of labour as it assist with intervention decisions and on-going appraisal of the effects of implemented interventions (WHO, 1994b, WHO, 2006, Fawole *et al.*, 2008).

The observations carried out on the woman during labour that are routinely recorded on the partograph show the progress of labour. These observations include 4-hourly monitoring of cervical dilatation, hourly checking of the descent of the foetal head and hourly uterine contractions. The woman's membranes are checked hourly to see if they have ruptured, and the colour of liquor and moulding of the foetal skull noted at the same time. Also her blood pressure and pulse rate are recorded hourly, and temperature recorded every 4 hours. In addition the foetal heart rate is measured and recorded at half-hourly intervals (MOH, 2009a). The word partogram and partograph are used interchangeably in the literature. In the context of this thesis, I will use the term 'partograph'.

The partograph has its origins in Africa, a continent where access to skilled care in childbirth has been limited (Philpot and Castle, 1972a, Mathai, 2009). The focus of using the partograph in developing countries is on the prevention of maternal and foetal morbidity and mortality related to prolonged labour, whereas the focus in developed countries is on early identification and management of dystocia in order to offer appropriate interventions (Windrim *et al.*, 2007, Philpott & Castle, 1972). Prolonged and/or obstructed labour is common in developing countries, as are their consequences of high maternal mortality and morbidity, including obstetric fistulae. Obstructed labour is also associated with foetal hypoxia, birth trauma, infection and postpartum haemorrhage (WHO, 2006, 2010).

Analysis of the literature surrounding the use of the partograph revealed varied results as to its perceived benefits and value in clinical practices, which are still under debate (Lavender and Malcomson, 1999, Lavender *et al.*, 2011). There is little consensus about the use of the partograph, there are variation in types of partographs used and about their relevance in high-income countries (Lavender and Malcomson, 1999, Lavender *et al.*, 2011).

Both in the UK and in Africa, there is evidence to suggest that midwives find the partograph has practical benefits during the care of women in labour. Lavender and Malcolmsen (1999)

researched the views of seventy-one midwives on partograph use in labour management in England. The study uncovered some interesting points: 83 percent of the midwives surveyed expressed the view that the partograph was a necessary tool and felt that action lines help to "manage labour" and "diagnose prolonged labour at a glance" (Lavender and Malcolmson, 1999, p.24). The partograph was seen to be effective for practical reasons such as teaching, ease of handover and preventing duplication of notes. The midwives seemed to be more comfortable with the only records they had ever used for managing women in labour. However, others felt that it takes away autonomy and individual clinical decision making (Lavender and Malcolmson, 1999). The authors also observed that its incorrect use may become a rigid dictator leading practitioners to insist on action other than assessment. The findings from this study are valuable but they were based on a small descriptive survey from one particular unit which gives a baseline information but does not allow for any further depth of understanding.

Similarly, Lavender *et al.* (2007) conducted a study to seek the views of midwives working in settings with limited human and financial resources. Lavender *et al.* (2007) conducted the survey among fifty-seven African midwives who attended a regional conference in the UK in 2003. The survey revealed that African midwives' views about the partograph are largely consistent with those of UK midwives. Most midwives described the partograph as a practical management tool that helps ensure standardised quality care for women in labour. An important difference identified between this and the UK study is the emphasis on the partograph being a "life-saving tool, a watch dog which attracts attention" (Lavender, 2007, p.191). Midwives also expressed concern regarding women's emotional needs and they suggested adapting the chart to record women's appearance, anxiety level, opinion and cultural needs. This is another small survey that gives baseline information and, although it has some relevance, it does not give in-depth information regarding the midwives' views. In addition, the finding identified as a 'life saving tool' would require observational data to justify how the tool works to save the women's lives.

In contrast, findings in a recent qualitative study in Kenya by Lavender *et al.* (2011) suggested that the partograph had little status among midwives and obstetricians, which created a barrier to its use. The purpose of the study was to explore students' perceptions and experiences of partograph use in labour wards. A total of fifty-one student nurses allocated to a maternity unit for clinical experience participated in five focus-group discussions. A recent

Cochrane database systematic review was unable to make any clear recommendations concerning the use of the partograph for practical benefits (Lavender *et al.*, 2011). Given its widespread use, the researchers recommended further evidence is needed in order to make concrete decisions regarding the use of the partograph and that for now, its use can be determined locally by individual countries.

The preceding discussion shows that the benefits or problems of using a partograph are still under debate (Lavender and Malcolmson, 1999). There is little agreement about its use, and there is a disparity in the types of partograph used in many units in the UK and around the world (Lavender *et al.*, 2008). These debates in the literature justify the significance of a research study like this one to advance the knowledge of midwives' use of the partograph as a decision-making tool during the care of women in labour. In section 3.6.2 I offer a critical appraisal of the origin of the labour-progress paradigm and the debates surrounding the use of the partograph as a labour-assessment tool.

3.6.2 Development of the partograph: the origin of the labour progress paradigm

Glick and Trussell (1970) were the first obstetricians who adapted Friedman's (1954, 1955) sigmoid curve to develop the first partograph. Glick and Trussell (1970) designed the partograph for the sole purpose of training medical students and helping them to visually recognise abnormal labour. The design of the partograph was later refined by Philpot and Castle (1972a, 1972b).

The first publication by Friedman (1954) was an initial report of a larger study (Friedman, 1955) which was published in full the following year. The publication consisted of the results of a study of 100 women with the aim of finding a simple, reproducible, and relatively objective method of recording and comparing progressive changes in the course of labour (Friedman, 1954). Some women reported early enough to permit sufficient time to study them – labour in five women was induced, ten labours were augmented with synthetic oxytocin and twenty women received some type of caudal anaesthetic for pain relief. The report illustrated that cervical dilatation during labour could be plotted graphically and depicted as a sigmoid curve (Friedman, 1954) which Friedman divided into stages based on dilatation over time (Figure 3.2).

Subsequently, Friedman (1955) provided further evidence for his original idea as the findings of his later study were so similar to the statistical guidelines he had reported in his earlier study. The follow-up publication (Friedman, 1955) included the findings of a study of the labour patterns of 500 white American nulliparous women. Friedman (1955) did not discover anything new but he defined labour quantitatively and thus standardised its course (Pitkin, 2003). Friedman's (1955) explanation divided the first stage of labour into two parts – the latent phase and the active phase. Friedman (1955) analysed the different sections of the labour curve mathematically using graphic and statistical analyses of the normal limits of each phase. Based on these calculations, he described the slope of the curve for normal dilatation and suggested average durations for the phases of labour. The calculated mean durations were 8.6 and 4.9 hours for the latent and active phases respectively. The maximum durations of these phases were 20.6 and 11.7 hours (Friedman, 1955). However, the literature suggests that accurate demarcation between these stages of labour is unclear. Labour may also be seen as a continuous, smooth process and as a seamless transition from pregnancy to labour and delivery, characterised by particular physiological and psychological behaviours along the continuum (Downe and McCourt, 2008).

Through the findings of Friedman's (1954, 1955) studies, the distinction between normal and abnormal labour progress was established for the next few decades. Friedman's work became very prominent, and the Friedman Curve (Figure 3.2), or some variation thereof, has been incorporated into clinical settings for the management of women in labour and adapted into teaching material in midwifery and medical training institutions up until now.

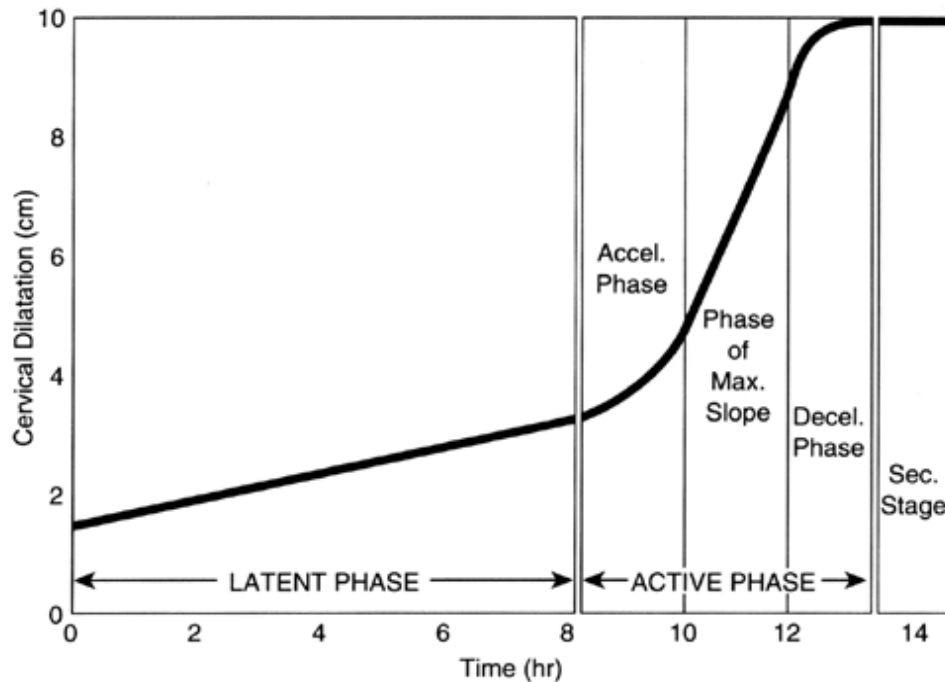


Figure 3.2: The Friedman Curve

Source: Adapted from Friedman (1956b)

Although the work of Friedman (1954, 1955) has been an important milestone in midwifery and obstetric practice, there are serious challenges with his research design. Friedman did not document whether or not the women who participated in his studies were given any information about what was to happen to them. Therefore, based on evidence relating to women's feelings about vaginal examinations in labour (Bergstrom *et al.*, 1992, Devane, 1996), there are doubts if many would have given consent.

In addition, the women who participated in Friedman's (1954, 1955) study did not receive any support and they experienced labour alone. Subsequent studies have increased our knowledge of the difficulty of the process of labour. These studies have shown how the interaction of the hormones that are essential for the process of labour to progress towards birth, can be influenced by aloneness, absence of psychological care, and the lack of mobility during contractions into positions in which gravity assists labour (Enkin *et al.*, 2000, Buckley, 2003).

Furthermore, there are several significant limitations levelled against the work of Friedman (1954, 1955). Using the rate of cervical dilatation to predict normal or pathological progress

of labour has been extensively challenged and debated in the literature by research from both obstetricians and midwives (Davis *et al.*, 2002, King, 2012). There is growing evidence to suggest that knowing the exact cervical dilatation does not seem to be a good predictor of how labour may progress (Albers *et al.*, 1999, Zhang *et al.*, 2010a, 2010b).

The evidence discussed in the preceding section suggests that there are more physiological differences between labouring women than previously thought. Midwives have always known that many women do not fit the average dilatation rate of 1cm per hour and, more fundamentally, may not physiologically mimic the parameters of the ‘average’ cervix (Walsh, 2010). To this end, authors Buckley (2003) and Walsh (2010) advocate for a better understanding of the hormones regulating labour to contribute to the more complex picture of the physiological variations in labour. In section 3.6.3 I examine the literature surrounding midwifery assessment of the progress of labour.

3.6.3 Midwifery diagnosis of progress of labour in contemporary practice

In this section I explore the literature concerning midwives’ assessment practices during the first stage of labour. There was limited research reflecting the use of physiological parameters of labour to assess its progress. A review of midwifery textbooks suggested that assessment of physical parameters enables the midwife to determine labour progress, identify the development of complications and recognise the need for interventions (Fraser and Cooper, 2009, Macdonald and Magill-Cuerden, 2012, Thorpe and Anderson, 2015). To this end, Crowther *et al.* (1989) and Stuart (2000) propose conducting an inclusive assessment of uterine activity and palpation of the abdomen to examine the baby’s position; presentation and descent of the baby into the pelvis provides a basis for ongoing assessment of the progress of the labour. Specifically, abdominal palpation is advocated as a useful tool for assessing the progress of labour, providing valuable data to assist a midwife in understanding how the labour is progressing, and avoiding the need for unnecessary vaginal examinations (Fraser and Cooper, 2009, Macdonald and Magill-Cuerden, 2012, Thorpe and Anderson, 2015).

Stuart (2000) is probably exceptional in relying on abdominal palpation instead of vaginal examination to ascertain progress, and most midwives weigh the findings of vaginal

assessment above contractions and behaviour. However, Stuart (2000) points out that the degree of descent of the presenting part can be ascertained as a method of determining the progress of labour. Furthermore, earlier work by Crowther *et al.* (1989) suggested holistic approach of the rate of labour progression within the context of a woman's wellbeing rather than mere physical signs. Following the scarcity of published material related to midwifery assessment decisions during the care of women in labour, this thesis focusses on understanding midwifery assessment decisions during the care of women in labour. In section 3.6.3.1 I analyse two research studies found in the literature that provide evidence for midwifery use of maternal behaviours to assess the progress of labour.

3.6.3.1 Assessing progress of labour using maternal behavioural cues

There are suggestions that the progress of labour can be assessed by observing women's behavioural cues. The two studies in this section (Winter, 2002, Duff, 2005) draw on the authors' research which involved skills of listening to the woman and observing her, to assess the progress of her labour. Both studies reported that the progress of labour is a complex, chaotic, physiological process that is not just based on time. These skills included interpretation of visual signs that change during labour and decision-making skills based on midwifery knowledge and intuitive knowledge.

Winter (2002) conducted a qualitative grounded theory research study in England to examine independent midwives' practices with a focus on some of the ways they assess the progress of labour. Winter (2002) utilised unstructured interviews with a purposeful sample of six independent midwives. The findings revealed a variety of skills that independent midwives use to assess the progress of labour. The midwives were not using medical protocols, preferring instead to use their midwifery skills to assess the progress of labour. Therefore, the relationship between the midwife, the woman and her partner formed a crucial part of the process. Winter (2002) developed a model demonstrating how the midwives weave various aspects of the labour process together, these included the continuous changes taking place which the midwives process and use to reassure themselves that the progress of labour is still safe. The midwives were more focussed on completing the process of labour than on achieving time limits on a chart. These midwives rarely used vaginal examinations since this would only inform them that the cervix was dilating. Rather, they used their skills to

understand how the woman as a whole was progressing through labour physically, mentally and spiritually. They were concerned that the whole person, rather than the cervix, encounters labour (Winter, 2002).

Winter reported that independent midwives do not consider contractions to be the most important way of assessing the progress of labour. Nevertheless, contractions are an integral part of, and crucial to, labour. Fraser and Cooper (2009) state that uterine contractions have two major functions – to dilate the cervix and to push the foetus through the birth canal. Therefore, progress in uterine contractions remains one of the important diagnostic indicators when assessing intrapartum progress. These arguments illuminate the significance of a research study like the one undertaken for this thesis, which aims to advance the knowledge of midwifery decision making during the care of women in labour.

In her Australian doctoral study, Duff (2005) examined midwifery assessment of cues to the progress of labour in hospitals where midwives were required to work within protocols and policies around the medical assessment of labour. The midwives, therefore, worked ‘within the time constraints of their working time’ while the responsibility of managing the progress or otherwise of labour rested with the medical staff. Duff (2005) developed this study to explain why some midwives appeared to explain the progress of labour in colloquial terms rather than biomedical terms within the hospital settings.

Duff (2005) developed a labour-assessment tool that combined observations recorded on a partograph and descriptor cues identified from a critique of the literature on changes in women’s behaviour during labour. The tool was designed so that an observer could mark off appropriate labour observations during set periods. The midwives caring for the women in labour collected the data, rather than the researcher, to resolve the ethical dilemma of having an unfamiliar person present with the woman during labour. The study was conducted in two hospitals over 3 years and collected behavioural responses to the labour of 179 women (94 primiparas and 85 multiparous women).

Duff (2005) found that attempting to categorise behavioural responses into the phases of labour described by Friedman (1955) provided few useful cues to assessing labour progress. When the results were viewed across time in labour maternal responses changed, also their responses differed with parity and whether they were induced or not. Duff (2005) argued that these physiological changes were identified by the midwife from the woman’s audible and

visual cues. These responses or cues changed during what Duff (2005, p.240) termed the “starting out” period, the “getting into it” period, the “getting on with it” period, when women are “nearly there” and again when “the end is in sight”. Duff (2005) proposed that these terms describe the process and progress of labour, active labour, transition and the second stage that are based on divisions of cervical dilatation measurement. She developed a model of labour that was not linear based on a woman’s physiological response to her labour.

The midwives felt they were able to detect the subtle changes in the intensity of contractions that indicate progress because they stay with the woman. The midwives make sense of these changes and they can put them in the whole context of labour. The ability to interpret the changes taking place in the labour is attributed to having cared for the woman throughout pregnancy. Having a trusting relationship with the woman is seen as one of the pivotal reasons of how midwifery skills work. This practice setting may not be applicable in other settings, especially where there are shortages of midwifery staff. It’s more difficult to assess the women when there are staff shortages. The study by Duff (2005) recommended combining the observed behaviours of labouring women with observations of contractions and cervical dilatation recorded on the partograph.

Arguably, if a woman in labour is not attended continuously, it is difficult to observe and integrate the complex dynamic behaviours expressed during labour. Also, women’s responses to labour may vary at different stages of the labour process based on differences in pain perception and response, parity and expectations of labour. Therefore, some cues could easily be attributed to wrong periods of the labour process. Furthermore, provision of some humanitarian aspects of care to women in labour such as encouraging mobility and other coping mechanisms would influence the women to react differently in different stages of labour.

Therefore, the consequences of these conclusions are worthy of further investigation in order to locate what midwives do during labour, record details of the assessments of labour behaviour, and note the support that is given and the decision making that occurs. In this thesis I wanted to understand how midwives make decisions during care for women in the first stage of labour in real practice settings and identify the factors that influence their decision making. In section 3.6.4 I present the evidence that identifies midwifery practices that support and facilitate the process of labour and birth

3.6.4 Research on midwifery care decisions during labour

The review of the literature showed a dearth of studies identifying midwifery practices that support, promote and facilitate normal labour and birth, although one study was found that provided evidence for this. One study used midwives' descriptions of normal midwifery practice (Mead, 2004). Although the study is exclusively based on survey data, the findings provide some interesting information and useful evidence to provide a glimpse of midwifery care decisions during the first stage of labour.

In the UK Mead (2004) surveyed eleven maternity units. Results showed that when identifying the type of nutrition that midwives would offer to a woman in labour, none of the midwives selected a nil-by-mouth option and they did not restrict solid food and fluids to women in labour. On pain relief, the majority of the midwives and their colleagues opted for non-pharmacological pain-relief measures. Midwives considered artificially rupturing the membranes as a form of augmentation of labour, and they perceived themselves as more likely to monitor the foetal heart rate with a Pinard's stethoscope than using continuous electronic foetal monitoring.

In Mead's (2004) study, using hypothetical scenarios, midwives were asked to identify the care they, or their colleagues, would undertake while looking after a woman in labour. The midwives based their responses on assumptions of what they thought their colleagues would do which may not be a true representation of their colleagues' practice. Also, the question of whether evaluations of hypothetical situations apply to judgements in real life remains an issue (Klein *et al.*, 1993). Difficulties include problems establishing reliability and external validity.

3.7 Summary of Chapter 3

Overall, from the review of the current literature, it is not clear which decision-making approaches midwives use during the care of women in the first stage of labour. None of the approaches solely offers a substantial elucidation of the decision making processes of midwives who are engaged in the care of women in labour. Besides, studies in midwifery decision making have failed to acknowledge adequately the complexity of the factors that impact the decision-making process and the need to be re-examined in this context. More

knowledge about midwives' cognitive approaches would offer valuable information for the design of educational strategies to promote better critical decision-making skills to underpin women's care during the labour and birth process.

There is a lack of robust evidence about assessment and management decisions midwives make during the care of women in labour. While midwives are accountable for this area of clinical decision making, the evidence base concerning their cognitive approaches is unclear, and it is not clear how the relevant factors are managed in the decision-making process. This in itself is essentially disturbing and raises concerns when coupled with the evidence in Malawi, which suggests suboptimal care. Exploring how Malawian midwives make decisions during the first stage of labour in a hospital setting might unearth the approaches that would promote optimal care. In Chapter 4 I discuss how I chose the methodology and the rationale for the approach I have adopted in this thesis.

Chapter 4 : Research Methodology and Design

4.1 Introduction to Research Methodology and Design

The review of literature has provided in-depth understanding regarding midwifery decision making during labour and birth. Research findings revealed that midwives use a range of cognitive approaches, both analytical and intuitive when making decisions. However, there is a dearth of evidence to explain the actual decision-making processes employed during midwifery practice. The review of literature also revealed minimal knowledge relating to the contextual factors that influence midwifery clinical decision making. I did not identify studies which examined the ways in which midwives engage in decision making in response to these contextual issues. In addition, there were no empirical studies specifically exploring midwives' decision making during the first stage of labour. Furthermore, the literature search indicated that there is limited data from the African perspective and none for Malawi. Consequently, it is not possible to locate decision making within the context of Malawian midwifery. In this thesis therefore, I aim to address these gaps identified in relation to midwifery decision making in order to understand how Malawian midwives make decisions during the first stage of labour in a hospital setting (see aim and research questions in section 4.2).

In this chapter, I provide a detailed and justified account of the methodological approach used to address the research questions, reflecting the perspectives I have chosen and their relative implications. I begin by identifying the aim of the study and outlining the research questions in section 4.2. I proceed to consider the philosophical assumptions underpinning this research in section 4.3. I then move the discussion on to explain, justify and critique the methodology for this thesis in section 4.4 – within this section, I justify the choices I made to explore midwifery decision making using a qualitative approach. Specifically, I base my research on principles of ethnography. Problems relating to an ethnographic approach have been thoroughly examined and I explain the reflexive process I undertake to deal with the nature of 'self'.

In the latter part of this Chapter, I reflect on the way in which I conducted the study; examining challenges and decisions relating to the research project in section 4.5. The research process involves the complex interaction between the research question, the

researcher and those who were being researched (Silverman, 2011). The focus here is on the issues of real-world research which can be messy (Robson, 2011) which I had to cope with and address ethically in a variety of social situations. I discuss the systematic process of data analysis undertaken in this study in section 4.6. A discussion then follows focusing on ethical considerations for conducting this study in section 4.7. I discuss evidencing the methodological rigour for the study in section 4.8. Limitations of the study are outlined in section 4.9 and finally conclude the methods chapter in section 4.10.

4.2 The Research Aim and Questions

As stated in the preceding text, I generated the research questions that I aim to address in this study from the review of literature and from my midwifery background where I identified the problem. These research questions refer to the time when a woman is admitted to the labour ward. I seek to identify the individual midwifery decision making during the first stage of labour in a hospital setting alongside exploring factors that influence decision making. I formulated the following research aim and broader research questions that I seek to answer in order to achieve this aim:

To understand midwifery decision making during the first stage of labour in a hospital setting within a Malawian context.

To recap from Chapter 1, I posed three research questions:

1. What assessments and management decisions do midwives make regarding labour progress during the first stage of labour?
2. What is the role of the partograph in midwifery decision making regarding assessment and management of progress of labour?
3. What are the contextual factors that influence midwifery assessment and management regarding labour progress during the first stage of labour?

The questions posed for this research helped me focus on the identification of research methods, fields to be studied and subsequent analysis. The way I answered these research questions is addressed in the following section. First, I clarify this in the philosophical assumptions and methodological approach guiding the research.

4.3 Philosophical Assumptions Underpinning the Study

The review of literature in Chapter 2 demonstrated that there is a dearth of research about midwifery decision making during labour and birth. Therefore, this study required an exploratory approach (Hammersley and Atkinson, 1995). I required an in-depth understanding of the social processes, relationships and general contextual factors involved in the construction of midwifery decision making. I selected a theoretical paradigm of qualitative interpretation that constructs understanding from multiple data collection sources to answer research questions (Denzin and Linkoln, 2000). In addition, I considered a research strategy that also satisfied the ontological and epistemological perspectives on the nature of social reality I hold in this thesis, which is that of a qualitative ethnographic approach (Mason, 2002). Therefore, in this section, I analyse my ontological and epistemological stances that guided the choice of the research process.

4.3.1 Ontological Perspective

A researcher's decision on how to study the social world raises a number of key philosophical considerations. Some of these issues relate to ontology and are concerned with a researcher's beliefs about what there is to know about the world (Crotty, 1998, Mason, 2002, Lewis and Ritchie, 2003, Gray, 2009). Therefore, an ontological orientation is concerned with the question of "What is the nature of the phenomena, or social 'reality' that I wish to investigate" (Crotty 1998, Mason, 2002, p.14, Gray, 2009). In this thesis my ontological perspective is that there is a common, shared, context-dependent and subjectively perceived 'reality' and I reject the option that social behaviour is governed by 'laws' that are fixed, independent of reality and generalisable. Specifically, I endorse idealism or relativism, which asserts that reality is only knowable through the human mind and through socially constructed meanings (Lewis and Ritchie, 2003). Therefore, my ontological perspective can be narrowed down to subjective interpretation. To this end, the very essence of midwifery decision making I examine within this thesis cannot be universal; it is subjective and derives from the midwives' experiences which occur within the labour ward settings. Thus the midwives' 'world' of the labour ward can only be understood if I seek to stay close to their experiences and endeavour to illuminate the processes as they are lived by the midwives. However, Crotty (1998) asserts that such a viewpoint is not simply personal because the

meanings in the world of midwifery care are shaped during the process of action rather than deliberately constructed by the midwives.

Therefore, in order to gain understanding of the labour ward midwives' 'world', I endeavour to find out what it is like to be a midwife. Bearing in mind that diverse opinions exist about what constitutes reality, the next question is: how is that reality measured and what constitutes knowledge of that reality? This leads to questions of epistemology which I discuss next.

4.3.2 Epistemology

While ontology represents 'what is', epistemology attempts to understand 'what it means to know'. For my study, it means 'how do the midwives know what they know?' What has occurred in their lives and careers to inform their 'knowing'; the nature, scope and sources of their knowledge? Therefore, it is essential to examine what midwives know about decision making during labour in order to have a shared representation of social reality (Siddiqui, 2005). Epistemology provides a philosophical background for deciding what kinds of knowledge are legitimate and adequate (Crotty, 1998). To that end, Guba and Lincoln (1994, p. 108) clarify that epistemology asks the question "what is the nature of the relationship between the would-be knower and what can be known?" Therefore, an epistemological stance helps the researcher clarify issues of research design (Easterby-Smith *et al.*, 2002). With regards to epistemology (how it is possible to know about the world), I endorse an interpretivist position.

Closely linked with ontology and its consideration of what constitutes social reality, epistemology reflects views about the most appropriate ways of enquiring into the nature of the world (Easterby-Smith *et al.*, 2002). In this thesis, my ontological position is that the nature of social reality is subjective and there are multiple context specific realities out there and the truth is complex and situated. Therefore, my way of 'knowing' and 'being' holds an ontological position that "midwives knowledge, views, understandings, interpretations, experiences and interactions are meaningful properties of the social reality which my research questions are designed to explore" (Mason, 1996, p.39). Similarly, this complies with my epistemological stance that an acceptable way to "generate data on those ontological properties is to interact with the midwives, talk to them, listen to them and gain access to

their accounts and articulations” (Mason, 1996, p. 40). My study examines and explores midwives’ ‘worlds’ in Malawi, specifically their clinical decision making during the first stage of labour. Therefore, I pursue this research to understand a social phenomenon and capture practices, actions and subjective experiences pertinent to midwifery; a profession that is primarily concerned with human behaviour and experiences (Mason, 2002). I sought the perceptions of midwives as to their constructions of meaning: an insider or emic understanding rather than imposing my outsider view (Blaikie, 2000). In addition, the environments and decision tasks that midwives work with are very dynamic and complex. Furthermore, midwives are members of a culture and they work in relationship with other health workers as such, the way midwives think, behave and interact is influenced by the culture (Savage, 2000).

Therefore, ethnographic approach involves understanding the social world of people being studied through immersion in their community to produce detailed description of people, their culture and beliefs. The ethnographic approach is entirely well situated within interpretivism which is characterised by the ontological assumptions that deals with ‘Verstehen’ and understanding and inductive approaches as there are subjective multiple realities out there (Schwandt, 2000).

To summarise, in this section, I have discussed the ontological and epistemological stances of my thesis. I have adopted the ethnographic approach which recognises that meaning and social action can be understood in a specific context and I take a standpoint that any attempt to understand and present others’ behaviours and practices will always be possible through the participant’s own context. Having clarified these positions, I now move the discussion to this project’s methodological approach.

4.4 Methodology

In this section, I demonstrate the research methodology used in this thesis to answer the research questions. I intended to immerse myself in the practice of the midwives and to use the labour ward settings as data sources by gaining “first-hand experience” of its culture (Mason, 2002, p.55). Therefore, I required a research approach that valued discourse and observational data. An ethnographic approach provided for this. In this section, I explain the justification for the choice of a qualitative ethnographic approach and the reflexive stance I

adopted to maintain quality of the study. Next, I discuss the rationale for adopting the qualitative research design.

4.4.1 Rationale for Qualitative Research

Crotty (1998) suggests that a methodology needs to be appropriate to the research aims and coherent with the researcher's theoretical perspective, which in turn influences the methods selected. In this section, I discuss the methodological approach adopted for the study and its coherence with my ontological and epistemological stances discussed earlier.

The literature review Chapter 3 did not indicate that an ethnographic approach was frequently adopted in studies that examined midwives' decision making during labour and birth. Cheyne *et al.* (2006) used a qualitative study focusing on focus group discussions to study midwives' diagnostic judgement and management decisions during diagnosis of labour. Rattray *et al.* (2011) employed a grounded theory approach to explore midwives' decision-making processes related to the use of continuous electronic foetal monitoring on low-risk labouring women. Scholes *et al.* (2012) employed simulation with a patient actress to study decision making by student midwives during the care of a woman with postpartum haemorrhage. Cioffi *et al.* (2010) used a descriptive qualitative study to explore midwives decision making whether or not to suture the perineum and areas of associated trauma after childbirth. Jefford and Fahy (2015) employed post-structural, feminist methodology to study midwives' clinical reasoning during the second stage of labour. Patterson *et al.* (2015) utilised individual and group interviews to study midwives' decision-making processes when making transfer decisions for cases of slow labour progress from rural areas to specialist care. Therefore, there are gaps in the literature related to our understanding of midwifery decision making in real contexts of care. I would argue that these studies have not yielded a more comprehensive picture on how midwives make decisions during labour and birth. Therefore, I employed an ethnographic approach to gain a deeper understanding of midwifery decision making. In this study's methodological approach, I was able to identify and analyse unexpected issues since they were based on in-situ observation of interactions and practices.

My interest in understanding the social phenomena and capturing practices and subjective experiences also demonstrates its pertinence to midwifery; a profession that is primarily concerned with human practices and experiences. In this study, I aimed to understand

midwifery decision making during the first stage of labour from the midwives' own perceptions and this included my own perceptions. Therefore, I sought an understanding of the workings of complex social situations and relationships and subsequent social processes (Blaikie, 2000) thus, I considered a qualitative approach to be the most suitable approach to achieve the research aim.

This choice of research methodology was determined by a combination of several factors including my ontological and epistemological positions showing that my research is inclined towards an interpretivist (qualitative) approach. This method of knowing offers the opportunity of gaining an in-depth understanding of how Malawian midwives make decisions during the first stage of labour. Qualitative approaches are deemed most appropriate when a researcher seeks to understand a social situation about which there is limited understanding, as was the case in my study (Richards and Morse, 2007, Allsop and Saks, 2013). The approach has the potential to explore a wide range of issues in relation to the social world and social phenomena, and it is regarded as a good fit for the purposes of this aim (Mason, 2002, Creswell, 2007). Therefore, this criterion for choice of a qualitative paradigm is based on methodological appropriateness that eventually enhances methodological quality (Patton, 2002, Creswell, 2007, Richards and Morse, 2007). Qualitative research is conducted in naturalistic environments where data is collected in the setting of everyday life (Creswell, 2007). This characteristic directly fits the aim of this research to understand the context in which midwives address the issue of decision making and how the context influences decisions. It is deemed important, therefore, not to separate what midwives said from the labour ward in order to match what was said with the context (Creswell, 2007, Allsop and Saks, 2013). In addition, a qualitative approach has been the main approach used in the existing literature for the exploration of midwifery decision making (Cheyne *et al.*, 2006, Jefford *et al.*, 2010, Young, 2012, Patterson, *et al.*, 2015). Based on the facts outlined in the preceding text, I considered a qualitative design to be the best fit to address the aim of my thesis and the research questions.

In this thesis, I argue that the quantitative mode of inquiry is not appropriate for the purpose of my study. I concur with Siddiqui (2005) when she argues that quantitative methods cannot be used to represent the world as it is experienced by either pregnant women or midwives, unless the main aims of the research are to seek cause and effect. While quantitative research approaches can lead to gaining true knowledge and explaining what is actually going on in

the world (Patton, 2002), there are criticisms of the appropriateness of such designs to study adaptive processes such as decision making (Croskerry, 2005). Therefore, the scientific method may not be the best way to understand human action such as midwifery decision making and quantification may result in meanings closer to the beliefs of the researcher rather than the participants (Allsop and Saks, 2013).

Qualitative research embraces a range of approaches to social inquiry that are underpinned by different philosophies and techniques (Hennink *et al.*, 2011). These include, for example, phenomenology, ethnography and grounded theory. In-depth exploration of all three qualitative methodologies is beyond the scope of this thesis. However, in the following section I do provide a detailed explanation for selecting an ethnographic research approach for this thesis. I justify why I considered an ethnographic approach to be appropriate for gaining an interpretative and emic understanding of midwifery decision making during the first stage of labour in a hospital setting.

4.4.2 Rationale of drawing on an ethnographic approach

Historically, ethnographic research focuses on ‘culture’ and/or human phenomena to explore what people say, what they do, and the relationship between these (Brink and Edgecombe, 2003, Savage, 2006). In this thesis, I draw upon Hammersley and Atkinson’s (1995, p.1) definition of ethnography as being:

“A particular method or set of methods. In its most characteristic form it involves the ethnographer participating, overtly or covertly, in people’s daily lives for an extended period of time, watching what happens, listening to what is said, asking questions –in fact, collecting whatever data are available to throw light on the issues that are the focus of the research.”

Hammersley and Atkinson (1995) explain the strength of ethnography as the role that the researcher plays in identifying social and cultural behaviours, employing participant observation and then enquiring about the meaning of the behaviour through interview. This is regarded as a comprehensive way of observing human events and behaviours in the natural context in which they occurred (Hammersley and Atkinson, 1995). Similarly, Savage (2000), Mason (2002) and Allsop and Saks (2013) commend ethnography when the researcher wants to access beliefs and practices in context. To that end, Madden (2010) asserts that

ethnographers strive to gain insight by being in the same social space as the subjects of their research. Thus, ethnography is described as a

“fulfilling endeavour and appealing strategy for studying practice-based professions such as nursing and midwifery, as it enables researchers to observe directly culture and associated activities” (Simmons, 2007, p.11).

Personal meaning is tied to context, therefore I needed to observe decision making in action and listen to the dialogue that took place between midwives and other maternity care givers in the clinical environment. This allowed me to see what was going on and listen to who was saying what and to whom (Savage, 2000, Hammersley and Atkinson, 2007, LeCompte and Schensul, 2011). I therefore value such an approach to understand the decision-making approaches of midwives during the first stage of labour. Ethnography has been clearly described as a method suitable to study the social world of midwifery in its natural state as it happens (Kirkham, 1992, Hunt and Symonds, 1995, Dykes, 2005, Price and Johnson, 2006).

4.4.2.1 Focused ethnography

Historically, ethnography is related to anthropology and requires the researcher to be immersed in the culture being studied to explore the social world for many months or years (Denzin and Lincoln, 2005, Creswell, 2007, Simmons, 2007). To this end, Denzin and Lincoln (2000) and Green and Thorogood (2004) asserts that ethnography requires a great deal of commitment and effort from the researcher to get extensive and valuable data to conduct the study. Nonetheless, current approaches have seen ethnographic principles being applied to shorter ethnographic studies (Spradley, 1980, Savage, 2000, Madden, 2010). Most research studies conducted in health care settings overcomes the issue of time by carrying out focused ethnography (Savage, 2006) where the researcher will be able to complete the research within less time than that required for traditional ethnography (Roper & Shapira, 2000; Green & Thorogood, 2004; Savage, 2006). For this study, I used the contemporary form of ethnography: focused ethnography where I was immersed in the hospital environments collecting data for six months.

Focused ethnography is sometimes called mini or micro-ethnography (Roper & Shapira, 2000). It differs from traditional ethnography because it aims to examine a small culture or group within an institution such as a hospital (Holloway & Todres, 2006). Focused

ethnography has gained increasing popularity for researcher's interested in studying particular elements within one's society. The method presupposes a familiarity with the field being studied, which allows focused examination (Knoblauch, 2005, p. 2; Yakong et al., 2010). Therefore, my study is situated within the focused ethnography where I was immersed in the hospital environments collecting data for six months. The focused ethnographic approach was appropriate for the research questions put forth in this thesis for a variety of reasons: First as a researcher, I had extensive familiarity with the hospital settings having spent a considerable amount of time practising midwifery and teaching midwifery students during clinical learning. Second, because I entered the field with the desire to target a particular aspect of the midwifery culture (decision making), this method offered a more efficient and appropriate route than the traditional ethnography. Third, it is well suited for health care research that answers specific research questions and can be characterized by:

1. Conceptual orientation of a single researcher,
2. Focus on social phenomena and a distinct community,
3. Being problem focused and context-specific,
4. Involvement of a limited number of participants who usually hold specific knowledge,
5. Episodic participant observation (Higginbottom, 2011, p.3).

Despite this being an appropriate method to study decision making, the literature reflects some limitations and criticisms of the use of an ethnographic approach. This includes lack of objectivity, access problems, power differentials and role conflict (Wolcott, 1999, Borbasi *et al.*, 2005, Alvesson and Skoldberg, 2009, Madden, 2010). I refute the claim of lack of scientific rigour in section 4.9. The other issues will be discussed in the section on data collection and analysis processes, section 4.5. However, the criticism related to the role of the researcher has caused particular concern (Hammersley and Atkinson, 1995, Allen, 2004, Alvesson and Skoldberg, 2009, Madden, 2010). The argument is that presenting meaning on behalf of another is considered as constructed reality. In addition, Borbasi *et al.* (2005) argue that the researcher's presence is understood to influence both the data and the setting and propose that no single interpretation is definite. Notwithstanding these limitations, ethnography remains an appropriate approach to gain an interpretive and emic understanding of the midwives' decision making during the first stage of labour.

The influence of the researcher on the research process is crucial, with the issue of ‘self’ in the research addressed by incorporating a “methodological self-consciousness and a concern for reflexivity” (Ryen, 2008 pp. 85) to provide methodological rigour. Nevertheless, underpinning the research is my assertion that what is presented can only be considered as a construction of events. I acknowledge that my ‘self’ has particular perceptions based on considerations such as class, position and power. In the next section I detail my reflexive approach to deal with my influences on the research.

4.4.3 Use of reflexivity

Social research cannot ignore the influence a researcher has on the social world being studied (Hammersley and Atkinson, 1995). Wolcott (1999), Alvesson and Skoldberg (2009), Madden (2010) and Borbasi *et al.* (2005) explain the difficulty in applying ethnography in one’s own field is because the researcher has a familiarity with the field and difficulty in disassociating themselves from the who they are and their pre-understandings. The approach may lead to loss of the research perspectives and threatens validity of data as the position adopted by the researcher in the field may affect every phase of the research process (Borbasi *et al.*, 2005, Gerrish and Lacey, 2010). The risks in this case are bias and subjective depiction of reality (Finly and Gough, 2003, Borbasi *et al.*, 2005). Hammersley and Atkinson (1995, p.16) further claim that the entire research process is shaped by the researcher’s “socio-historical locations” however, the most important thing is to recognise the reflexive character of social research and acknowledge that we are all part of the social world we study. In this study, I did not try to eliminate the effects of being a midwife doing research in a labour ward but tried to understand the effects of this status. In the following section I explore my process of reflexivity in this study.

4.4.3.1 Examination of my positioning within the research process

Being a sole researcher and as an ethnographer with midwifery knowledge seeking to understand the midwifery culture, I acknowledge that my personal experiences, professional background and the wider sociocultural context of my life might influence my interpretations and constructions (Finly, 2002, Madden, 2010). I hold a particular role as an ethnographer in this research because it is in the area of my professional expertise (midwifery); a speciality that holds similarities to my knowledge and clinical experiences, and which is within study sites that are familiar clinical areas. Nursing and midwifery are my main clinical

backgrounds. I have previously worked in several maternity units in Malawi at district and tertiary hospitals both as a registered midwife and in charge of a labour ward. Therefore, my skills and knowledge in labour and birth issues were greater than those of the practising midwives, in particular during labour and birth. In addition, I have been teaching midwifery for over 10 years. I reflect on all these issues and how they influence the research.

Being a midwifery lecturer places me within the midwifery college and university system. I witnessed students developing into qualified midwifery practitioners and, during the research, I would meet some of them working in the labour wards. I reflected that it was possible for such midwives to decline from participating in the study, because, if they did take part, they might feel as if their midwifery knowledge and skills were under scrutiny.

I was also aware of the professional relationship that I would need to maintain with midwives once the study had completed. Different from other external researchers, I would not leave the field forever – I would continue to be working with the participants in either the college, midwifery professional forums or clinical areas. Other students would finish their training and the lecturer/qualified midwife relationship would develop. Consequently, I was aware of the mark that my researcher role and research might leave. If my behaviour was regarded as falling short of what midwives and clinicians expected of a midwife/midwifery lecturer/researcher, it might have consequences for future midwifery research. I did not want to lose the trust already established.

I reflected upon my behaviour as a lecturer and my connection with students. I develop very close relationships with students and try to encourage them to work hard. Most students in Malawi claim that the midwifery course is difficult and when they enrol for it, they always have fears about failure. Students often said “we always hear that midwifery is not a cup of tea”. I always engaged with students assuring them that it is a manageable course though tough. This is the way I behaved as a midwifery lecturer before commencing the research and I felt that I would continue in the same manner during the research.

I have had a wide-ranging and enduring clinical background with my praxis knowledge grounded in midwifery care provision and therefore find the maternity care system interesting. This account highlights the fact that I am a midwife with some considerable knowledge and, as a midwifery lecturer and the ethnographer in this study, it is not surprising

that I brought to my observation of the field some firm opinions on what constitutes good practice.

Burns *et al.* (2012) suggest that a participant observer must find middle ground by drawing on those aspects of 'self' required to negotiate respectful relationships with colleagues while also ensuring the maintenance of an analytical degree of distancing. Consistent with these views in this research, I regard reflexivity as an important activity throughout the conduct of my research. I consider my perceptions, knowledge and experiences in midwifery as key to my understanding and interpretation of the research. I have integrated more of my reflexive comments and practices throughout this thesis. In Chapter 1 I explained my background and motivation to conduct this study. The aim is to explicate the focus of my research but also allow the reader to understand the lens through which I conduct the research. In this Chapter, I continue to make references to my own positions, experiences, influences and feelings in relation to the research. Similarly, in Chapters 6 and 7 where I present the research findings, I use reflexive comments complementing my interpretation and analysis.

During the observation phase of the data collection period, I moved between different roles based on the relationships I had with individuals and how they perceived my role at that time. Although my agenda in the clinical area was to conduct the research, I was put into different roles, for example as an academic lecturer or as a former midwife in charge of the labour ward. Midwives were asking me about registration at my college; students asked me to supervise them on other procedures; consultants sought my views on how best to run the labour ward. Due to the multiple identities that I held in the field, I inconspicuously presented various aspects of myself in the research process. However, to get rich and valued data, I continuously reflected on the impact of this position on the research and at the same time keeping ethical issues in mind. After each participant observation and interview, I documented my interactions with participants and the impact of my role in my research diary. This approach assisted me to become aware and able to manage my multiple identities in the field. In the following section I give two examples of my positioning during participant observations.

4.4.3.2 Examples of my positioning during the research process

During data collection, midwives had a perception that I was going to challenge their practice and that their clinical decision making would be called into question. An example of an

imbalanced relationship based on aspects of hierarchy occurred during data collection. I contacted one of the midwife participants for a possible observation while she was caring for a woman during the first stage of labour, to which she consented. As I spoke to her, she asked to have feedback on how she cared for the woman and if I would assist her in areas that she might perform badly. The midwife stated this despite my having presented myself as a researcher in the field. However, during conversation she put me in a hierarchical position, perhaps due to the 'expert' knowledge that I exhibited as a midwifery lecturer. I tried to communicate with the midwife in a way of moderating her perceptions and expectations about me in relation to my position during the research study. At the same time, I reminded her that she had been practising midwifery for many years and that she knew what she was doing. I also explained to her that I was not there for fault finding and reminded her about my research interest, namely observing midwifery decision making during the first stage of labour. This explanation continued during the follow-up interview of this particular observation episode. These discussions further helped the midwife to understand my role because during follow-up interviews, I learned that she feared being observed by a midwifery lecturer. This approach helped to reframe power balances between the two of us by clarifying my position and professionally positioning myself within the research (Hertz, 1996).

During the next observation, I perceived that the midwife was more relaxed and comfortable when she was caring for another woman. My view is that this explanation did not necessarily make me become an 'insider' and neither did it make my relationship fully equal with the midwife; my belief is that who I am and the way I interacted with this midwife helped me in forming relations of trust that were important in this ethnographic study. Keval (2009) points out that who people think we are will have an enormous bearing on the research and of course vice versa. To that end, as Agar (1980) contends, the effort is more than a professional one; it is personal.

Similarly, Robson (2011) underscores this view arguing that as an observer, one must possess great sensitivity and personal skill to obtain meaningful data. Bonner and Tolhurst (2002) identify the potential for role conflict during research as a further disadvantage for an insider researcher. The researcher may feel conflicting emotions related to the insider–outsider perspective of researching within a familiar setting. As a participant observer, it may be difficult to separate the two roles, sacrificing one for the other through the sheer effort of trying to do two things at the same time (Kite, 1999). This was certainly found to be a

personal dilemma during field work which required me to be flexible in alternating the roles of midwife and researcher. For instance, during data collection in hospital A, I was once emotionally affected after attending a morning report meeting where they discussed an issue of a woman who experienced a foetal death. Initial investigations suggested this was linked to a prolonged second stage of labour. One obstetrician asked me to lecture the midwives on how to handle such cases of prolonged second stage of labour in order to prevent future foetal deaths. I was emotionally touched and nearly cried. I wanted to share my feelings with the midwives but quickly realised my role in the field. I shared my emotions with my local academic research supervisor (a senior lecturer in midwifery with a PhD) who was in the labour ward supervising midwifery students. She advised against interfering with normal work processes as it would have an impact on the research. This support was really important for me as a researcher at a time when I felt emotionally involved. This example shows the value of using introspection and being reflexive about one's own personal reactions as identified by Finly (2002). Finly (2002) claims that being preoccupied by one's own emotions and experiences can skew findings in unfortunate directions.

Beale *et al.* (2004) and Dickson-Swift *et al.* (2008) suggest debriefing as an effective strategy to deal with emotional effects experienced during research. Debriefing is certainly valuable and I was pleased that this local support mechanism had been organised for my period of data collection in Malawi when I was working at distance from my academic supervisors.

In this section, I have presented my ontological and epistemological stances and discussed how these led to the endorsement of a specific methodological approach. Alongside this, I have also presented the theoretical perspectives that have informed and shaped these positions. I have argued the case for using ethnographical approaches to study decision making and discussed the criticisms against this approach. I have acknowledged how my status impacts upon the research and how I reflexively dealt with some of the problems encountered. In the following section, I outline the research methods used for this study.

4.5 Research Methods

Following on from discussing the theoretical underpinnings of this research, as well as the methodological approach taken, this section explain the thesis' research methods. I begin by describing the research settings, then move on to explain the practical issues of gaining access to the participants, sampling, data collection methods, key ethical issues related to the

study, and issues of quality of the study. Finally, I present the process of data analysis used for this study.

4.5.1 The study setting

In this section I briefly describe the two hospitals situated in the western region of Malawi (Pseudonym) where I conducted the study. One hospital is a tertiary urban referral hospital and the other a secondary semi-urban referral facility. In order to preserve anonymity of the settings I have named them hospital A and hospital B respectively. These settings provide the context of care of women during the first stage of labour and its impact on midwives decision making. Blaikie (2000, p.189) defines setting as “a form of social organisation in which either space or common interests are the defining characteristics”.

Hospital A predominantly admits women with complicated conditions. However, women with normal labour are admitted as self-referrals or are those seeking paying services. Similarly, hospital B admits women with both complicated and non-complicated labour. Women with complicated obstetric conditions are referred to the district hospital from primary health facilities within the hospital catchment area. The selection of these settings was based on my professional work experience in a tertiary and a secondary hospital, as well as providing unique and important contexts of philosophy of care in terms of organisational structure and culture. The aim of the study is to understand midwifery decision making in a hospital setting within a Malawian context and it was not my intention to make a comparison between the two settings, but to recruit midwives. Midwives with varying levels of experience and qualification in nursing and midwifery worked in these settings. I have presented detailed descriptions of the study settings characteristics in Appendix D. Below, I discuss my journey to obtain the required authorisation from the hospital administrators and the research ethics committees to conduct this study in the two settings.

4.5.2 Gaining access to research setting and atudy participants

Gaining access to a research setting and participants can be difficult, time consuming and is not a single event (Labaree, 2002, Holloway, 2005, Larkin, 2013). Accessing midwives in this study involved approaching various levels of gatekeepers. Although my background had some elements of insight and knowledge as discussed in section 4.4.3, accessing the research site and midwives was not a foregone conclusion. I had to negotiate roles and relationships in

order to be accepted at the research sites and by the research participants (Labaree, 2002, Larkin, 2013). Nevertheless, my role as a midwifery practitioner and lecturer facilitated negotiations with hospital gatekeepers in providing access to the organisation and possible participants (Labaree, 2002, Simmons, 2007). Therefore, the 'insider' status facilitated acceptance, integration into the labour wards and recruitment of midwives into the study (Pellatt, 2003, Borbasi *et al.*, 2005, Simmons, 2007, Burns *et al.*, 2012). In addition, being a Commonwealth Scholar might have helped in gaining access because this work was funded and was considered important research. In this section, I highlight the process I undertook to access the research settings and study participants. As the process of gaining access to both hospitals was similar, I illustrate the organised process I followed to access the research field and potential participants in both settings (Figure 4.1).

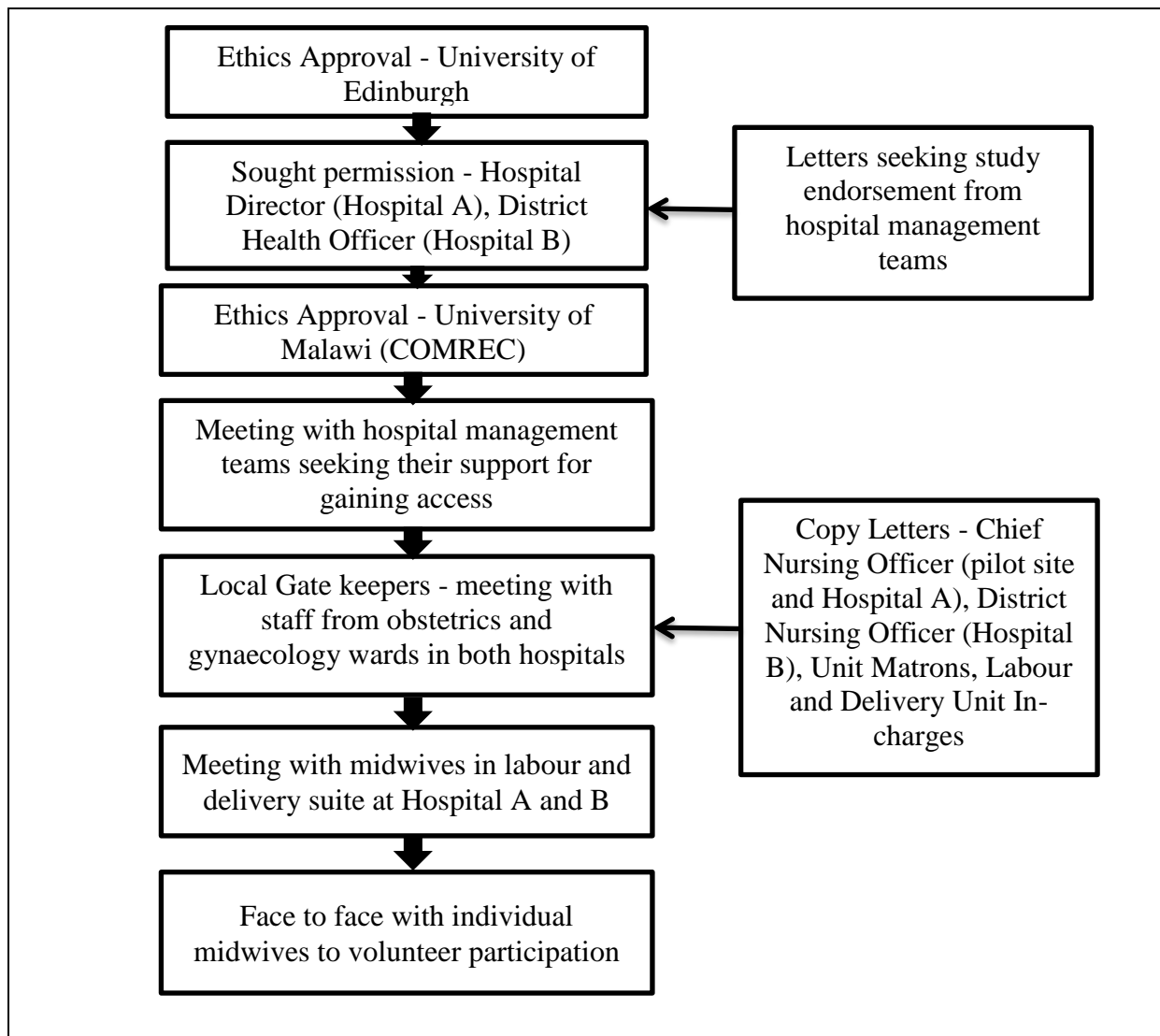


Figure 4.1: Gaining Access and Recruiting Study Participants

The first step was to seek ethical approval from the School of Health in Social Science research ethics committee at University of Edinburgh who agreed that the research topic was important. They approved the research on 27th July 2013 without any changes to the study design (Appendix E).

The second step to negotiate access to the hospitals was to seek endorsement of the study by the management committee of the participating hospitals. Therefore, I supplied the committee with a brief protocol of the proposed study and sent emails requesting approval letters that formed part of the application documents to the Malawi ethics committee (Appendix F and Appendix G).

Ethical approval was also sought from the Ethics Committee at College of Medicine in Malawi. This committee requested some clarifications of the research design and suggested some alterations of the participant information sheet and women's consent. After amending the requests, approval to conduct the study was granted (Appendix H). I provide a detailed discussion regarding the ethical aspects of the study in section 4.11.

Following the approval of the study by Ethics Committee at College of Medicine in Malawi, I requested a second meeting with hospital management teams seeking their support for gaining access. Following the presentation of the proposed research to management members, they granted me permission to conduct the study at their hospitals and acknowledged the importance of this research.

Subsequent to these meetings with management, I met the head of the Obstetrics and Gynaecology Department at hospital A and the District Health Officer for hospital B separately to brief them about the study and seek their endorsement. They welcomed the prospect of the study and asked me to make a presentation about the research study at the department's morning report meeting. During these meetings, various health professionals such as obstetricians, registrars, clinical officers, intern doctors, student doctors and nurse-midwives were in attendance. The health professionals gave the impression that they thought it is an important study.

4.5.3 Recruitment of study participants

The next and final meetings to obtain access and promote recruitment were held with midwives in both labour wards. The meetings were organised through unit matrons and midwives in charge of the labour ward. During the meetings I explained the exploratory nature of the study, its aims and the plan for data collection, and the midwives were assured that the aim was not to assess the quality of care they provide. The focus and emphasis was on the exploratory nature of the project, how midwives make decisions in the first stage of labour and the factors that affect their decision-making processes. I was grateful for the midwives' positive response and the time they spared for me to make the presentation about the study.

An information package that included the participant information sheet with details about the study, invitation to participate (Appendix I) and the consent forms (Appendix J) for both observation and follow-up interviews was made available to potential participants in the labour ward. Midwives were encouraged to read the information at their leisure time. I followed up with the midwives in labour wards after one week of reading through the research details; none of the midwives I contacted refused to participate in the study. Data collection in hospital A was conducted from October 2013 to January 2014 and in hospital B from March to May 2014.

4.5.3.1 Study sample

I invited all trained midwives from the labour wards to participate in this study, regardless of their qualification or length of practice. I identified the midwives because they have knowledge in midwifery and are therefore familiar with the tools and information sources relevant to decision making during the first stage of labour. I observed and interviewed a total of nine practising labour-ward midwives drawn from a population of midwives working in the labour wards of hospitals A and B. This sample comprised of a mix of RNMs, NMTs and ENMs with different experiences and educational qualifications (Table 4.1). I used pseudonyms to maintain the principle of beneficence, choosing similar sounding names to the participants' real names.

I used the strategy of purposive sampling that was flexible to meet the aims of the study to provide an understanding into how midwives normally make decisions during the first stage

of labour. Purposive sampling assisted me to select midwives who had the ability to give information to inform the research questions and to illuminate the features and processes of decision making (Hammersley and Atkinson, 1995, Silverman, 2001). Specifically, I used the pragmatic approach of a maximum variation sampling strategy to select a small but diverse sample of midwives that were able to offer a wide variety of perspectives related to midwifery decision making (Patton, 1990, Polit and Beck, 2008).

There were both male and female midwives practising in the research settings, however there were only two male midwives in hospital A who were still waiting for their licensure examination results. I considered these as non-qualified midwives and they were therefore not invited to participate in the study. In hospital B there were also two qualified male midwives, but during commencement of the study they were not available for recruitment as they were away from the setting until close to the end of the data-collection phase.

I recruited midwives who were available during the volunteering phase; targeting specific midwives to enhance variation among the sample and, at this time, I explained the principles of the study in more detail. Almost all the midwives expressed interest in participating in the study. In this way, it was not difficult to recruit midwives with varying qualifications and experience into the study. The midwives were eligible for inclusion when they met all of the inclusion criteria. The midwives had to meet one of the exclusion criteria to be excluded. Below are the recruitment criteria for the midwife participants in this study.

Inclusion

- Qualified midwives of any cadre currently working in labour and delivery wards.
- Qualified midwives who consent to be observed, interviewed and audio recorded.
- Qualified midwives with any months and years of midwifery experience in the labour and delivery wards.
- Qualified midwives working 40 hours or more in the labour and delivery wards.
- Qualified midwives licensed to practice by the NMCM.

Exclusion

- Student midwives.
- Locum and temporary qualified midwives.

- Qualified midwives unwilling to consent.

Table 4.1: Midwifery Participants' Characteristics

Hospital	Pseudonym	Educational Background	Qualification	Length of midwifery practice
A	Maureen	Enrolled nurse-midwife	Certificate in Nursing and Midwifery	7 years
	Mabel	Nurse-midwife technician	Diploma in Nursing and Midwifery	3 months
	Odetta	Registered midwife	Bachelor of Science in Nursing and Midwifery	3 months
	Alice	Registered midwife	Bachelor of Science in Nursing and Midwifery	2 years
	Mary	Nurse-midwife technician	Diploma in Nursing and Midwifery	7 years
	B	Matilda	Enrolled nurse-midwife	Certificate in Nursing and Midwifery
Linda		Nurse-midwife technician	Diploma in Nursing and Midwifery	1 year
Monalisa		Registered midwife	Bachelor of Science in Nursing, and University Certificate in Midwifery	1 year
Zione		Nurse-midwife technician	Diploma in Nursing and Midwifery	2 years

4.5.3.2 Informed consent

I informed participating midwives verbally and through information packs about the purpose and scope of the study, nature of observations and interviews, benefits and risks associated with participating in the study, use of the results and the reporting system. This detail of information helped me to obtain informed consent and provided assurance that I did not

‘coerce’ or ‘deceive’ the midwives (O'Neill, 2003). I respected the rights of the midwives in the research and upheld the principle of autonomy by informing and assuring them that participation in the study was entirely voluntary, and they could withdraw at any point without giving reasons for their decision (Polit and Beck, 2008). Therefore, I asked for signed consent from all midwives who agreed to participate prior to the start of participant observations and follow-up interviews. This approach ensured an ethical strategy for recruiting participants into the study. It is noteworthy that none of the midwives invited to participate in the study either declined or withdrew at any point.

4.5.3.3 Identifying the woman in first stage of labour

It was necessary, but also challenging for me as a researcher, to gain consent from women that were being cared for by the participating midwives. In line with this challenge, the ethics committee in Malawi initially asked me not to obtain consent from the women since they were not the major focus of the study. This was one of the reasons for rejecting my first ethics application (Appendix K). However, in my response to the ethics committee, I indicated that it would be good ethical practice to obtain consent from the women or their representatives because they have the right to allow or not to allow an additional person (in this case myself as a researcher) to be present during their care in the first stage of labour. In addition, I explained to the committee that I planned to review care records of the women during the first stage of labour (e.g. the partograph and labour-progress notes). Therefore I expressed to the ethics committee the need to obtain consent from the women to utilise their data. I obtained written consent from women in labour after making clarification with the ethics committee.

However, I experienced a dilemma during my study because it was apparent that obtaining consent was not always possible due to women being distressed by the pain of contractions at the time. Labour and delivery wards being my usual place of practice, I had anticipated these difficulties. I was aware that asking women to participate in a study when they were in labour was challenging because women feel vulnerable and might agree to participate out of fear. In addition, the association for improvements in maternity services argue that once labour has started, women may not be able to give their full attention to details of the research project because they are coping with painful contractions.

Therefore I made a decision to provide information to prospective participants well in advance of asking them to participate in my study. I designed a poster (Appendix L) with the research details that was posted on the walls at antenatal care clinics in the two study sites. The poster was translated into Chichewa, the vernacular language (Appendix M). However, this approach did not work to my satisfaction because most women did not read the information and some did not attend antenatal care at the two hospitals' antenatal care clinics. In addition, as identified in the background section of this thesis, literacy levels are very low among women in Malawi. Being aware of this problem, I asked midwives at both antenatal care settings to assist in disseminating research information; however none of the women who presented at the labour wards acknowledged being informed about the ongoing project. Long (2007) has struggled with firm compliance and the principles of obtaining consent, commenting that it might not always be practical in the field.

Based on these facts, I used my discretionary judgement to adjust my approach of obtaining consent from the women. For the women who were very distressed, I decided not to observe the midwives caring for them. Therefore, I planned to observe midwives caring for women who were in early active labour (from 4cm cervical dilatation) when the contractions are still tolerable. In addition, I asked these women for retrospective consent (Denscombe, 2002). I gave eligible women in early labour an explanation about the research project (Appendix N, Appendix O) and obtained their consent for me to be present as they were being cared for (Appendix P, Appendix Q). I then followed up the women in the postnatal ward to give them the full research details. A total of six women gave written retrospective consent allowing me to utilise the data. Significant others were also included in the discussion and were given the chance to ask questions or object to the request. Further ethical considerations for this study are discussed in section 4.7. In the following section I detail the data collection methods I used for this study.

4.5.4 Data collection methods

In this section, I provide an account of the data collection process, problems encountered and how they were addressed. I used three methods to collect data for this study. These were participant observations, follow up semi-structured interviews and analysis of documents used during care of women in labour. I commenced data collection on 7th October 2013 at hospital A and lasted for three months on full time basis. In total I undertook 27 episodes of

participant observations. I supported participant observational data with 27 semi structured follow up interviews.

I triangulated the qualitative methods to ensure validity of my etic understanding, to gain an account of structure and meaning within the perspective of decision making. The review of women's notes and the partograph helped in understanding of the midwives' decision making. Therefore, triangulation helped to produce more accurate, comprehensive and objective representation of the study aim (Silverman, 2011). This approach also promoted the validity of the findings and enhanced rigor of the research (Lincoln and Guba, 1985, Silverman, 2011). I discuss further issues of the validity of my study in section (4.8).

4.5.4.1 Pilot Study: Appraising the Research Design

Before starting data collection for the main study, I had chance to conduct a small pilot study. The pilot was conducted for two weeks in September 2013 at a district hospital located in Southern region of Malawi. I aimed at assessing realities of exploring midwives decision making during the first stage of labour using participant observations and follow up interviews. Specifically, the main objectives of the pilot were to:

- Evaluate the methods of data collection
- Test participant's recruitment process
- Determine recruitment of women in labour

I conducted the pilot study following approval of the research from COMREC. I recruited 2 nurse midwife technicians and conducted participant observations as well as post observation interviews. Data from these observations and interviews are not included in this study. This exercise illuminated a number of issues which helped me to reconsider other aspects of the main study discussed below.

The exercise clearly showed the need for prior arrangement with a particular midwife for possible observations. My impression during the first week of the pilot was that midwives were very busy and they worked randomly assessing and providing care to women in labour. There was no continuous contact between a midwives and particular woman. I needed a better approach in which a midwife participant would individually care for a woman throughout the first stage of labour. I adjusted the approach by discussing with participant midwives to identify a specific woman they would individually care for during the observation together with other workload.

Recruiting midwives caring for women in labour (either early or advanced) who were very stressed up with contractions was a challenge because the women could not comprehend the research details provided during the process of obtaining consent. I made a decision to recruit only those women who were in early active phase of labour and were coping well with contractions. I explained the project details, obtained consent and made the observation. I followed up the women to the postnatal ward to give them further research details and confirmed their consent to use their data (see section 4.5.3.3 for further details).

During pilot study, it was observed that there were a lot of midwifery students in labour wards. I did not intend to explore student midwives decision making however, I did not want to disrupt students' learning. Therefore, the student midwives were allowed to care for women under direct supervision of midwife participants. I agreed with the participants that they would be observed supervising students and how they make decisions to support them in women's care. Midwives agreed to support the students learning because it is an important part of midwifery practice and student midwives had the opportunity to practice under the direction and support of the qualified midwife.

This experience also showed me that I had to develop a more precise guide (

Appendix R) for conducting interviews with midwives. As a novice researcher, the pilot also allowed me an opportunity to reflect on my interviewing skills and wording of questions. Further assessment of the research plan occurred when I had completed a number of observations and interviews with midwives in hospital A. I made further adjustments to the guide; this was specifically related to questioning skills. I needed further probing questions and make sure they were generating meaningful data. Such type of questions enabled me to generate significant features of the decision making context and encouraged midwives to talk more and get a sense of their perspective regarding decision making.

Testing of the interview guide also revealed that participants experienced challenges in expressing themselves adequately in English. This problem posed some barriers to obtaining adequate data. I therefore decided to translate the interview guides into local language (Chichewa) (

Appendix S) to ensure accurate representation of midwives words, behaviours and beliefs during data collection. This problem posed some barriers to validity of the data (Esposito 2001). Walcott (1995) explains that language is an important instrument in research and needs to be considered when analysing and interpreting data. Therefore, I translated the interview guide into the native language (Chichewa). Midwives in Malawi undergo training in English, however in their daily work they interact with each other and with women in their native language. Madden (2010) suggests that ethnographers must always strive to keep participants at ease in order to keep them talking. In addition, informants are native speakers and they provide a model for the ethnographer to imitate (Spradley, 1980).

The translated version of the interview guide was back translated by a bilingual independent midwifery researcher to check the meaning of the questions in English and Chichewa for correction. All inaccuracies in translation and grammatical errors were checked to ensure reliability and validity of the translation (Birbili, 2000).

4.5.4.2 Participant observation

As identified by Mason (2002), participant observation is a data collection method that enabled me to immerse myself in the labour wards and enabled me to get direct experience of the settings and midwifery practice. Therefore, I was central to the data-collection process and I, at times, worked entire shifts with midwives. This approach facilitated an emic perspective which highlighted the complexity of the role of midwives in labour and delivery care (Burns *et al.*, 2012).

Although I was familiar with the labour and delivery units, I studied the context of both settings for a period of 1 to 2 weeks without conducting formal observations and interviews. I aimed at understanding the sites in detail and gathered information on the context of human behaviours, type of practices, interactions among staff and decision-making processes. Therefore, I familiarised myself with the participants and the context until I felt a level of acceptance that I was ‘fitting in’ within the midwives’ space. As a researcher I had little control over the participants’ perceptions about me. Therefore, I deemed establishment of rapport and trust very important before starting field work.

Observation periods lasted from 4 to 10 hours and I conducted one observation per day to increase the possibility of capturing rich data on midwifery decisions during the first stage of

labour. Prior to observations, each midwife was approached face to face to ensure they were still willing to participate in the observations and follow-up interviews. All midwives were given the opportunity to stop participating at any time prior to and during data collection even after giving initial consent. I also interviewed them and asked questions whenever opportunities arose during the participant observations. I did not identify areas for further questions in advance; these emerged during the observations. I observed midwifery decision making without using a predetermined observation schedule but allowed categories to emerge from the collected data once I obtained the observations (Polit *et al.*, 2001). Polit *et al.* (2001) assert that unstructured observations are most appropriate when little is known about a phenomenon.

I found using a structured observational schedule too restrictive as it did not provide a clear picture of the reality of how midwives make decisions during the first stage of labour. My aim, after all, was to understand midwifery decision making during the first stage of labour in a hospital setting within a Malawian context.

Participant observation allowed me to identify what was happening in the labour and delivery settings, who was involved, and when and where things were happening (Jorgensen, 1989). During this period, I observed consultations between midwives and other health professionals in order to identify the type and context of interactions related to the care of women, and their influence on decision making. Observations of interactions among staff regarding the care of women during the first stage of labour and their impact on decision making occurred at several points: during the midwifery handover, during obstetric assessment of the women, during obstetricians' or doctors' ward rounds, during the unit matron's ward round and during morning meetings. I held informal interactions with midwives, doctors, the unit matron and other health workers within the labour wards during free periods such as lunch and tea breaks. Observing interactions among midwives and other obstetric workers was critical in interpreting their impact in decision-making.

As discussed in section 4.4.3.1, I had no intention of conducting covert observations and my aim was clear to the participants. Although the midwives agreed to participate in the study, I gave them options to opt out from being observed if they wished. However, none of the participants indicated any objections and they all consented.

I found the task of conducting participant observations challenging and the roles I adopted in the field required attention. Gold (1958) explored the typology of observation explicating the possible roles available which range from that of complete observer through the options of participant observation to that of the complete participant. However, Gold (1958) acknowledged the many possible dangers related to the use of observations in the field.

Nevertheless, I endeavoured to engage with participant observation and I made the decision to structure my participation. At other times when I was present in the labour ward but not following or observing the midwifery decision making, I decided to fully participate in other labour ward activities. I knew that if I participated while making specific care observations, there would be disturbances and I would possibly miss out important observations which may not have permitted complete engagement in the moment. Therefore, while I planned to collect the data in a participant–observer role, in reality I did not follow one type of observational role but oscillated along a continuum between observer, participant and participant observer (Gold, 1958).

I did not have the care of any women directly allocated to me during my data collection because this would have detracted my focus of observing the midwives. I spent an extended period in the field with some involvement in some non-midwifery activities such as dusting, wheeling patients to theatre and transferring women to postnatal wards and theatre (Gold, 1958). My engagement in the activities of the labour ward can be classed between passive and moderate as suggested by Spradley (1980). This approach offered flexibility for exploring field and daily practices. If I decided not to help while staying in the labour ward, it would not have been conducive to gaining access and recruiting midwives and would have negatively affected my relationship with the midwives. I was concerned that the limited staffing levels meant that a small number of midwives were providing constant care to large numbers of women in labour, and I did not believe, given my experience, that I could be totally detached from providing some basic support in such a busy environment.

The vignette in Table 4.2, taken from my observation field notes, relates to midwife Mabel in hospital A. It exemplifies and enhances a description of the type of participant observation I undertook during field work, and shows what I learnt on the challenges of being both an observer and a participant.

Table 4.2: Vignette Reflecting the Conduct of Participant Observation

It was a Thursday morning and I had been looking forward to having another eventful day. I arrived at the labour ward in hospital A at 7.30am and I rushed straight to the labour ward because handover session was about to start. Today, there are only six women in labour and the labour ward does not seem to be very busy. Day duty midwives organised basins and rugs for dusting the labour ward, I joined the crew. We dusted surfaces, scrubbed labour beds and walls. There was a fresh smell in the labour ward.

Mabel, one of the midwife participants is on duty today. We meet and exchange a conversation.

Elizabeth: Hello Mabel?

Mabel: Hi Elizabeth? The ward is not very busy today, there aren't many women in labour. All the same if I happen to care for a newly admitted woman who will meet the criteria for recruitment into your study, feel free to make an observation as I provide care to this woman.

Elizabeth: Thank you! That would be wonderful; both of us should be on the look out to identify a woman among the new admissions today!

Meanwhile, I ask the midwife in charge of the ward if I can clear the area where they store intravenous fluids and vacuum extraction equipment. There is not enough space for storage and I decide to pack them properly. She is happy to have the area cleared. At 10.30am Mabel reports to me that there is a woman who has just arrived with complaint of labour pains and she would love if I observe her caring for the woman. I thank her for letting me know and willing to be observed. The observation starts during admission of the woman in labour. Two hours into the observation, Mabel decides to go for a cup of tea. The woman is left with a student midwife and I observe the student massaging the woman's lower back during a contraction, chatting with her, etc. Another student working from the opposite cubicle approaches me and asks if I would help him assessing position of the foetus on a woman he is caring for. I advise the student to ask one of the registered midwives who seems not to be too

busy and is sitting in the midwives' station. Meanwhile Mabel has just arrived from her short tea break and I knew I would miss some important observations.

The consultant round is in progress and the entourage has just arrived at Mabel's cubicle to review the woman she is caring for.

I was present in the labour ward in hospital A during 35 shifts (30 day and 5 night shifts) and hospital B for 29 shifts (25 day and 4 night shifts) for observations. The length of a day shift was 8 hours and 14.5 hours for a night shift. I observed midwives caring for women in labour from the early active phase of labour. Mostly, I relied on the midwives to call me for an observation. In a few cases I would alert them when a woman had just come in labour.

I experienced challenges in presenting myself correctly while holding the multiple roles of midwife, lecturer, and researcher as discussed in section 4.4.3.1. These roles raised ethical concerns, especially if midwives consulted me when they experienced dilemmas during the care of women. Another challenge that arose was that as a midwifery lecturer, medical staff would ask me questions about women's care. At first I was not sure how to respond but was eventually able to assist accordingly as long as a particular woman being discussed was not being cared for by a midwife participant under observation. This helped in building my relationship with medical staff. Similarly, midwives sometimes involved me in their assessments and decisions for women in labour and I faced ethical dilemmas of giving advice.

In addition, there were quite a number of midwifery students in the ward with only a few clinical lecturers to supervise them. There were circumstances in which the students asked me to assist with certain procedures. I continued explaining about my role as a researcher but, when I had no specific observation underway, I provided assistance.

Women in labour also identified me as a midwife and would call me to assist them. I would explain my role as a researcher but the ethical concern arose when it was a situation that required urgent attention such as an imminent birth. If there was no one in the immediate surroundings to assist, I ended up helping the woman to give birth.

Although my presence in the labour and delivery settings was a familiar one, midwives' comments occasionally made reference to my role demonstrating their awareness of my

researcher role. The Hawthorne effect is a phenomenon seen in research whereby participants' behaviours change because of researcher attention (Wolcott, 1999, Hughes, 2013).

In the following section I discuss the more semi-structured post-observation interviews that I conducted with the participants.

4.5.4.3 Field notes

One of my main activities was writing field notes and I gave much consideration to recording observational data. I documented detailed field notes after events had occurred, either during field observations, or as soon as possible after leaving the field to minimise the possibility of forgetting important details (Emerson *et al.*, 1995). I included information on decisions made at the midwifery handover sessions, medical professionals' ward rounds, matrons' ward rounds, the department's morning handover meeting and data from interactions among staff. I made notes of most of the activities occurring in the labour wards and strived to capture most of the issues that related to the research questions. I also used a diary to make comments and personal observations about the events witnessed (Wolfinger, 2002, Larkin, 2013). I proofread the notes and added any further details at this point. I transcribed the field notes electronically the same evening on my laptop. I generated extensive notes in an attempt to capture all details that contribute to the telling of a story.

The field notes were typed up as an exact copy of the written notes in a word processor immediately after each observation, or during the evening of an observation depending on the prevailing circumstances. I entered all data into a personal computer with a security code for access. All information recorded on the partograph and women's progress notes which revealed elements of assessments and care decisions were included to complement the observations. The partograph and progress notes included in the records were stored as paper copies.

4.5.4.4 Interviews

I conducted most of the interviews following the modified semi-structured interview guide as discussed in section 4.5.6. I used a semi-structured interviewing approach because it was deemed suitable to explore the meanings that underpinned the midwives' behaviours,

perceptions and opinions (Mason, 2002). Interviews were also guided by specific questions that arose during the observations which were significant for elaborating on and clarifying specific decisions relevant to each observation (Hammersley and Atkinson, 1995). I interviewed each midwife participant two to three times after each observation to elicit detailed information surrounding the decisions that had been made during the first stage of labour. Interviews lasted for a period of 1 to 2 hours. Potential difficulties in the environment for the midwives became apparent. I planned to complete individual interviews before the end of a shift while events were still fresh in the minds of all the midwives involved. However, the midwives were under considerable pressure and sometimes could not afford a planned interview on the day of the observation. Therefore, I adapted the interview appointments conducting some interview sessions on the day of observation and others the following day. Women's labour progress notes and partographs were brought to the interview session in case midwives wanted to remind themselves regarding the events surrounding their decisions during the care of a woman in labour.

The interviews helped me elicit descriptions of midwives' behaviours and actions during the observation period to draw out their domain knowledge and understand their in-depth accounts of their perspectives and experiences about decision making (Patton, 1990, Madden, 2010). This is particularly relevant because, with clinical decision making, midwives may not always express their thoughts as they were practising (Arksey and Knight, 1999, Rubin and Rubin, 2005). Thus, the interviews gave me the chance to reflect on and distance myself from tacit knowledge of midwifery decision making during the first stage of labour (Allsop and Saks, 2013). To this end the main feature is the idea that, as a researcher, I was there to learn from the midwives rather than impose an external frame of reference. Therefore, the presentation of myself during the interviews and observations was characterised by Spradley's (1979 p. 34) representation of the researcher's posture as being that "I want to know what you know in the way that you know it ... will you become my teacher and help me understand?"

Most interviews conducted in hospital A took place in a quiet room that was free from interruptions. All the midwives preferred to have the interviews in this room. For hospital B, I conducted interviews in a number of rooms such as a sister's office in antenatal ward which was usually free or unoccupied side ward. The midwives chose venues for the interview sessions. I ensured that the rooms were free from interruptions and that conversations could

not be overheard. Comfortable seating was arranged so that I sat at the same level as the midwife and facing them to ensure eye contact. I felt it was important to set the tone at the beginning of the interview. Before the start of each interview, I gave a clear introduction and reviewed with the midwife the purpose of the interview. I went through issues of informed consent, anonymity and confidentiality, and the use of a digital recorder (Burns, 2000). All the interviews were digitally recorded with an Olympus DSS recorder version 7. The recorder was placed on a table to the side of the researcher out of the direct line of vision of interviewees. I always explained focus of the research and emphasised that I was not auditing the quality of midwifery care but my interest was to understand midwifery decision making during the first stage of labour.

I did not take notes during an interview because I found this distracting to the face-to-face communication. I compiled field notes soon after an interview session, often in a private space within the labour ward. I recorded the interviews after getting consent from the midwife participants to ensure that no important issues were omitted (Marrow, 1996, Bryman, 2008, Kvale, 2007). The interviews varied in length from 1 to 2 hours. Because of the trust and rapport established during the field work, the interviews were truly conversations with a purpose (Spradley, 1979) with the midwife participants demonstrating their trust in me by being very open in their discussions. I established rapport and trust during field work which allowed the free flow of information to access authentic data (Mason, 2002, Hunter, 2007). I conducted the interviews in the local dialect because of the problems identified during the pilot study.

The process of interviewing midwives did not seem to cause any 'problems' with the midwives, in fact, the interviews seemed to be a positive experience for them as they certainly were for me. The midwives seemed to have found a medium for expressing the challenges they experience when providing care to women in labour. At times they could digress in their discussions explaining issues that did not relate much with the observation or decision making *per se*. I gave them the chance to express their feelings but tactfully brought them back to the topic of discussion. As acknowledged in section 4.4.3.1, the midwives knew my personal identity, and this could have affected our interactions. As I sought to draw on my own experiences and perceptions reflexively, I also ensured that I did not impose my own constructions inappropriately (Mason, 2002).

Translation issues

The same process of translation and back translation, as used for the interview guide, was also used for the interview transcripts for the main study. I translated and transcribed the digitally recorded data and a sub-sample of translated transcripts was translated back into vernacular by an independent translator and compared with the originals to check for any problems in translation. Back translation can improve the reliability and validity of data (Chen and Boore, 2009). The translator compared the original (audio files from the midwives' narratives) and the back-translated version to evaluate the equivalence between source and target versions of the transcripts (Chen and Boore, 2009). This exceedingly expensive process in terms of time and cost was well worth the investment for this research in order to rule out any inaccuracies and inconsistencies in data.

4.5.4.5 Documentary evidence

Documentary evidence was gathered that helped understanding of the midwifery decision making and the culture of their working practices. The documents analysed included the documents used during care of the women in labour that influenced the midwives' practices, for example the partograph of the women being cared for by the midwives under observation. This provided the necessary information regarding the various assessments and care decisions the midwives made during the first stage of labour and how they arrived at their decisions. The information documented within these documents were considered relevant to an interpretative understanding of the midwives' decision making. In addition, I used these documents to clarify points in the interviews. I made copies of the documents and showed the midwives so that I could encourage them to elaborate on various points.

4.5.4.6 Data management

Organising the data was considered to be one of the first steps in data analysis in order to work through the data systematically (Madden, 2010). In addition, Madden (2010) argues that analysis and interpretation of data do not just spring up from data sets. I began data analysis at the time of data collection with ideas emerging from the observations through noticing patterns of meaning and issues of potential interest from the data, and from discussions with individual midwives during follow-up interviews.

The field notes were transferred onto a word processor immediately after each observation or during the evening of an observation depending on the prevailing circumstances. I entered all data onto a personal computer with a security code for access. All information recorded on the partograph and women's progress notes which revealed elements of assessments and care decisions were stored as paper copies.

I transcribed each interview verbatim. I listened to the digitally recorded files again, made some corrections and wrote reflexive notes. This familiarity with the data was important because it allowed for close interaction with the data and facilitated identification of emerging themes. The process of listening and transcribing digitally recorded files was exhausting and time consuming but at the same time crucial in gaining close understanding of midwifery decision making.

As a novice researcher I had little experience in managing data. Before the study, I received training in the use of the programme NVivo 10, data analysis software for organising, sorting and coding text-rich data, which I subsequently used to manage the data, organise my analytical thinking and store documents related to the research.

This section discussed the use of participant observation, semi-structured interviews, filed notes and documentary evidence. It was a unique and challenging undertaking. It required use of flexible and adaptable approaches to achieve the research aim. The labour ward setting presents a challenging environment for conducting research. However, undertaking this research has justified the importance of understanding, accommodating and adapting to such challenges in order to develop the body of knowledge for midwives working in this field. Whilst it has been argued that researching in one's own field is appropriate (Robson, 1993), the difficulty of managing competing roles of midwife and researcher are not to be underestimated. The midwifery behaviours, feelings and authentic reactions experienced and observed in the field could not have been easily replicated by a researcher from another background. Most importantly, being a midwife and lecturer of midwifery placed me in a unique position to undertake this study; the one which will add essential knowledge to the field of midwifery practice currently lacking understanding of the midwifery contribution. In the following section I discuss how I analysed the data for this study.

4.6 Data analysis

Although I have presented data analysis as the last phase of the research process, this was not the case in reality; the data was analysed concurrently with the data collection and the process was cyclical. Thorne (2000, p.68) acknowledges that qualitative data analysis is a daunting task and describes it as “the most complex and mysterious of all of the phases of a qualitative project”. I concur with the views shared by Thorne (2000); and reflect on the fears I had that despite immersion into the data through conducting the participant observations and interviews, transcribing, reading and re-reading the data, the interpretation and meaning of the data could not come out automatically. I struggled to articulate the many interesting findings within the data. On the other hand, Strauss and Corbin (1998) assert that the process is rigorous, systematic and reflexive so as to facilitate explanation, understanding and interpretation of the data. Qualitative data analysis often involves the process of sorting, organising, reducing and structuring data in an attempt to bring some order to it (Carter, 2004, Creswell, 2007). Most fundamentally, data analysis is about the representation of social phenomena. In this section therefore, I explicate the process I have undertaken to generate the findings for this qualitative research.

I adapted Ely *et al.*'s (1997) and Braun and Clarke's (2006) principles of category and theme formation to match the study design and my particular skills or limitations in data analysis. According to Ely *et al.* (1997, p.162), the aim of analysis is to identify "relationships, patterns and themes that run through categories". Theme formation from a constructionist perspective is socially produced. The process incorporated the data-driven inductive approach of Boyatzis (1998) because it allowed themes to develop from narratives of the midwives and observational data. Therefore, the analysis I conducted within a constructionist framework did not seek to focus on “individual psychologies, but instead to theorise the social contexts and structural conditions”, that enable the individual midwifery accounts that are provided (Braun and Clarke, 2006, p.14). Ely *et al.* (1997, p.162) describe a process that begins with the identification of "meaning units" within the data: these areas convey significance to the researcher. In my case, the meaning units were derived from a variety of sources and the process was complex because I triangulated the data.

4.6.1 Immersion in the data

The process of familiarisation with data began much earlier since my data collection and analysis were undertaken concurrently. The entire processes of gaining entry to and familiarising myself with the research settings in themselves provided useful data. I started formulating my thoughts about context, work practices and interactions and maintained some comments and analytical memos.

Similarly, I began analysing field notes, and transcribing interviews, diaries and documents while still in the field. During interviews, as the midwives related their thoughts and experiences, I was continuously involved in exploring and analysing their narratives. I developed the analysis by immersing myself in and moving back and forth and across the data and began to move away from the centre of the field. I made initial impressions and thoughts when transcribing data. In order to become fully immersed and familiar with the data, I read and reread the field-notes diaries, interview transcripts and observational data on several occasions and made some literal notes. The notes were then read again to identify areas of similarity from the data. These notes contained valuable comments and insights.

Although repetitive reading of the different data sources was time consuming, I concur with assertions by Braun and Clarke (2006) that it was vital to be familiar with all aspects of data as this process provided the foundation for systematic analysis. Repetitive reading of the data before coding assisted me to shape my ideas and identify patterns and helped in identification of emergent themes and interpretations without losing the connections between the original concepts and their context (Bradley *et al.*, 2007). During this phase, I structured my thoughts and ideas for coding; these were utilised in subsequent stages of the analysis.

4.6.2 Coding

Coding is a contested term in the literature and it is open to different interpretations (Carter, 2004). Many authors define the label of a meaning unit as a code (Miles and Huberman, 1994, Coffey and Atkinson, 1996, Ely *et al.*, 1997). According to Coffey and Atkinson (1996, p.32), codes are very useful because they allow the "data to be thought about in new and different ways". Although coding at its most basic level means a way of organising data, I used coding in this research in a more analytical way where I interacted with the data in a way to look beyond the obvious and into the data's inherent complexity. Therefore, this

analytic stage involved identification of "meaning units" (Ely *et al.*, 1997, p.162) within the data which conveyed some significance. The elements which I identified from the observational and interview transcripts were different in lengths and conceptual density which depended on what made sense in the data, meaning that I coded sentences, paragraphs, words or phrases which signified meaning (Graneheim and Lundman, 2004, Ely *et al.*, 1997). During examination of the observational field notes and interview transcripts, I noted things that conveyed meaning and significance. I made notes and brief summaries to describe what the event was, why it happened and how it impacted on the midwives' decision making.

I inductively analysed the data and developed over 200 codes in the first set of interviews and field notes in hospital A. I saw everything as important and was scared of missing critical information. However, this process was overwhelming and time consuming and I felt lost in it. As a novice researcher, I realised that using technology to analyse the data could be a challenging and humbling experience. Although my initial plan was to code data using NVivo 10 software, I realised that to combine learning the coding basics and qualitative data analysis simultaneously was overwhelming. Therefore, I considered assertions by Creswell (2013) that it is the researcher who does the coding and categorising and not the computer programme. I therefore used both manual and computer programme to analyse the data. As a first-time user with inadequate skills, I followed what Saldaña (2009) proposed: conducting initial coding on hard-copy print outs and writing the codes in pen until I gained confidence with the process. This really assisted me to have more control and ownership of the work. After I felt the codes were fairly set from the first five interview transcripts and five observations, I transferred the codes into NVivo 10 and continued with coding the rest of the data while adding emerging codes and returning to the previously coded transcripts to recode.

4.6.3 Categorising the data

The next step involved sorting and arranging the meaning units into broad categories which LeCompte and Schensul (2011) describe as 'bins' where the initial coded data were sorted. This process was done manually outside NVivo 10. This was a descriptive level of the content which is a manifest content of the text (Graneheim and Lundman, 2004). Graneheim and Lundman (2004, p.107) describe a category as a "group of content that shares a commonality". This process helped me to bring some order to the unmanageable volumes of data. I copied a list of the codes from NVivo 10; grouping the ones that fitted together and

labelled the entire group. The ones that didn't fit were left to stand separately. I looked for links between the codes. This process assisted me to recognise relationships, patterns and themes that run through the categories (Ely *et al.*, 1997). Each emerged category was given a label reflecting its content and making sure the categories suited the data. Table 4.3 illustrates the category labelled 'embracing uncertainty': this category includes the midwives' construction of unusual labour as being normal that emerged from the midwives' interviews and observation data. Midwives described several actions undertaken within this category. These actions have been assembled to show the formation of a category from a group of codes (Table 4.3).

Table 4.3: Examples of Emergent Categories from Codes

Transcripts	Codes	Category
<i>"I did not identify a problem, I decided that if it doesn't dilate after some few hours then I would think of other ..."</i> (Odetta, hospital A)	Accepting the normal	Embracing uncertainty: the midwives construction of unusual labour as normal.
<i>"... However, the descent was static at 3/5, but I did not despair too much because the cervical dilatation was progressing well, this time around the contractions were strong ..."</i> (Zione, hospital B)	Variation of a normal labour pattern	
<i>"... I did not identify what was delaying the progress of labour for this woman however, I realised that her admission assessment showed the pelvis was adequate..."</i> (Matilda, hospital B)	Normalising situation	
<i>"... may experience prolonged labour but I believed I still needed to give her time and she could still give birth normally ..."</i> (Monalisa, hospital B)	Tolerance with unusual progress of labour	
<i>"When I assessed this woman she looked younger and smaller ... despite this I still expected that she would have normal labour and birth because the size of the baby was small"</i> (Matilda, hospital B)	Trusting in labour process	
<i>"... I was not worried because the liquor was clear, and there was no presence of caput and moulding indicating good foetal condition. Contractions were still strong, almost all the assessments were normal and this really gave me hope ..."</i> (Mary, hospital A)	Salutogenic thinking	
<i>"... I was not very concerned with this progress because I believed that the woman would progress though the contractions had reduced from 3 to 2 ..."</i> (Linda, hospital B)	Recognition and tolerance of uncertainty	

4.6.4 Formation of themes

After coding and forming some categories from the data I was in a dilemma as to how to move from the divisions in the data to a sense of the whole across the data. Analysis for themes was the next step of the analytic process which Braun and Clarke (2006) identify as ‘searching for themes’ and Ely *et al.* (1997) describe as identifying the essence of the material in the categories. Categories helped to discover some themes by highlighting some relationships between them. Ryan and Benard (2003) identify thematic analysis as one of the most fundamental but mysterious processes of qualitative analysis. Themes in this thesis developed from categories formed from the data. Further consideration of, and reflection on the data facilitated the formation of themes. Therefore, themes were achieved by categorising data and identifying relationships between the categories. I identified most salient themes and those necessary for understanding the essence of midwifery decision making during the first stage of labour. For example, the theme entitled ‘the role of cue acquisition’ emerged from the analysis as a theme because it was central to the relationships between several of the categories. In short, I would state that other categories revolved around it and when analysing the data, it was the theme I went into and out of the most. Figure 4.2 illustrates a visual presentation of the theme ‘The role of cue acquisition’, coloured in yellow and how it relates to the categories in blue colour and the codes in white.

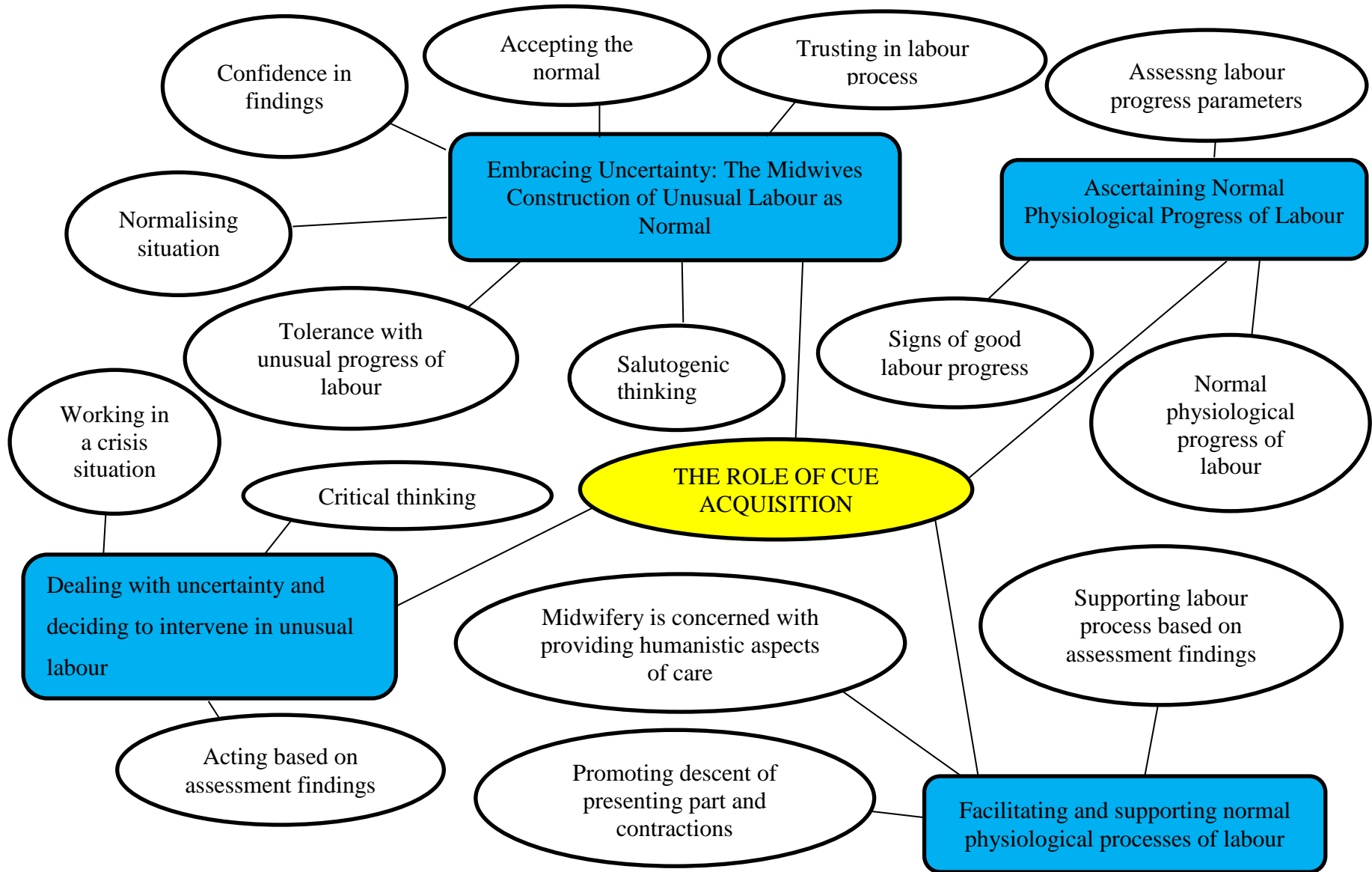


Figure 4.2: An Overview of Category and Thematic Structure

This complex approach enabled me to generate data that were rich and in depth, and allowed the development of understanding during the course of the research. The conduct of ethnographic research in a healthcare setting raises many important ethical issues related to midwives as research participants. In section 4.7, I discuss the ethical considerations that arose and the approaches that were undertaken.

4.7 Ethical Issues and Considerations

Research involving human subjects is subject to ethical considerations which promote respect for the subjects and protect their rights (WMA, 2000). Research ethics were a vital part of the research governance that was followed during conduct of this study. Some of the ethical issues that were addressed, such as gaining ethical approval and obtaining informed consent, are discussed in section 4.5.2. In the widest sense, ethics are concerned with the justification of human actions and the basic principles and concepts that guide thoughts and actions (Beauchamp and Childress, 2001).

4.7.1 Possible benefits and harms of the study

One of the ethical considerations in conducting a study concerns balancing its benefits and risks (Beauchamp and Childress, 2001). There were some benefits for the midwives who participated in this study. Some midwives clearly appreciated the opportunity to talk about midwifery care and the decisions they make during the first stage of labour. The study presented midwives with the opportunity to be listened to and air opinions and views. One of the advantages of 'insider' research is that I represented someone with the capacity to empathetically listen, understand and show concern. Indeed, some midwives said they found the interviews and the whole research process helpful and enjoyable and thanked me for the opportunity. On a wider perspective, I am hopeful that the findings of this research will contribute to robust midwifery decision making during the first stage of labour. This may contribute towards the provision of satisfactory midwifery care and improved women's labour and birth outcomes and experiences.

The possibility existed that midwives would become distressed during in-depth probing interviews that could induce psychological stress or discomfort. These interviews could invade the midwives' privacy as they were to reveal their inner thoughts, attitudes and

behaviour, and this could be detrimental to them (Crandall *et al.*, 2006). In addition, midwives may not open up to provide sufficient information, especially on sensitive issues. I was aware of these concerns and I indicated to the midwives that there was risk of personal upset when discussing experiences. This could be emotional to some of them. I demonstrated significant protection and good communication skills that depicted an eagerness to listen and learn about their work. In addition, I continuously sought on-going consent (Miczo, 2003). In the case of a sensitive or difficult interview, I identified a trusted and experienced independent midwife to refer any stressed midwife for guidance. In addition, there are established mechanisms in place where midwives can seek help without referral in case they experienced distress caused by the research. This approach was meant to help midwives reflect on their practice (Gerrish and Lacey, 2010). Such challenges were not experienced throughout the study.

4.7.2 Confidentiality and anonymity

To ensure confidentiality of the data for both participating midwives and women, I kept all the information securely and created back-up files. The back-up files were kept in a separate secure location to the originals. The original reports and files were stored on a computer with an access code. All hard-copy files were stored in a lockable cabinet and were accessed only by the principal investigator. These will be destroyed as specified by Committee protocols of the University of Edinburgh and the COMREC. All information in hard copies will be shredded while electronic copies will be erased from all electronic devices. I informed the midwives of the need to keep the content of the interviews secret for their own safety. In addition, I enlightened them about their right to decline from answering any questions that made them feel uncomfortable.

I took every effort to maintain confidentiality and data security procedures that helped protect a participant's identity during data collection and analysis. I kept all information pertaining to the study under my strict custodianship and used pseudonyms in the transcripts of interviews and observations. I assured the midwife participants that neither their identities nor the hospital's would be revealed in publications arising from the study.

4.7.3 Professional accountability

My commitment to maintaining midwives' confidentiality was conditional. I was aware that there was the possibility of facing a moral obligation to breach the confidentiality if I observed malpractice during observations. I was obliged to divulge such information from an ethical, professional and personal point of view, and, although this was a requirement, reporting each and every issue would endanger the future of the research. Therefore, I had to make decisions as to when, to what extent and for what purpose I had to intervene. I attempted to find some clarification from the midwifery literature but did not find any. However, from a nursing perspective Casey (2004) highlights the significance of developing a framework for dealing with ethical decisions before beginning a study. Therefore, before starting the field work, I developed a protocol that outlines the process for intervening during the study (Table 4.4). If a situation that threatened a woman's or her baby's life arose, I would have taken appropriate action to address the risk. This was made clear to participants when seeking consent. I also gave the protocol to the ward sister and agreed that I would follow this process to intervene if necessary.

Table 4.4: Ethical Protocol Used for Midwifery Decision Making During the Study

- Discuss the issue with the individual midwife.
- If the midwife adapts her intervention the issue will be considered to be resolved.
- If the midwife does not adapt, in the interest of the mother's and baby's safety the researcher will consult the member of staff in charge.
- If a malpractice happens due to lack of resources, this will be raised as a concern regarding its impact on women's and babies' safety.
- The researcher shall intervene in cases of severe mismanagement where the health of the mother and baby are at risk.

In summary, it is argued that the ethnographic approach has no ethical elements but the approach itself was an ethical commitment from the outset of the research and throughout all the phases of the research and writing. Therefore, I endeavoured to deal with all the responsibilities and obligations that went with forming close human contacts and contracts (Madden, 2010).

4.8 Evaluating the Quality of the Study

One of the important concerns in the conduct of research is how to ensure quality of its processes, procedures and findings (Mason, 2002). Qualitative researchers have argued that rigour of the research permits it to be acceptable and therefore gain the necessary weight to affect changes (Lincoln and Guba, 1985, Atkinson *et al.*, 2001, Polkinghorne, 2007). To this end, I demonstrate to the reader the procedures used in this research to ensure that the methods are reliable and findings are valid (Silverman and Marvasti, 2008).

Nevertheless, there appears to be a lack of consensus within the qualitative researchers in relation to the definition of quality and criteria to assess it (Sandelowski, 1986, Avis, 2005). This also remains a problematic issue because of the wide variety of qualitative research approaches with varying philosophical perspectives which makes it difficult to identify a unified qualitative research paradigm which can embrace and guide all the approaches (Lewis and Ritchie, 2003). To this end, it is argued that different frames of reference are used to assess quality in qualitative research and the strategies used will be specific to and inherent in each methodological approach. Therefore, based on the methodology underpinning my study, the range of tools used to assess quality is acceptable.

It is, however, noteworthy that the procedures used and discussed in this research only reinforced rigour as they were not in themselves a means to achieve the research rigour. Rigour was achieved through systematic application of principles of the qualitative research design. Barbour (2001) argues that reducing qualitative research to a list of technical procedures is rather prescriptive and can be ineffective.

I found compelling the discussion by Hammersley (1992b, p.196) of the ontological and epistemological position of qualitative research such as ethnography using the construct of 'ethnographic realism' which is influenced by idealism (Lewis and Ritchie, 2003). The idea is that there are independent and unknown realities that a researcher can know by getting close to reality; that is getting into direct contact with the participants through participant observation or in-depth interviewing (Hammersley, 1992a, 2002). I accept that the social world does exist independently of individual subjective understanding, but that it is only accessible to us via the respondents' interpretations. In addition, in terms of ontological stance, I acknowledge that personal interpretations are important both in terms of the study

participants' perspectives of reality and in terms of the researchers' understanding and portrayal of study participants' views (Hammersley, 1992b). I discuss Hammersley's (1992b) interpretation of the concepts of "truth" (validity) and relevance as criteria with which to evaluate my qualitative research claims.

4.8.1 Validity

According to Hammersley (2002), an interpretation is valid if it represents precisely features of the phenomena that it is envisioned to describe or explain. Therefore, validity involves identifying the main claims made by a study. Although the concept of subtle realism suggests that there cannot be certainty about the truth of anything but from our knowledge of the world there are aspects about which we have a confidence as to their truth (Hammersley, 1992b). Authors, for example, Noble and Smith (2015) and Sandelowski (1986) have contended that a perfect account of the process used to collect data, the processes used to code and categorise data and develop conclusions can enhance validity. If an external auditor can judge the trustworthiness of the data and the interpretative processes involved in the analysis, this provides an audit trail (Lincoln and Guba, 1985, Sandelowski, 1986) that aids judgements of validity. Therefore, this requires that decisions reached about methodological, theoretical and analytical choices be made explicit within the presentation of a study. Such decisions are made, however, by the researcher and are influenced by the researcher's personal worldview. Therefore, reflexivity can help acknowledge these influences (Hammersley and Atkinson, 1995).

4.8.1.1 Reflexivity and reflection on own perspectives

I used a reflexive approach throughout this study and, to encourage reflexive thinking, I maintained a reflexive journal. This supported the documentation of my reflexive insights, decisions and ways in which products of the research may have been affected by my personal sociocultural background plus my subjective experiences that were intrinsic to the research as identified in section 4.4.3.1 (Koch, 2006, McGhee *et al.*, 2007). This journal also served as a diary of my thinking and progress throughout the research including analytical insights that I did not want to lose.

The interview data offered midwives' interpretations of midwifery practices and decision making during the first stage of labour and is an unbiased presentation of reality in

comparison to my observational data that is more prone to subjective bias. This diary therefore served the purpose of reducing this bias as much as possible. I recorded my interpretations of the interactions and practices that I observed and the field notes were used to stimulate discussion and explanation by midwives. I also documented my interpretations of interactions between midwives and other health professionals that resulted in conflict. I used this to explore further issues of social behaviour within the labour-ward settings.

I also used peer debriefing to help me uncover taken-for-granted biases and assumptions. According to Lincoln and Guba (1985), the purpose of peer debriefing is to inform the researcher of his or her posture and process. For example, in this thesis, through a process of reflection and peer debriefing, I found out that the initial interviews were not generating adequate data. Thus, I revised the interview guide and the subsequent interviews took a more holistic approach. Peer debriefing was done with my research supervisors in the UK throughout the research process, and this provided an objective view of the quality and content of the data collected. I shared all the data transcripts with my supervisors and the insights from peer debriefing and review of transcripts by my supervisors were incorporated during data collection. In addition, peer debriefing in this study occurred after I had presented preliminary findings of this research to a group of expert midwifery lecturers who hold PhDs. During the debriefing meeting, I received feedback, emotional support and some new ideas about meanings in findings. This process increased the likelihood of correcting biases and other problems in data interpretation.

My study aimed at understanding midwives' decision-making processes during the first stage of labour; the flexibility that field work allows appeared very relevant to achieve the aims of my study. This approach enabled me to access midwifery behaviours, actions, thinking and inter-professional relationships, and focus on how the context and culture influence midwifery decisions. I would argue that a quantitative approach to this study would limit the comprehensiveness of information and interactions with midwives and other health workers. In addition, I enhanced methodological rigour by discussing clearly the research methods and processes in the study. I performed the process of data collection and analysis judiciously in order to produce an audit trail which would allow the reader to evaluate the credibility of the study.

4.8.1.2 Prolonged engagement and persistent observation

Prolonged engagement is a strategy for improving the trustworthiness of qualitative research findings that attempts to reduce the impact of reactivity and respondent bias (Rubin and Barbie, 2010). The ethnographic approach for this study already provided the strategy of prolonged engagement and persistent observation. I was engaged in the research setting long enough (a period of 6 months) to facilitate understanding and appreciation of the context, detecting and accounting for distortions that might be in the data. This was achieved by forming long and trusting relationships with the midwives, conducting lengthy interviews and a series of follow-up interviews with the midwives (Rubin and Babbie, 2010). This increased the likelihood that the midwives ultimately revealed some truths that improved some of the interpretations of the context and practices. In addition, I used prolonged engagement in the field and the development of rapport with midwives which enabled me to return to them or to events to gain a more complete understanding on developing themes, and this enhanced validity for this study (Morse and Field, 1996). I have also used rich and thick verbatim extracts from the midwife participants which assist the reader to make judgements about whether the final themes are true to participants' accounts.

4.8.2 Relevance

According to Hammersley (1992a, p.201) "research should be aimed at producing knowledge that contributes to the problem-solving capacities of some group of people". Hammersley (1992b, p.73) cites two characteristics of relevance of a study as "the importance of the topic" and "the contribution to the literature". Therefore, judgement can be made as to the importance of the topic studied to the substantive field and its relevance to the values and needs of the wider society. As discussed in section 4.9, claims to generalisation in qualitative research are by theoretical inference (Hammersley, 1992b) or analytical generalisation (Silverman, 2001) and not by statistical measures. In this research, I have reported findings of the research in detail; the setting of data collection and findings are presented with data extracts so that the reader can judge the relevance of the interpretations offered. Balance was sought between presenting in-depth data and protecting the anonymity of the setting and participants. The implications of this study are evaluated in Chapter 9.

4.9 Limitations of the Study

In this section I discuss the main limitations identified in this doctoral research study. Acknowledging and discussing the limitations of a study enhances the quality of the research, helps the reader to correctly interpret the study and illuminates opportunities for further studies.

First, qualitative research is criticised for being heavily dependent on the individual skills of the researcher, the researcher presence as an observer and participant in the field may have altered the participant's natural responses and hence this is considered a limitation of the study (Bryman, 2012). Researcher bias may have impacted upon the data, but attempts were made to account for this and minimise its bearing through the use of various forms of triangulation within the study (Bryman, 2012), this was done through the use of a variety of data collection methods such as participant observations, field notes, interviews, diaries and record reviews. These various data sources enabled me to obtain the richness, breadth, and depth of data gathered (Bryman, 2012). In addition, this approach enhanced the interpretive status of the evidence. Furthermore, I dedicated sufficient time in the settings during data collection that should help to validate the interpretations that I make within this thesis. This was a critical approach because it involved building sufficient trust and rapport with the midwives. I was assured that the midwives were telling the truth as they knew it.

Second, there are criticisms in terms of restricting the generalisation of the findings in qualitative research as opposed to quantitative research in which the principle of generalisability is paramount (Bryman, 2012). However, there appears to be a common perception among qualitative researchers that findings of qualitative research are to “generalise to a theory” rather than to populations (Bryman, 2012, p.406). The argument being that it is the “quality of the theoretical inferences that are made out of qualitative data that is crucial to the assessment of generalisation” (Mason, 2002, Bryman, 2012, p.406). In other words, whether there is a possibility of transferring the developed theory to comparable situations. Therefore, the issue is about situational rather than demographic representativeness. Similarly, I conducted this study in two unique hospitals and the findings could not be applied to all hospitals and health facilities without any problems. Therefore, in this study, I have developed a theoretical understanding of Malawian decision making which may be ‘exported’ to comparable situations. Through such exploration, the theory generated

from the analysis of this research may be developed further in other settings in future studies (Yin, 1994).

Third, I acknowledge that as the data collection progressed and the issue of the medical professional's dominance over maternity care emerged, it would have been both interesting and potentially useful to interview the labour ward medical staff to explore their experiences in addition to those of the midwifery staff. Undoubtedly, exploring their views would have been insightful; however, I endeavoured to adhere to my initial study aim which was to explore the midwives' decision-making process and the contextual factors that influence it. This decision was strengthened by the knowledge that midwives are the main providers of maternity care in Malawi, who are present with women in labour more than any other healthcare professionals.

Fourth, I did not examine the accuracy of midwifery decision making and the quality of the outcomes. However, this area of practice characterises a vital part of midwifery decision making that needs further examination in the practice settings. Fifth, there is, within the nursing decision-making literature, evidence that compares the decision making of novice with expert decision makers and illuminates significant differences between them (Benner, 1984, Tanner *et al.*, 1987). Although a comparison of these two groups of practitioners' would provide interesting insights, it was beyond the scope of this study. The perspective of the women in relation to the way midwives make decisions would likewise have been a significant and informative view which I did not set out to explore. This may, however, be examined in future research.

Finally, my background as a midwifery practitioner, midwifery lecturer, my previous experiences and personal interest in the subject area all had some influence on this ethnographic study. Again, through reflexivity, I have identified, acknowledged and made transparent the impact of this prior knowledge and experience within this thesis. I have discussed the process of reflexivity conducted throughout the research process in section 4.4.3.

4.10 Summary of Chapter 4

In this chapter I presented my ontological and epistemological stances and discussed how these have led to the endorsement of a specific methodological approach. Alongside this, the

theoretical perspectives that have informed and shaped these positions have been presented. I have argued for ethnographical approaches to study decision making. I have acknowledged how my status impacts upon the research and how I reflexively dealt with some of the problems encountered. I have clearly defined how the research was conducted including discussing ethical considerations and the methodological rigour for the research. In addition, I have explicitly discussed the limitations of this study. Through conducting this research, I came to realise that there are no clear solutions to some of the challenges encountered during data collection. In addition, some decisions that I undertook were not always governed by what has been addressed in the literature. Some of the decisions mainly depended on morality, creativity and common sense.

In Chapters 6 and 7 I present the findings for this study. However, before presenting these findings, in chapter 5 I introduce two vignettes; one from hospital A and the other from hospital B, to represent themes and findings that emerged from the study. I present 2 vignettes developed from my data. These vignettes represent what I saw, heard and interpreted in the field. I aim to produce a detailed description so that the reader gets a sense of the world of the midwives in Malawi. The vignettes help to contextualise subsequent raw data presented in the chapters.

Chapter 5 : Midwives' Experiences of Providing Care during the First Stage of Labour

5.1 Introduction

In Chapter 4 I analysed the methodological approach undertaken to conduct this study. In Chapter 5 I present two vignettes that I use to epitomise the findings that emerged from the study, they also interpret examples that fully illustrate the context and behaviours of the midwifery decision-making process. I will refer to these vignettes throughout subsequent chapters. One vignette represents hospital A (Mabel, vignette 1) and the other represents hospital B (Zione, vignette 2). I developed these vignettes from data obtained from observations and post-observation interviews with participant midwives as well as from the data in the women's labour records. Drawing on the vignettes, I have extracted issues that demonstrate specific ideas related to the midwifery decision-making process. I have used pseudonyms and alphabet letters to represent the midwives and hospitals respectively in order to maintain the anonymity of the midwife participants and the hospitals they worked in.

A vignette, according to Miles and Huberman (1994, p.81), "is a focused description of a series of events taken to be representative, typical, or emblematic". Tracy (2013) asserts that vignettes are 'embodiments' of an inductive claim that may help readers enter into the author's argument. I have, however, endeavoured to avoid putting words into the midwives' mouths when constructing the vignettes (Miles and Huberman, 1994).

I have used vignettes for various reasons. First, I decided to use vignettes to bring the findings together into an ethnographical account. Specifically, they will provide a means for the midwives to tell their own story, to illustrate the major themes identified and bring contextual vividness that was difficult to produce using other means. In this thesis the vignettes represent what I heard, saw and interpreted. Therefore, I want to produce a description detailed enough for the reader to identify with the characters and story.

Second, while I used primarily theme and category formation to identify the major themes in the midwives' data transcripts, the Zione and Mabel stories remain intact as a major decision-making thread running through the findings as well as a backdrop to the other smaller excerpts from the midwives. These vignettes also serve as means of unravelling the data from

my analysis and describing my etic understanding of the midwives' context and how they made decisions during the first stage of labour. This unravelling of the data is rather unnatural as my interpretations are central to the vignettes; nonetheless it is the intention that the reader can gain a richer understanding of the findings using this approach.

The hypothetico-deductive model framed the analysis of this study; however, the data as illustrated in the vignettes did not provide overwhelming evidence in favour of this single model of decision making. I found that the individual midwifery practitioners did not always go through the steps that are traditionally associated with the rational approach to the hypothetico-deductive reasoning. Implementation of some midwifery decisions seemed to require a deeper understanding of the processes of collective "sense making" by which both explicit and tacit knowledge was constructed and internalised in midwifery practice. To this end, emerging theories such as "mindlines" or "illness scripts" could also explain some of the data in this study.

The midwives seemed to use what Gabbay and le May's (2004) call 'mindlines'. These are collectively reinforced, internalised, tacit guidelines that practitioners apply through learning in praxis. Through their research, in general, practitioners' decision-making, Gabbay and le May's (2004) describes how this knowledge is attained through doing, reflecting and sharing with colleagues in similar situations. Gabbay and le May's (2004) ethnographic research provide evidence of the relative power of alternative forms of knowing in practice and lends support to the identification and synthesis of practitioner's tacit knowledge.

Similarly, the concept of 'illness scripts' has been used to describe how experts organise and utilise their clinical knowledge. 'Illness scripts' are models of clinical reasoning used by experienced practitioners where there is recognition "of particular features of the case" (Higgs et al. 2004 p. 183). These cases are stored in the clinician's memory and used during the reasoning process as clinicians move "from a set of particular observations towards a generalisation" (Higgs et al. 2004 p. 183). Boshuizen and Schmidt (1995) described how an individual's knowledge structure develops as they progress from novice to expert. They suggest that initially clinicians have a knowledge network that allows them to make direct lines of reasoning between different concepts within that network. Schmidt et al. (1990) described this process as "knowledge compilation".

Therefore, the concept of illness scripts contributes to the understanding of decision making by providing an explanation of how Malawian midwives retrieve and apply their knowledge during clinical problem solving. The illness scripts provide a useful theoretical framework for interpreting the finding that Malawian midwives appeared to have an internal representation of clinical problems that led them to expect and search for certain clinical features, anticipate or understand the cause of the problem and express surprise when incoming data was a "mismatch" with their internal representation. I present the vignettes in section 5.2.

5.2 The Vignettes

5.2.1 Vignette 1: Mabel, Nurse-Midwife Technician, Hospital A Labour Ward

It is a chilly, rainy morning on 16 October 2013 and the setting is the labour ward of hospital A. This is a public, tertiary, urban hospital with a large labour ward within an obstetrics and gynaecology department. The department comprises wards and units such as antenatal, paying and non-paying postnatal, neonatal nursery, operating theatre, gynaecology and an antenatal clinic. The labour ward has several sections including an admission area, high-dependency unit, paying and non-paying labour and recovery rooms. The non-paying section is usually full with women seeking free services. The delivery ward has twenty-six labour beds in small cubicles with curtains. The midwives' office is in the direct line of sight to the labour rooms.

I arrive in the labour ward and it looks busy as a group of women is in the admission area, some sitting and some sleeping on the floor. The floor beds are made up of a mattress laid on the floor covered with hospital linen or a woman's cloth. Other women are writhing with labour pains on labour beds in small cubicles with no one attending to them; midwives are changing shifts and doctors are at the morning report meeting. In this labour ward, no matter how hard midwives work, they cannot overcome the daunting reality of a huge volume of work every day. As the ward sister, a 23-year-old, registered midwife states "*the number of women in this labour ward exceeds the ward's capacity and we have floor beds every day because all labour beds are full most of the times*".

The 07.30am shift commences; midwives are arriving at different times and only two midwives have arrived, the handover session begins at 7.40am. I have joined the two

midwives and student midwives. The midwives give a bed-by-bed handover, emphasising details documented on the partograph, in particular gestation, foetal heart rate and cervical dilatation. The unit matron comes in and asks “*has the handover session finished?*” She reads through the handover notes and takes note of particular cases. Setting her eyes on the matron, the ward sister shouts “*Matron! We do not have resources; there are no suturing materials, sterile gloves, aprons and cannulas, please help.*” As a unit manager she is expected to source resources for the ward.

The labour ward is very busy. A total of eight women are labouring in the non-paying labour ward and three in the paying labour ward, some are writhing with labour pains and some shouting for help. One woman shouts ‘*Anesi!*’ (meaning ‘nurse!’ but in a respectable manner), possibly she is about to give birth. Women in Malawi address midwives as ‘nurses’ or ‘doctors’. Today there are eight midwives working in the labour ward, falling short by two to make up the required number of midwives in a day shift. As the unit matron reports “*we need at least ten midwives during day shift to cover all areas adequately.*”

Eleven student midwives are also on duty for labour and delivery clinical experience. The ward sister gets a duty allocation sheet from the notice board and assigns midwives to various work stations. She pairs student midwives with qualified midwives for mentorship. The ward sister hastily picks up a phone in the midwives’ office and calls other wards within the department begging for resources such as cannulas, aprons and gloves.

The morning report meeting is over and doctors are rushing to the labour ward for the morning ward round. None of the midwives, including the ward sister, joins the ward round. The ward sister once reported to me that the relationship between midwives and consultants is not good “*the relationship between midwives and obstetricians is not so good. We do not do ward rounds together because when things go wrong, some doctors talk to us in an impolite manner; they insult us. Intern doctors are good and willing to learn from us, but others do not listen to midwives, they stick to their decisions. Obstetricians threaten the relationship more!*”

Today is a consultant’s ward round, normally termed a ‘teaching ward round’ joined by registrars, intern doctors, intern clinical officers and medical student doctors. At least a consultant is conducting the ward round on this day. I rarely saw consultants conducting ward

rounds, it was mostly registrars or intern doctors. According to the doctors, this has implications on decision making. One junior consultant lamented during a morning report meeting that *“usually there are no regular consultants’ ward rounds and sometimes people do not know what to do because there are no inputs from these consultants.”* The consultants ward round involves discussions about women’s labour status based on midwifery assessments.

Mabel, a newly qualified NMT, volunteered to participate in my research. She had just worked in the labour ward at hospital A for 3 months and this is her first allocation since she qualified from the midwifery training. Today, she is allocated to the non-paying labour ward and has three women under her care including a woman who has just arrived from the antenatal ward. The antenatal ward is one of the wards within the obstetrics and gynaecology department where women with pregnancy complications or in early labour are admitted while they wait for labour to become well established.

The woman is a 38-year-old, gravida 4 para 3, with one living child, at 38 weeks’ gestation. She is escorted to the labour ward by a midwife from the antenatal ward. She looks stable and can afford a smile. Upon arrival at the labour ward, Mabel greets her and settles her in one of the cubicles on a bed with a bare mattress due to the hospital linen shortage. Mabel asks the woman for a piece of cloth saying *“do you have an extra piece of chitenje² to cover the mattress?”* The woman pulls out two pieces. Mabel uses one to make the bed and the other to cover the woman.

The midwife who escorted the woman to the labour ward gives Mabel a verbal summary of the woman’s issues. The report is incomprehensive and Mabel, immediately after receiving the handover, conducts initial assessments. She asks the woman a few questions to rule out danger signs: she asks her if she has any history of bleeding, headache or draining liquor, and she reviews the antenatal and labour records and the findings from a physical examination. Mabel notes that the woman is HIV positive and confirms this with the woman. She performs an abdominal assessment and documents the following: descent was 4/5, foetal heart rate 130 beats per minute and cervical dilatation 4cm. This information seems to provide Mabel with

² ‘Chitenje’ is a 2m piece of cloth used by women to wrap their newly born babies, or it can be worn around the waist.

the overall picture of the clinical and labour status of the woman; she interprets the data and documents her clinical impression which is a low risk multigravida in the active phase of labour. Mabel outlines a plan of care: admit the woman into the labour ward, monitor foetal and maternal conditions, provide psychological support, provide back massage to relieve pain and provide fluids and food.

Apparently the ward round is over and this woman's bed was skipped meaning that she was not reviewed by the medical round. A female intern doctor on call swiftly pops into the woman's cubicle and reviews the woman. She outlines her plan of care too, based on Mabel's assessments; she documents the time for the next vaginal assessment and anticipates that at that time she expects cervical dilatation to be 8cm.

Labour and birth are generally prolonged affairs with lengthy hours of waiting before the woman gives birth. Mabel is busy assessing other women under her care. Portraying a picture of a hurried midwife, she is going to each woman under her care and making quick assessments before moving on to the next one, she is unable to keep up with the women in labour. During the follow-up interview, Mabel explains that it was useful to have the student midwife and the woman's birth-support companion around as she could rarely stay with the woman in labour for long. Mabel indeed rarely stays with the woman in labour, I observe the student midwife providing care to the woman: assisting the woman to ambulate, encouraging her to eat and drink, as well as promoting non-pharmacological pain-relief measures. Mabel acknowledges this during a post-observation interview "*I worked with a student midwife who assisted me in checking foetal heart rate and progress of labour but the woman was left alone at some point because I had a delivery somewhere. I missed some assessments because the student had also gone out for a cup of tea and lunch break.*"

Throughout labour progression, either Mabel or the student assesses foetal and maternal responses to labour by checking the woman's and the foetus's vital signs. Mabel keeps checking labour progression parameters such as frequency, duration and strength of contractions, descent of the presenting part and cervical dilatation through vaginal examination. During the follow-up interview Mabel echoes the assessments she performed and why she had to do them "*I assessed foetal condition through checking foetal heart rate every 30 minutes, checked for the presence of caput and moulding on foetal head*". On the progress of labour she states "*I checked descent of the presenting part, uterine contractions*

every hour and performed vaginal examinations every 4 hours to check cervical dilatation and station of the presenting part, presence and amount of moulding and caput.” She documented all the data on a partograph. During a post-observation interview Mabel states that the partograph helped her because she documented all the data and assessed progress easily.

The partograph was an integral tool for labour assessment and management even among the medical professions. Trying to emphasise the significance of the partograph, one obstetrician lamented during a mortality meeting about lack of skills in using the partograph as contributing to poor outcomes saying *“Ninety per cent of staff in the labour ward should go back to school to learn how to use the partograph. Action lines are not followed at all, and doctors do not document their assessment findings on the partograph, and midwives do not join ward rounds to discuss patient issues! This is a waste of time.”*

As labour progresses Mabel continues analysing the data she obtains on her assessment of labour progression. She reassesses cervical dilatation 4 hours after the first vaginal examination. Mabel looks puzzled when she finds the cervix is still at 4cm dilatation. She adjusts her plan of care to deal with the current labour progress status. She proposes that the woman should walk around, encourages her to take some more food and fluids and provides psychological care. Meanwhile she also briefs the doctor on call on the progress of labour for this woman. Mabel identifies that the slow progress is due to poor uterine contractions. During the observation she told me *“the contractions were not sufficient enough to advance cervical dilatation and descent of the presenting part ...”*

Mabel uses the partograph to observe the deviation from normal labour progress. When she fills in the second vaginal examination findings on the partograph, the labour progress picture shows that it has diverted to the right of the alert line. During a follow-up interview Mabel acknowledges how the partograph helped her to notice the deviation *“the partograph guided me to see that progress of labour was poor because I plotted cervical dilatation findings on the right of the alert line. This picture helped me to decide that I needed to help the woman with further midwifery interventions that is why you saw me discussing with the woman to get out of the bed and walk around to help enhance the progress of labour ...”* Meanwhile, the doctor Mabel had consulted pops in and prescribes oxytocin 2.5 units for augmentation and recommends artificially rupturing the membranes. Mabel does not agree with the decision to

rupture the membranes. She politely reminds the doctor about the prevention of maternal to child transmission of HIV policy. The policy states that membranes should never be ruptured on a woman not anticipated to give birth soon. The doctor insists that Mabel should still rupture the membranes. Mabel decides to consult the ward sister who advises her to rupture because the woman is a multigravida and would give birth within 4 hours. Mabel insists this is not appropriate. The doctor insists but Mabel maintains her stand and says to the doctor *“I cannot rupture the membranes for this woman; it is not proper because she is not in advanced labour yet and above all she is HIV positive and we risk her baby to HIV.”* Mabel further tells the doctor that *“according to my assessments and labour progress of this woman, I know she cannot give birth within the next 4 hours.”* While Mabel is trying to justify why the membranes need not be ruptured, she decides to ask the doctor to conduct the procedure himself and she says *“If you want come and rupture the membranes yourself.”*

During follow-up interviews I asked Mabel to reflect on the incident as she cared for the woman and discuss what was happening in that scenario. Mabel narrated the following *“The policy stipulates that we must as much as possible preserve the membranes in women who are Sero R (HIV positive) to prevent mother-to-child transmission of HIV, but also these days we stopped rupturing membranes anyhow until onset of second stage of labour. In case of poor labour progress then we must be sure that the woman will deliver within 4 hours following the rupture of membranes. Therefore, I never felt it was good practice to rupture membranes in early active labour; imagine the cervical dilatation was only 4cm and the head was still high. Such practices predispose women to unnecessary infections.”* She further confidently said *“I was not refusing to work but giving him a chance and I thought he should do it himself because he thinks the intervention would benefit the woman.”*

Meanwhile, the woman is contorted and crying in agony. Mabel provides a back massage and reassures her that things will be fine. Assessments this time reveal there are three strong contractions in 10 minutes, the cervix has dilated up to 7cm and descent is still at 4/5 above the brim. Mabel interprets this as poor labour progress despite augmentation. Later, the woman is reviewed by a doctor on call and they agree to give her some two more hours of labour progress.

As Mabel continues assessing the woman’s labour progress and the foetal and maternal condition, she discovers that the foetus has become distressed. The foetal heart rate has

dropped to 105 beats per minute and the amniotic fluid is clear. She immediately sets up a cardiotocograph to monitor the foetal heart rate continuously; gives the woman an intravenous push of 30ml of 50% dextrose and suggests to the doctor that he should review the woman. The woman is then reviewed again by the intern doctor who orders the midwife to prepare the woman for a caesarean section.

Vignette 1 in hospital A highlights a number of issues. Mabel paints a picture of a NMT who is on a day shift and is allocated to care for women during the first stage of labour. The vignette illustrates the daunting structural reality of the large workload in the labour ward as well as the problem of restricted resources. Although Mabel has a large workload, she strives to ensure the woman's labour status is assessed throughout the first stage of labour either by herself or by a student midwife. In addition, Mabel ensures the woman receives humanistic aspects of care such as psychological care, food and drinks, and non-pharmacological pain relief. The vignette also illustrates the routine practice of the medical profession of prescribing care and management of women in labour regardless of whether or not their labour is complicated. Mabel demonstrates the capability of challenging the decision of a medical professional to have a woman's membranes ruptured unnecessarily. The routine use and reliance on the interpretation of data documented on the partograph is also highlighted. The vignette further shows an example of Mabel thinking through her actions as a way of helping her organise what she has to do next and deciding what the best course of action might be. She compares the current assessment findings to previous assessments as the labour progress seems to derail. She suggests the woman changes position. She also consults the medical team when she is unsure of what is happening. In the following section I present vignette 2, Zione a nurse-midwife technician in hospital B.

5.2.2 Vignette 2: Zione, Nurse-Midwife Technician, Hospital B Labour Ward

It is a bright Tuesday morning on 11th March 2014 when I drive up to hospital B feeling excited and eager to work with the midwives in the labour ward. Hospital B is a secondary, public-referral, semi-urban hospital with a maternity ward that comprises antenatal, postnatal, nursery and labour wards. The labour ward has three bays with a total of eight labour beds in small curtained cubicles.

I arrive at exactly 07.30am, the normal time for starting a day duty shift. A day duty shift starts at 07.30am and finishes at 05.00pm. The ward looks very busy; all the labour beds are occupied and three women are seated on chairs in the admission area enduring contractions as they wait for attendance. The admission area is a small, improvised space within the labour ward. Everyone looks busy and the day duty midwives have not arrived yet.

One female night duty midwife is assisting a woman to give birth. I quickly join a male midwife who is rushing to the conference room for the morning report meeting. Nothing unusual is reported from the labour ward at the report meeting. I rush back to the labour ward to catch up with a midwives' handover session which began at 07.50am. I am joined by the ward sister, two clinical officers and six student midwives. The midwife giving the handover leads the session and takes us through all the women in the labour ward, explaining the labour status for each woman. Arriving at a certain woman's labour bed, the midwife urges clinical officers present during the round to review the woman because she suspects obstructed labour. The midwife clearly and confidently says *"this woman cannot make it, just consider a caesarean section, I have given her enough time and have done all I could but this labour is becoming obstructed ..."*

Midwifery staffing shortages are at a peak during the data-collection period at hospital B; there is one registered midwife, two NMTs and six student midwives on duty on this day. Apparently one NMT is continuing with a day shift after working on a night shift. According to the labour-ward sister in charge, they would work well with midwifery coverage of four qualified midwives per shift excluding the midwife in charge who would be an overseer of care for the women in labour. Despite the ward sister having made a formal work allocation, I observe midwives working randomly covering all tasks such as admission, monitoring women in labour and assisting women to give birth and receiving babies in theatre. The ward sister assigns one or two student midwives to qualified midwives for mentorship.

Today Zion, NMT is allocated to monitoring women in labour and assisting women giving birth. I plan to work with her on this day. Zion is a 36-year-old who initially trained as a nursing auxiliary and later trained as a nurse and midwife. She has since worked in the labour ward for 3 years. She enjoys working in the labour ward and acknowledged during one of the follow-up interviews that her midwifery training prepared her fully for this work. Zion stated *"The midwifery training helped me because I am practicing what I learnt during the*

training ... we were prepared to meet real issues on the ground and that is what makes it exciting.”

Apparently, Zione notices a woman who looks very distressed with labour pains and decides to attend to this particular woman first. She tries to encourage her. The woman is a 20-year-old gravida 1 para 0 at 39 weeks gestation, she is complaining of lower abdominal pains and backache. Zione greets her and then focusses on reviewing the woman’s antenatal booklet. Filling out the woman’s partograph, Zione asks about her age, date of birth, home address, and whether she has diabetes or hypertension. Zione asks some detailed questions about the woman’s labour history and when she started experiencing labour pains. She rules out the presence of danger signs such as bleeding, draining of liquor and history of fever.

Unexpectedly, another woman arrives from a health centre as a referral due to foetal distress. This complicates Zione’s situation; she has to pause the admission process for the first woman and attend to this new woman because it is an emergency situation. After stabilising the new woman, Zione continues with the admission procedure for the woman in labour. She asks the woman to empty her bladder before performing a physical examination. She listens to the foetal heart beat which is good, and checks the position of the foetus, descent of the presenting part and presence of contractions. Zione explains to the woman that she will perform a vaginal examination to check the status of the cervix, assess her pelvis and also rule out cord presentation. The woman agrees to this.

Zione conducts a subjective and objective assessment aiming at identifying the wellbeing of both mother and foetus as well as ascertaining labour status. During the follow-up interview Zione clarifies the initial assessments she performed on the woman in labour *“when admitting that woman, I focussed on many issues, but the assessment showed the woman had no history of any disease or complications and there were no danger signs, serostatus was NR (HIV Non-Reactive)”*. Zione continues to explain about the physical assessment she performed *“the woman had a pink conjunctiva; the fundus was, of course, broad but with her stature, it showed that she could give birth normally because her pelvis felt roomy for vaginal delivery. I also checked her vital signs and they were normal. The cervical dilatation on admission was 4cm and I decided to admit the woman in labour ward.”*

The practice at the hospital is that when the cervical dilatation is less than 4cm, a woman is sent to the antenatal ward to wait until labour is in the active phase, i.e. dilatation is above 4cm. A woman who has a cervical dilatation of more than 4cm is then admitted to the labour ward for monitoring the progress of labour and birth. Women are not sent home when they are in early labour because of transportation problems and geographical challenges.

Zione documents all the data she obtains from the woman on the partograph. She indicates a clinical impression of primigravida in the active phase of labour. Zione also outlines an initial plan of care which includes admitting the woman to the labour and delivery ward, explaining her findings and the process of labour to the woman for her better understanding and to gain her cooperation, and monitoring foetal and maternal condition as well as labour progress. In addition Zione plans to implement the following midwifery care decisions – encourage the woman to move about and urinate frequently, encourage her to eat and drink, give her back massage to help reduce pain and involve her labour-support companion³ in her care to allay anxiety.

After all the initial assessments, Zione settles the woman on a labour bed and asks her if she has a black plastic paper⁴ and chitenje saying “*Mum! Do you have a black paper and chitenje to cover your bed?*” The woman, without any verbal response, picks up her bag and pulls out two pieces of chitenje and black paper. Zione helps her make the bed with one piece of chitenje then covers her with the other.

Zione proceeds with further assessments and the provision of midwifery care. She reassesses the woman 1 hour following the first assessment. She monitors foetal heart rate and vital signs which were within normal ranges: descent was 3/5 above the pelvic brim and there were three moderate contractions in 10 minutes. During this time the woman verbally complains about painful contractions. Zione reassures the woman and gives her a back massage.

³ A labour support companion is a female relative of the woman in labour who escorts the woman in labour to hospital. Officially, she does not have a designated role but midwives utilise them to assist with the provision of various aspects of support to women in labour such as back massage for pain relief, provision of food and psychological care.

⁴ Women in antenatal clinics are advised to bring a black plastic paper to the labour ward to use as a mackintosh.

During the follow-up interview 6 hours after the observation, Zione reports that she focussed on monitoring the maternal and foetal condition, and progress of labour during the first stage of labour. She states *“I started caring for the woman and concentrated on monitoring maternal condition, foetal condition and progress of labour. I also provided psychological care, pain management and provision of food. I involved the birth support companion by asking her to prepare food for the woman. Of course it was difficult for her to be with the woman full time because of the nature of our labour ward. On foetal condition, the foetal heart rate was excellent and when the membranes ruptured, it showed that the baby was fine because the liquor was clear”* Regarding the monitoring of maternal condition, Zione says she assessed maternal condition during labour *“the pulse rate was normal though it rose a little bit at some point, but it was not alarming. The blood pressure was also normal throughout. ... This showed that the maternal condition was good and I aimed at ensuring normal progress of labour and positive foetal and maternal responses to labour.”* Zione interprets the information obtained from the assessment and recalls her midwifery knowledge as she notes a slight rise in pulse rate and during the interview she tells me the slight rise was *“not alarming because the woman was experiencing labour pains”*. In addition, the respiration rate was slightly higher than normal (34 breaths per minute) and, during the interviews, Zione explained why the respirations were raised saying *“I understood why she had increased respirations. It was because the woman expressed worries if she would give birth normally. Increase in respirations denoted she had anxiety. Therefore, I was encouraging her not to despair and that she would give birth normally.”*

The problem of restricted resources and work overload is an exhausting situation at hospital B and poses a significant challenge to the effective functioning of the midwives during the care of women in labour. The labour ward has one blood-pressure machine which is also used by other wards. At times the machine is not functioning properly. Usually, midwives have to go to other wards to borrow the blood-pressure machine. When borrowing is not possible, blood pressure is not measured. In addition, there is large workload and midwives have to run up and down to provide care to women. During follow-up interviews Zione echoed the problem of restricted resources and its impact *“I made incomplete and intermittent assessments on the woman due to shortage of resources such as B/P (blood pressure) cuff which made me fail to check the woman’s blood pressure at times. We had no blood pressure machine and I could not manage to go round the wards looking for it and leave women alone in labour. Towards the end of care, I did not know her blood pressure reading and I would*

not know if it was raised.” On work overload, she says “There were many other women in labour I had to provide care to and at some point, I had to assist another woman who was giving birth. During this time, I could not monitor the woman.”

On monitoring the progress of labour, Ziona demonstrates her ability to relate issues based on assessment findings. The baseline information indicated that cervical dilatation was 4cm and descent 4/5 above the brim. With such findings, she anticipates that labour will progress normally. During a follow-up interview she says she *“expected normal labour progress and believed the head would descend as well.”*

When Ziona performs a second vaginal examination following the rupture of membranes, the cervical dilatation is 7cm; she plots this on the alert line of the partograph and I observe her talking to herself saying *“this is good progress”*. However, she notices the descent becomes static at 3/5 and the woman has a full bladder. I follow up on what she thinks about this progress during follow-up interviews. Ziona states that she did not despair because cervical dilatation was progressing well and the contractions were strong. She anticipated and predicted a normal outcome with such progress and during the interviews she explained that *“I still expected normal progress and delivery and believed the head would descend as well because contractions had improved”*. Based on these assessments, Ziona formulates and documents the following clinical impression: primigravida in the active phase of labour at risk of delayed labour due to a full bladder. Ziona also documents a plan of care which includes encouraging bladder emptying to promote descent, monitoring urine output and continuing with monitoring the foetal and maternal condition and progress of labour. Ziona justified her rationale for the care she gave and during the follow-up interviews she stated that *“Even though the woman had effective contractions, I thought about the static descent and the fact that she failed to pass out urine. I knew the full bladder could delay the descent that is why I decided to catheterise the bladder.”*

Despite the logical reasoning in managing the progress of labour, Ziona experiences some dissonance after she evaluates the care given. With the next assessment, she expects the cervix to be fully dilated (10cm) but instead the cervix is still at 7 cm dilatation, descent still at 3/5 and the frequency of contractions has decreased to two strong contractions in 10 minutes. When I followed up with Ziona on her reasoning during the care of the woman, she said *“Following catheterisation, I expected the cervix to be fully dilated at the expected time*

of delivery because the cervical dilatation and contractions were enough. Unfortunately, when I performed a vaginal examination, I found that the cervical dilatation was still at 7cm and the descent was also still at 3/5. Furthermore, contractions had reduced from three strong contractions to two strong ones. That is when I decided to augment the labour because I felt the contractions were not forceful enough to effect cervical dilatation and descent of the presenting part.”

After analysing the situation, Zione documents a re-plan of the care in the woman’s records. She documents the following plan to explain the findings to the woman for better understanding, augment labour with 2.5 units of oxytocin in 1 litre of normal saline intravenously to promote uterine contractions, inform the ward sister about the labour status of the woman, continue monitoring foetal heart rate, descent and cervical dilatation, review for the next course of action if the woman does not make further progress. During follow-up interviews, Zione shows that she reflected on the situation and the care given. She said *“I thought about the head failing to descend into the pelvis. This happened despite inserting a catheter. I gave the woman food, ambulation was done, the contractions have been strong but still no progress in descent and the cervical dilatation has also remained static.”* Zione was able to relate the issues and considered the baseline assessment which showed that the fundus was broad but she still believed the woman could have a normal birth because the pelvis was adequate for the size of the foetus. *However, I also considered that my first assessment had shown that despite the fundus being broad, this woman can give birth. Because of this, I told myself that the right decision I can make based on this type of progress was to augment labour rather than expose the woman and her foetus to unnecessary dangers.”* Zione believed that she made the correct decision based on her knowledge and experience. She selected another course of action, deciding to augment the labour. Zione was observed using the partograph to follow the foetal and maternal condition and progress of labour during the first stage of labour. During follow-up interviews she acknowledged how the partograph had helped her track the progress and make decisions along the way, saying *“I documented on the partograph all findings on assessment of foetal and maternal condition, labour progress and care provided to the woman. Therefore, I would look back on the things I had documented, and I was able to see the progress, and it helped in continuation of care. I was able to see progress in cervical dilatation and descent of the presenting part because I was using the partograph. The design of the partograph assisted me to know when to assess the woman.”*

As Zione continues caring for the woman in labour, a clinical officer pops in and reviews the woman's partograph. He confronts Zione saying that she should have reported to him about the progress and the woman should have been prepared for caesarean section. The clinical officer insists that the woman has had static descent for 3 hours and confirms the presence of cephalopelvic disproportion. Zione is not in support of the clinical officer's suggestion. Zione argues that she has assessed the woman thoroughly through the first stage of labour and she has ruled out signs of cephalopelvic disproportion. Zione clearly communicates to the clinical officer that she finds no justification for caesarean section. During a post-observation interview, Zione expressed the opinion that she could not find a reason for letting the woman undergo a caesarean section and that, if the clinical officer insisted, she was going to convince him that a caesarean section would mean causing unnecessary pain for the woman who would give birth vaginally.

Vignette 2 in hospital B highlights a number of issues. The vignette highlights the shortage of midwives at hospital B and its impact on midwifery care. The vignette identifies that the midwife's approach to decision making during the first stage of labour is predominantly based on the assessments she makes and her reasoning as labour progresses. The use of the partograph is also highlighted within this vignette as providing the midwife with some practical benefits in terms of its ease of use and the pictorial overview of labour progress that it provides. The vignette further highlights Zione's reasoning processes basing on the assessments she obtained throughout labour progression. Zione has found ways to manage the workload by involving the support of the birth companion in the care of the woman in labour. Humanistic care decisions and use of birth support companions to participate in provision of humanistic care to women in labour are highlighted.

5.2.3 Summary of Chapter 5

In Chapter 5 I have presented two vignettes, one from hospital A and one from hospital B, which were created to provide a lens through which to illuminate the research findings. The vignettes provide a means for the midwives to tell their own story, to illustrate the major themes and bring contextual vividness to the findings. I will refer to these vignettes in Chapters 6 and 7 where I present the findings of the research.

Chapter 6 : The Midwifery Decision-making Context during the First Stage of Labour

6.1 Introduction to Findings and Discussion

I embarked on this study to help understand midwifery decision-making during the first stage of labour in hospital settings within the Malawian context. In Chapters 3 and 4 I have argued that we do not currently have enough evidence on how midwives make decisions during the care of women in labour. In Chapter 4 I outlined the methodological perspective relating to the study of midwifery decision making during the first stage of labour. In Chapters 6 and 7 I present and analyse my research findings. I discuss the contextual factors impacting midwifery decision making and how Malawian midwives make decisions during the first stage of labour in a hospital setting. I use data segments from the vignettes presented in Chapter 5, direct quotations and field notes to demonstrate the link between the emerging themes and the data. Also, this provides the reader with a triangulated narrative evidence of midwifery decision making. I discuss the findings of each chapter drawing on the wider relevant literature.

In Chapter 7, I analyse the midwifery decision-making process during the first stage of labour. The major theme that was identified, ‘the role of cue acquisition’, has six stages through which the midwives made sense of the data they gathered from women in labour to formulate decisions:

1. obtaining a baseline for labour
2. deciding to admit a woman in the labour and delivery ward
3. ascertaining the normal physiological processes of labour
4. supporting the normal physiological processes of labour
5. embracing uncertainty: the midwives construction of unusual labour as normal’
6. dealing with uncertainty and deciding to intervene in unusual labours.

The examination of the decision-making process is expounded with the analysis of another theme – the role of the partograph, a tool which the midwives use to document the data obtained from assessing women in labour.

In Chapter 6 I analyse the theme: contextual factors that influence midwifery decision making during the first stage of labour in a Malawian context. I ‘set the scene’ of the decision-making context for the midwives in this study and the broad impact it had on their decision making. This provides the opportunity to explore midwifery decision making during the first stage of labour and guide the reader to have a clear picture of the context under which midwifery decision making takes place. I deemed it necessary to first present and uncover the context of midwifery care in the labour and delivery settings of hospitals A and B. Essentially, this unveils the main factors that impacted midwifery decision making and gives a perspective of the midwives decision-making ‘world’, without which one could be making assumptions about the midwifery decision-making context. To this end, I will analyse and discuss three major types of interactions of the decision-making process that were key elements of the context, namely the dominance of the medical profession, the shortage of midwifery staff and the problem of restricted resources.

In the latter part of the chapter, I discuss how these contextual pressures acted as a potent force that worked against woman-centred decision making during the first stage of labour. Although the supposedly woman-centred, decision-making process assumes a “level playing field on which women can state their wishes” Edwards (2000. p.74), this was not the reality in the midwives’ everyday practice where multiple and competing contextual factors marred the decision-making process. This study has highlighted issues of power and organisational structure and how these issues affected midwives’ involvement in decision making and subsequently participation by the women themselves in the decision-making process.

6.2 Contextual Factors and Their Impact on Midwifery Decision making during the First Stage of Labour

From the analysis, it appears that the way midwives work in hospital settings is influenced by the medical professionals who dominate maternity care and decision making during the first stage of labour. While the midwives are considered as autonomous practitioners, capable of providing individualised women’s care during labour (Hussein *et al.*, 2007), the nature of their work environment and the institutional imperative makes this more difficult to achieve. This was more apparent in hospital A than in hospital B.

As identified in Chapter 2, there is a gross shortage of various medical, nursing and midwifery cadres in Malawian hospitals. In addition, there is inadequate funding for the provision of midwifery services which has led to a lack of basic equipment and supplies. Therefore, the overall shortage of midwives, coupled with the lack of basic equipment and supplies appeared to impact on midwifery decision making during the first stage of labour.

Overall, the dominance of the medical professionals over maternity care, and the severe shortage of both midwifery staff and resources appeared to fundamentally influence midwifery decision making during the first stage of labour. I have grouped together these factors which constitute contextual factors impacting on midwifery decision making during the first stage of labour (Figure 6.1)

Chapter 6 addresses to the following research question.

What are the contextual factors that influence midwifery assessment and management regarding labour progress during the first stage of labour?

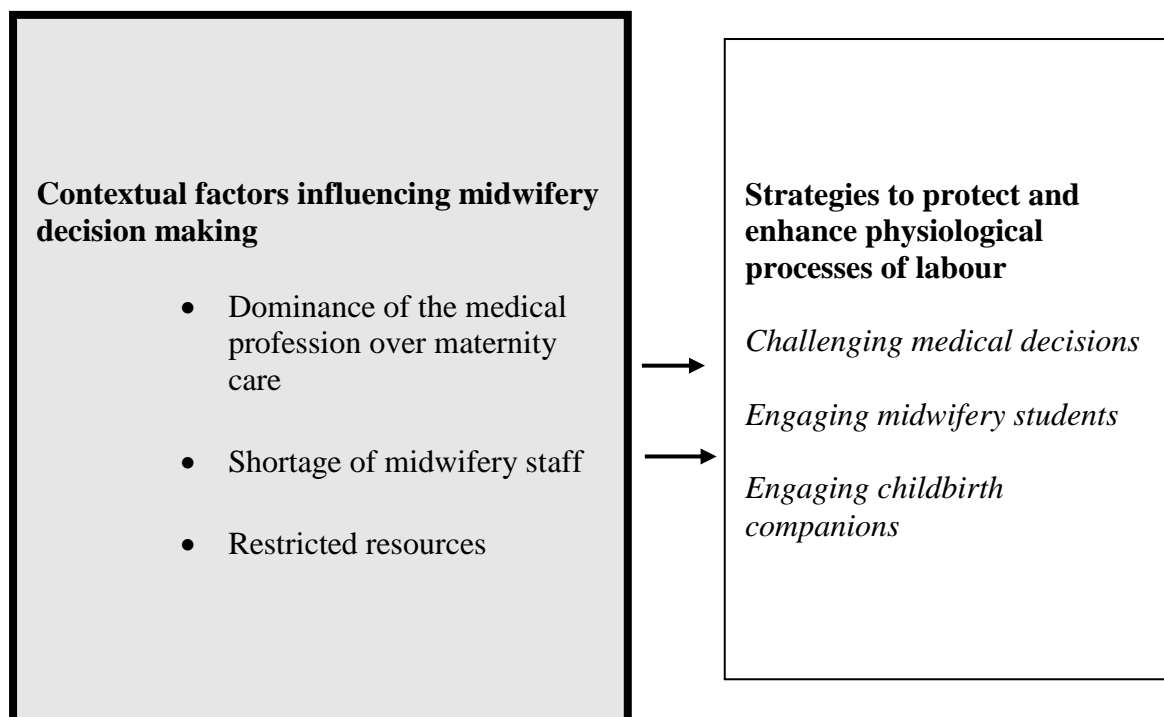


Figure 6.1: Contextual Factors Impacting on Midwifery Decision making

6.2.1 The Dominance of the medical professional over maternity care

The midwives worked in busy maternity units where decision making occurred in an environment that is firmly rooted in a medically dominated model of care. The observational and interview data reflected a midwifery working environment where midwives' and women's decision making and autonomy was undermined by the hierarchical system. According to the midwives, the ultimate decision maker is the medical professional and midwives are expected to work as subordinates. Although both midwives and medical professionals have professional accountability for women in labour, medical professionals seemed to have more authority within the institutional organisations.

The medical professionals in hospital A had a routine ward round every morning and evening, reviewing all the women in labour regardless of whether their labour was complicated or not. In addition, whenever a midwife was providing care, a medical professional on call could potentially become involved in the care. Where a midwife had outlined their plan of support to a woman, a medical professional could come in and suggest some acceleration of labour regardless of the midwife's plan. This could occur without any discussion. This approach to labour care rendered midwives' decision making dependent on the medical professional's approach.

However, the analysis also reveals that despite the medical staff's perception of having overall responsibility for making decisions for all women in labour, some midwives, at times, seemed to openly express their opinions regarding decision making for particular women in labour. Interestingly, midwives from both hospitals A and B, with varying experiences and qualifications, managed to contest some of the medical decisions.

Under the theme 'dominance of the medical profession over maternity care' I consider three subthemes. The subtheme of 'midwifery decision making under medically enforced parameters', discussed in section 6.2.1.1, describes how the medical profession dominated over and influenced midwifery decision making during the first stage of labour and how the midwives were observed being directed to perform regular vaginal examinations by the medical professionals. In section 6.2.1.2 I analyse the subtheme 'powerless to make

autonomous practice decisions', which reveals that midwives appeared to be compelled to comply with the technical approach to childbirth which subsequently affected their decision-making practices. Finally, in section 6.2.1.3, I analyse the subtheme 'challenging medical decisions', illustrating situations where midwives attempted to challenge the medical professionals' decisions.

6.2.1.1 Midwifery decision making under medically enforced parameters

The dominance of maternity care by the medical professionals, obstetric control and the hegemony of a medicalised system were referred to by all the midwives in this study, but these were more explicit in accounts of the midwives in hospital A compared to those in hospital B. The medical dominance over the care of women in labour was a social reality with which the midwives had to contend and its presence had implications for midwifery decision making during the first stage of labour. The midwives reported how the medical professionals retained all the power for decision making within the maternity system. The interview with Maureen, an ENM in hospital A, revealed the following episode which was quite critical for the practice in the unit.

“In this setting the most outstanding problem is that most of the decisions for care of women in labour are made by doctors. Not necessarily because a midwife is unable to take care of a woman. So midwives are found in a position where they know how to care for women in labour but the doctors direct them on what to do.”
(Maureen, hospital A)

This data illustrates that the medical professional was the official lead person who adopted a firm role and control of the midwifery work and decision making. This is akin to suggestions in the literature that organisational culture and power structures may be the greatest barriers to midwives' and women's decision making (Cooke, 2005, Walsh, 2010). Such perspectives are supported by findings from a plethora of other studies which confirm the nature of the environment where the obstetric care providers undermined the midwife's autonomy by retaining complete control of the events surrounding labour and birth (Sleutel *et al.*, 2001, Hyde and Roche-Reid, 2004, Lavender and Chapple, 2004, Freeman *et al.*, 2006, Keating and Flemming, 2009).

Again, studies by Hunt and Symonds (1995) and Stapleton *et al.* (2002) identified the presence of hierarchical power in their delivery suite, with obstetricians at the top, midwives in the middle and women at the bottom. Mary, in hospital A, told me during interviews about the existence of the hierachical structure and how this has regulated the midwifery autonomous practice and decision making.

“We have consultants who are at the highest position and they tell us how to manage women in labour.” (Mary, hospital A)

This narrative from Mary illustrates further the hierarchical work environment and lack of autonomy for the midwives. However, the medical professionals approach labour and birth from a scientific perspective where intervention is the norm and they view the process of labour as a clinical event (Wagner, 1994, Rooks, 1999, Davis-Floyd, 2001). The findings of a study by Page and Mander (2014) show that midwives, providing intrapartum care to women in high intensity hospitals, feel pressure to use technological services that may be unnecessary, provide care in a compressed workload, and take measures to hasten physiological processes to speed up labour and, as a result, increase the turnover in bed occupancy (Hastings-Tolsma and Nolte, 2014). The practice where the medical professionals approach labour as a clinical event and ensure active management by efficiently dealing with the ‘deviation of labour from normal’ was clearly recorded in my field notes.

Alice, a RNM admitted a woman, gravida 1 para 0. All admission assessments showed that the woman was in early active stage of labour. Alice conducted follow-up assessments of the woman throughout the progress of labour and assessment findings revealed labour was progressing normally physiologically. Alice outlined a variety of midwifery support physiological processes of labour including encouraging the woman to ambulate, taking fluids, eating porridge and encouraging frequent bladder emptying.

Two hours following admission, the woman was reviewed by a doctor who planned for a vaginal examination 4 hours later. The doctor stated that he anticipated the cervix to be 8cm by then. He then requested Alice to augment the labour with oxytocin 2.5 units if the cervix would be less than 8cm dilated with no signs of cephalopelvic disproportion or foetal distress. Furthermore, if there would still be no

progress after 2 hours of augmentation, Alice was directed to prepare the woman for caesarean section for safe delivery. (Field notes, hospital A)

This was one of my earliest observational recordings and it identified a theme that would keep recurring during the data-collection period, reflecting the institutional power and control the medical professionals possessed over midwives' working practices and women in labour. It appeared that medical principles primarily determined the midwifery decision making. For example, in the above scenario, Alice promoted the traditional labour support interventions for the woman in labour, such as encouraging the woman to ambulate, take fluids, eat porridge and pass urine frequently. However, the doctor overrides Alice's decisions by redefining the norms of practice and recommends augmenting labour, in a way directing the decision-making path that Alice should undertake. This is akin to the situation reflected in the literature – the medical professionals focus on diagnosis, treatment and morbidity, essentially approaching labour and birth from a scientific perspective (Wagner, 1994, Rooks, 1999, Davis-Floyd, 2001). However, several authors argue that such approaches contradict the ideologies underlying midwifery practice (Rooks, 1999, Crabtree, 2004, Downe and McCourt, 2004, Freeman *et al.*, 2006, Walsh, 2010, Carolan-Olah *et al.*, 2015). To this end, Schmid and Downe (2010) suggest that midwives should promote traditional interventions which are effective and not associated with adverse effects. Examples of such interventions are positioning (Gould, 2000, Chalmers and Porter, 2004, Romano and Lothian, 2008, Pairman *et al.*, 2015) and nipple stimulation (Kadar *et al.*, 1990, Stein *et al.*, 1990). Such practices are considered to be nature's simple plan for labour and birth (Romano and Lothian, 2008). Incidentally, these procedures have been replaced by practices that routinely interfere with the normal physiological process as this comment from Mary, a NMT, reveals that intervention could happen anytime in the process of providing care.

"I managed to support the woman by providing psychological care, providing food and fluids and also made the relevant assessments such as monitoring labour progress. However, the doctors came to review the woman, they did not have much input except telling me to continue monitoring the labour progress up to the stipulated time they had given the woman, otherwise ... I should augment the labour." (Mary, hospital A).

Labour care in the study settings illustrated examples of O'Driscoll *et al.*'s (1993) strict criteria for measuring labour progress and intervention known as the active management of labour; a strategy proposed more than four decades ago, which was claimed to shorten labour and reduce the suffering of women. However, active management of labour is a 'package' of interventions it is difficult to separate out the different effects of its various components. This Dublin protocol includes other interventions such as the intense and constant support of women in labour. The literature also reflects that the practices within the active management of labour protocol are possibly recommended because of the organisational imperative for medical personnel to process women through the systems while exercising power over them and over midwives (Hunt and Symonds, 1995, Oakley *et al.*, 1996). To this end, the WHO (2014) criticises the approach as being highly prescriptive and interventional and one that could undermine women's rights, choices and autonomy as a recipient of care. In the following incident Odetta, a RNM, exemplifies how the midwives were performing regular vaginal examinations under the orders of the medical professionals to check whether labour was within prescribed time parameters or not.

Odetta was caring for a gravida 1 para 0 in early active phase of normal physiological labour. During doctor's ward round, the doctor outlined the following interventions for Odetta to carry out: perform a vaginal examination 4 hours following admission examination. If findings of the vaginal examination indicate no substantial progress, labour should be augmented with intravenous oxytocin 2.5 units. If there is no substantial progress within 3 hours of augmentation membranes must be ruptured and observe for another 2 hours. If still no progress, prepare the woman for caesarean section. (Field notes, hospital A)

These practices illustrate how midwives' decision making was impacted by the medical professionals who expected midwives to be efficient and respect hierarchical orders. Midwives undertook activities such as conducting frequent vaginal examinations outlined by the medical professional within strict pre-set time parameters. The literature reflects that performing vaginal examinations to assess labour progress is strongly supported by the medical model as an objective way of measuring the progress of labour which originated from Friedman's (1954, 1955) studies. However, there are various concerns related to the performance of vaginal examinations during labour, such as the risk of introducing infections

into the uterus, this is a particular concern in low-income countries where gloves are not readily available (Downe *et al.*, 2013). Some women find vaginal examinations distressing and there is a lack of evidence to support and justify their use in normal labour (Devane, 1996, Walsh, 2010, Macdonald and Magill-Cuerden, 2012, Downe *et al.*, 2013); the variations and inaccuracies in the assessment of cervical dilatation means the results are unreliable (Nolan, 2001). The literature also reflects that the practice of conducting frequent vaginal examinations implicitly introduces uncertainty and amplifies risk, eventually disturbing and limiting women from experiencing a normal birth (Scammel, 2011). An observed scenario with Alice, a RNM, who was caring for a woman in labour articulates the perception of the possibility of danger rather than normal progress of labour.

Alice admitted a woman at 09.00am, gravida 1 para 0 at term gestation. Cervix was 4cm dilated and thin. At 10.11am: a consultant reviewed the woman during a ward round. The consultant's plan of care was: next vaginal examination at 01.30pm. The midwife conducted the vaginal examination at 1.30pm and this vaginal examination showed that the cervix was 4cm and thick. The midwife reported the findings and the consultant requested 4 hours of progress whilst on oxytocin 2.5 units for labour augmentation. This time, the consultant expected the cervix to be 8cm by 4.00pm, if not the midwife should prepare the woman for caesarean section. At 4.00pm, the midwife performed another assessment: foetal heart rate 140 beats per minute, cervix dilatation 10cm dilated with mild caput and plus one moulding on foetal head, descent 2/5, contractions three in 10 minutes strong. The doctor ordered caesarean section.” (Field note, hospital A)

This observation from a field note in hospital A illustrates that midwives are sometimes ordered by the medical professionals to perform regular vaginal examinations to ascertain normal physiological processes of labour. These findings are consistent with those of a recent study reported in the literature which confirms that midwives are expected to manage labour and childbirth by undertaking regular vaginal examinations to ensure that labour is safe and ‘on time’ (Scammel and Stewart, 2014). This practice is akin to assertions that such routine surveillance and intrusive examinations are intended to ensure that the woman’s labour is

safe and within an acceptable time frame (Scammel, 2011, Scammel and Stewart, 2014). However, in the case of the above field note, the woman's cervical dilatation was 10cm at the second assessment but the doctor ordered that the woman should go for caesarean section in the absence of compromised foetal and maternal condition. The doctor's decision seemed arbitrary as labour appeared to be progressing well. Current literature suggests that long labour is an unusual situation but not necessarily pathological. Schmid and Downe (2010) suggest that longer-than-normal labours are associated with fetuses in an occipital-posterior position. Therefore, intrapartum care providers require the skill to identify foetal position and assess the cause for long labour, then provide the appropriate remedy.

6.2.1.2 Powerless to make autonomous practice decisions

The analysis revealed that medical control impacted undesirably on midwives as their work practices and decision making came under the control of the medical professionals. Midwives seemed to be compelled to obey and comply with the 'technological paradigm' of childbirth, an approach that is different from the midwifery holistic approach to women's care (Davis-Floyd, 1992, Rooks, 1999, Crabtree, 2004, Mead, 2004, Downe and McCourt, 2004, Freeman *et al.*, 2006, Walsh, 2010, Carolan-Ola, 2015). Mabel, a NMT, demonstrates during an interview how the midwives were expected to be obedient and compliant to the medical decisions.

"... we can put forward our opinions based on what we think is the best approach to take care of women in labour. However, then it is only to a certain degree to which one can practice that, I do not know if I call it 'power.' It is quite frustrating! Usually, it is not the midwife in the end who has to make a decision on how to care for a woman during the first stage of labour. Mostly it is the doctors, and we are expected to implement." (Mabel, hospital A)

The midwives in this study appeared to become victims of patriarchal control and adopted an obstetric approach to labour care. These findings are consistent with assertions by Hastings-Tolsma and Nolte (2014) who point out that midwives lack independence and over their practice when they work in settings where medical professionals profoundly influence their practice. The literature reflects that medical knowledge is always considered superior to midwifery knowledge (McCrea and Crute, 1991, Meah *et al.*, 1996). However, such

understanding impinges upon the midwives' autonomy to make their practice decisions (Rothman, 1984). Beauchamp and Childress (2001) suggest that a person has reduced independence when she or he is in some respect controlled by others and unable to act on the basis of his or her plans. This inability to implement ones plans was sometimes articulated quite strongly, as in the case of Odetta, a RNM.

“As a midwife you really have to cover many things during midwifery training. The doctors should at least give midwives the ability to care for women in the manner in which we can based on our knowledge. They should not necessarily cut our care plans before our maximum level of care.” (Odetta, hospital A)

It appeared that midwives felt they had little autonomy in their work as well as decision making during the care of women in labour. According to Beauchamp and Childress (2001), personal autonomy, at a minimum, is having self-rule where the individual is in control of their own life and free from controlling interference from others and from limitations, such as inadequate understanding, that can ultimately affect making meaningful choices and decisions. However, Pollard (2003) and Marshall (2005) argue that autonomy in midwifery is difficult to define in absolute terms because of the control exerted over the midwifery practice by the medical profession. To this end, Marshall *et al.* (2014) argue that it is difficult to provide woman-centred care in practice, more particularly in large institutions. Other studies suggest that midwives believe autonomy is not possible when practising with other professionals (Meerbeau *et al.*, 1999, Pope *et al.*, 1997). However, this situation where the midwives are not able to exercise their professional autonomy during the care of women in labour, regardless of their knowledge, makes them frustrated as illustrated by Maureen.

“The situation is frustrating because you cannot practice what you know regardless of your knowledge.” (Maureen, hospital A)

This quote from Maureen illustrate that relationships at work are a source of negative emotion. There seemed to be emotional awareness and an acknowledgement of feeling frustrated with the level of care and decision making that the midwives could provide to women in labour. These findings have resonance with assertions by Marshall *et al.* (2014) who argue that relationships between midwives and their colleagues, both in midwifery and in other multidisciplinary teams, are a source of emotion at work. To this end, Fahy (2007)

argues that feeling submissive results in emotional, physical and intellectual weakness. The results of this study are consistent with other international studies on the influence of the work environment on the hospital based midwives (Mackin and Sinclair, 1998, Kirkham, 1999, Hunter, 2004, 2005). These studies found similar themes where midwives faced challenges implementing care based on their ideologies of care for women that resulted in a state of frustration. Unfortunately, the frustration leads to negative consequences as reported by Mary.

“One ends up drawing back, and sometimes it takes off your confidence as a practitioner.” (Mary, hospital A)

These findings have resonance with findings from a study by Lavender and Chapple (2004) who found that consultant maternity units were often perceived negatively by midwives because of the dominance of the medical profession and medicalisation of the processes. Arguably, despite the fact that midwives work within such contested environments, they have a responsibility to proactively resist the medical professional’s practices of amplifying ‘risks’ and find ways to promote normal birth (Crabtree, 2004).

6.2.1.3 Challenging medical decisions

Although the midwives were loyal to the demands of the medical professionals and worked within the medically enforced time constraints illustrated in the preceding text, the analysis further revealed that they were aware of the contradictions between the two professions and they sometimes challenged the medical decisions. The analysis revealed that the midwives were able to negotiate, to an extent, their position within the prevailing context. The midwives were not totally passive, acted on by the medical profession. The data provides some understanding in which some midwives worked to break down and challenge the existing paradigm of maternity care. The midwives were sometimes vigilant by asking about the basis for some of the decisions made for a woman in labour, reflecting an awareness of situations when the normal physiology of labour was being undermined and defined as problematic by the medical profession.

The midwives seemed to attempt to re-establish a body of knowledge that is unique to the culture of midwifery by keeping women in labour away from medicalisation, supporting

them and promoting a healthy and fulfilling birthing experience for the women. Consider for example, Mabel, a NMT who expressed quite clearly during a post-observation interview about the different boundaries of care and expectations between medicine and midwifery.

“During our training, we were never taught to obey everything that a doctor says. As trained midwives, we know all the care and management of women with normal labour Unless if a woman has developed some complication, then we should be able to consult a doctor.” (Mabel, hospital A)

Mabel’s narrative illustrates the difficulties in the coexistence of the medical and midwifery professions in the provision of maternity care within a hospital setting. Midwives at times challenged the intrusion into their territory of care. Kitzinger *et al.*’s (1990, p. 152) study revealed that such disputes between midwives and doctors manifest around “the disputed territory of ‘normal’ versus ‘abnormal’ birth, ‘midwives’ versus ‘doctors’ cases”. From the midwives’ narratives, it seemed reasonable to assume that some midwives adopted what Kitzinger *et al.* (1990, p.152) describe as “drawing up the lines of battle” as exemplified by Mary in the following example.

“It must be up to the midwife’s choice when you think you need consultation. The doctors should not necessarily cut our care plans before we have finished implementing our interventions, imagine they just came and said ‘let’s do this to a woman’. I asked them that we could probably wait since I had just assessed the woman.”(Mary, hospital A)

These findings lend support to the research findings by Kitzinger *et al.* (1990) that highlighted that the coexistence of the midwifery and medical professions, which function interdependently and in a hierarchical manner, is a potential source of conflict. The approach by Mary in the above scenario sharply contrasts scenarios where midwives seemed to function under the medical orders as illustrated by the observational data from Alice in section 6.2.1.1. Mary seemed to believe that labour was normal and, under midwifery jurisdiction, until proven abnormal there should be no intervention or referral to a doctor. This contrasts with the belief of the medical profession whose assumption is that “there is no room for the midwife as an independent practitioner for normal labour, since a ‘normal

labour' can only be recognised in retrospect" (Kitzinger *et al.*, 1990, p.152). The midwives' approach is arguably a positive development towards supporting and promoting normality since "physicians tend to manage labour using relatively narrow criteria for what is normal and intervene when a woman's labor falls outside those criteria"(Rooks, 1999, p373). The following account from Zione in vignette 2 exemplifies midwives' attempts to challenge what was perceived to be an unnecessary caesarean section and advocate for labour to progress normally.

When Zione was caring for a woman in labour, she was confronted by a clinician that the woman should have been prepared for caesarean section. According to the clinical officer, the descent had remained static for 3 hours and that confirmed cephalopelvic disproportion, an indication for caesarean section. However, Zione did not agree with this suggestion. She demonstrated knowledge and skills that she had assessed the woman and ruled out signs of cephalopelvic disproportion. Therefore, Zione found no justification for caesarean section. Zione further explained that if the clinical officer had insisted on taking the woman for caesarean section, she would discuss with the clinical officer and seek a way forward. (Zione, hospital B)

Zione seemed to have achieved a degree of autonomy in her practice where she did not always comply with the medical orders when she considered it inappropriate. Zione openly contributed to decision making by being assertive and challenging doctors' orders. She demonstrated the extent of her knowledge and critical thinking when she expressed to the clinical officer that a caesarian section was unjustifiable for the woman as there were no valid indications. The literature suggests that midwives are always looking for practices to better such trends to facilitate women's positive and meaningful experiences of labour and birth (Carolan-Olah *et al.*, 2015). These findings resonate with assertions by Crabtree (2004) who argues that midwives need to be aware of the overt ways in which the medical ideology frames the midwifery practice. The midwives must seek ways to challenge, resist and reframe such types of practice. To this end, Mead (2004) suggests that midwives must be aware when normal physiology is being undermined and identified as problematic requiring medical intervention. For example, Mabel, in vignette 1, demonstrates how the midwives were at

times aware of circumstances when normal physiology was being undermined and, determined to be problematic, she declined to implement unnecessary interventions.

Mabel declined to implement a doctor's orders who requested her to rupture membranes on a woman she was caring for during the first stage of labour. Mabel knew the woman would not give birth within 4 hours of membrane rupture based on assessments she conducted on the woman. In addition, Mabel was aware of the policy about care of HIV women in labour and the risk being imposed on the foetus by rupturing the membranes. (Mabel, hospital A)

From Mabel's account it seems that when midwives perceived obvious risk, they strive to protect normal birth and continue supporting women in labour. Carolan-Olah *et al.* (2015) highlight that normal labour and birth has major advantages for both mothers and their babies, including the reduced risk of postpartum haemorrhage (Davis *et al.*, 2012) and improved maternal satisfaction (Leap *et al.*, 2010).

In addition, the WHO (2014) does not recommend the use of amniotomy for the treatment of delay in labour. Furthermore, the use of amniotomy is strongly not recommended for HIV-positive women and those with unknown HIV status in HIV-prevalent settings (Wei *et al.*, 2013). These findings support assertions by Crabtree (2004) who argues that midwives have a vital role to play even when medical parameters define labour and birth as requiring medicalisation. The midwives must protect themselves from working as agents for medicalisation. Although medical interventions such as caesarean sections and augmentation of labour may sometimes be necessary to save the lives of women and their babies, these interventions have iatrogenic effects. Therefore, midwives have a role to maintain and facilitate normal birth among women who have neither complications nor risk factors.

Becker and Nachtignall (1992) define medicalisation as the process by which human experiences are redefined as a medical problem. To this end, childbirth is viewed as a medical rather than social event (Crabtree, 2004). However, Crabtree (2004) posits that midwives must strive to resist the need to define normal birth with the concrete medical profession boundaries. Maureen, a NMT demonstrates how firm midwives need to be in order to turn down doctors' prescriptions on medicalisation of childbirth.

“... but if you are a strong midwife, you tell the doctors that ‘no’, particularly for this woman, ‘no’. You cannot do that, and you tell the doctor that I am not giving any pitocin (oxytocin) on this woman.”
(Maureen, hospital A)

This illustrates the strength and confidence some of the midwives possessed in order to work using their power and make decisions for the women and their babies. The midwives took their position as independent practitioners seriously and demonstrated a desire to be professionally responsible for the care of women during the first stage of labour by being assertive, demonstrating confidence and advocating for proper care. To this end, Crabtree (2004) asserts that midwives need to be vigilant and challenge themselves on the basis that they are making decisions and implementing certain actions.

6.2.2 Shortage of midwifery staff

As discussed in Chapter 2, there is a severe shortage of midwives in Malawi. This is mainly a consequence of too few midwives being trained at midwifery training institutions, movement to other occupations and the HIV/AIDS pandemic (Caffrey and Frelick, 2006). Although the nursing and midwifery training colleges have increased their student intake to respond to the gap in numbers of midwives, the country still faces serious challenges of poor retention compounded by internal and external migration (WRA, 2014). Poor midwifery retention is largely due to varying factors such as poor remuneration, lack of incentives and poor working conditions (Caffrey and Frelick, 2006).

As discussed in Chapter 2, the government of Malawi has prohibited out-of-facility births with TBAs by prohibiting them from practising (MOH, 2009b). Following this policy, the hospitalisation of birth is a growing phenomenon in Malawi. The percentage of births attended by skilled birth attendants has increased from 55.6% in 2000 to 87.4% in 2011 (NSO, 2014). As a result there is an increased number of women giving birth in Malawian labour and delivery settings with a limited number of midwives. This situation has resulted in increased workloads and midwives working under difficult situations. Under the theme ‘shortage of midwifery staffing’ I discuss three subthemes. The subtheme of ‘the midwives’ perceptions of the shortage of midwifery staff’, discussed in section 6.2.2.1, illuminates the perception of the midwives on the shortage of staffing and its impact on midwifery decision making. While, in section 6.2.2.2, the subtheme of ‘being so busy and making decisions

under pressure' is considered. This subtheme explicates the behaviour and actions used by midwives to contain the situation in order to support women in labour. Finally, in section 6.2.2.3 the discussion moves on to the subtheme 'focusing on women with imminent birth and women with complications' illuminating the midwives' reactions to the overwhelming organisational factors they experience during the care of women in labour.

6.2.2.1 The midwives' perceptions of the shortage of midwifery staff

During the data collection period in 2012, the number of midwives in hospital A was sixteen while the number in hospital B was ten, the average number of births in hospital A was 9,936 and in hospital B it was 4,000 births per year. On average, the midwifery staffing levels at the hospitals was six to eight midwives on day shift at hospital A and three to four midwives on day shift at hospital B. In each 24-hour period this staffing pattern dealt with an average of 30 deliveries at hospital A and 12 deliveries at hospital B.

The current workforce shortages and the rising number of institutional births in Malawi exacerbate the midwifery difficulties in providing care and making competent decisions during the care of women in labour. Midwives described the pressures they faced in providing care to women in labour because there were too few midwives to cover all the work areas in the labour ward. The following field note from a dialogue with Mary explicates the midwives' perception and impact of the shortage of midwives.

This is my first day in the labour and delivery ward at hospital A. On arrival, I met Mary, one of the NMTs who worked as a ward supervisor on this particular day. The following is the conversation we had.

Mary: How are you today?

Researcher: Thanks, I am good and you?

Mary: I am fine, but today we have a problem in the labour ward.

Researcher: What is it all about?

Mary: There are a few of us, we are only six midwives on duty and it's not possible to have all the allocations covered, I don't know how I

will allocate the midwives? It is always a problem when we are few, and we normally have many women in labour. This means midwives will be running across allocations; it's really a difficult and frustrating thing! (Mary, hospital A)

The field note extract presented above reveals the difficult circumstances under which midwives operated and the emotional toll it exacts. Similar themes were identified in Dykes (2005, 2009) critical ethnography where midwives had pressures of time, staff shortages and rapid client turnover which created emotional work for the midwives. The emphasis was on effective rationing of care rather than engaging in meaningful relationships (Dykes, 2005). The following field note exemplifies an account that I observed where midwives had great difficulty in supporting women in labour, providing physical care and making subsequent decisions because of the increased workload.

Observing Maureen in hospital A providing care to women during labour and birth, There were seven women to one midwife: one woman on induction, five women in labour, and one woman waiting for caesarean section. Mary had to switch around the cubicles in order to assess the women in labour. A student midwife was seen providing some physical and humanistic care to women under Mary's care (Field note, hospital A)

The severe shortage of midwives created a difficult situation and incomplete assessments were done which consequently impacted on the ability of the midwives to conduct informed decision making during the first stage of labour. These findings concur with several other studies from both a western (Sandall, 1998, Smith *et al.*, 2009) and an African perspective (Mselle *et al.*, 2013) and from Malawi in particular (Bradley *et al.*, 2015). These studies highlight that maternity care providers found it more difficult to provide one-to-one care for women during labour and childbirth because of staff shortages. These working conditions appear to frustrate midwives and cause dissatisfaction for both mothers and midwives as depicted in Monalisa's statement.

"There are inadequate midwives at this hospital. As a result, there are few midwives per shift and yet we have many women in labour who require our attention and we cannot give the care which they deserve

or even make appropriate decisions. It becomes difficult for us to provide care and support to women in labour.” (Monalisa, hospital B)

These findings are consistent with themes identified in a meta-synthesis of fourteen studies on hospital-based midwives’ experiences in five European countries by O’Connell and Downe (2009) who found that most midwives were oriented to provide ‘real midwifery’. However, this strategy was often destabilised by large workloads and the burden to provide reasonable care to all women. Midwives lacked the time to provide support to women in labour, assess the physiological progress of labour or support and facilitate normal physiological processes. The following account from Mary, a NMT, shows how the midwives in my study lacked the time to provide care to women.

“The problem is that we have many women in labour compared to the number of midwives allocated to the labour ward. We lack time because one midwife may be assigned to care for seven or eight women in labour at a time. It is not possible to provide adequate care to all these women ... sometimes you are responsible for two allocations because there is no one” (Mary, hospital A)

These findings echo assertions by Hastings-Tolsma and Nolte (2014) who argue that women labouring and giving birth in hospital settings often receive midwifery care that reveals difficult work situations and failure to be ‘with women’ in labour. In contrast to the findings of this study, McCourt and Stevens (2009) suggest that smallness of workload permits the formulation of meaningful relations between midwives and women as well as their colleagues. Midwives from McCourt and Stevens’ (2009) study identified that case-load practice was rewarding as midwives were capable of controlling their time, their relationships with the women and their personal and professional development. This made the midwives feel like ‘real midwives’. Conversely, the midwives in my study were allocated many women to their care, posing significant challenges with regard to providing support and physical care and being ‘with women’ in labour as demonstrated by the comment from Mary in hospital A.

“I would have preferred to stay with the woman and make observations such as monitoring progress of contractions, the descent of the presenting part, and other psychological care. I failed to do this because I lacked time due to increased workload.” (Mary, hospital A)

Mary reflects the clear impact of lack of time and pressure from the increased work load as being one of the main organisational constraints affecting decision making. The midwives felt they lacked the necessary time to optimally assess women in labour and provide support. Holm (1997) asserts that time constraints may lead to impaired perception of the assessment details that may induce the health personnel to neglect a problem without further deliberation. Therefore, lack of time to 'be with the women' in labour impacted on the midwives' performance and ability to meet their professional standards during the care of women in the first stage of labour. Likewise Matilda, in hospital B, expressed awareness that it was her responsibility to ensure that women under her care were assessed and received the necessary support.

"I had a responsibility to look after all the women who were assigned to me: to be assessing the labour progress and condition of the mother and the foetus. It was not possible to provide the actual midwifery care because I was alone." (Matilda, hospital B)

These findings, where there are gaps in the provision of maternity care, have recently been reported in Malawi (Bradley *et al.*, 2015). In Bradley *et al.*'s (2015) study maternity care providers described that such circumstances forced them to take short cuts as exemplified by Odetta, a RNM, in the following example.

"It was difficult for me to provide appropriate care to that woman. I ended up doing shortcuts and performed inadequate assessments. Ideally I was supposed to stay with the woman and provide her with psychological and physical care but this was done in brief. I used that strategy to make sure that I could attend to the other women too ... and this affected decision making as it was difficult to evaluate the woman's current situation." (Odetta, hospital A)

These comments show the negative impact that the current midwifery staffing levels had on the care of women in labour. This is in contrast to the midwifery philosophy of 'being with woman' (Hunter, 2002) and (ICM, 2011) which claims that the key aim of midwifery practice is to assist women in achieving normal birth. To this end, UNFPA (2014) asserts that midwifery care consists of the provision of preventive and supportive care to women with access to emergency care when needed. The failure to provide supportive care to women in labour was expressed by Alice in hospital A.

“It was impossible for me to provide the woman’s psychological, nutritional and other physical needs during the first stage of labour. The workload was just too much to assist the women in labour.”
(Alice, hospital A)

This extract from Alice draws attention to the impact of lack of time for provision of midwifery care and decision making during care of women in labour. In an effort to support women in labour, the midwives seemed to adjust their approach to the care of women in labour in the face of the shortage of midwives. The midwives engaged in rushing through care which facilitated brief support for the women while going about performing other midwifery duties. The follow-up interview account which I conducted with Odetta revealed these episodes.

“We end up doing short cuts; we leave the women without any support or assessing how labour is progressing. All the women required my attention; I decided to do shortcuts in order to make sure that at least I assess each one of them and sometimes there are bad consequences.”
(Matilda, hospital B)

These examples illustrate the real situation under which midwives made decisions during the first stage of labour. Midwives decisions were based on incomplete data and this appears to compromise the support of normal physiological processes of labour which is a significant aspect of midwifery care during labour and birth. The midwives perceived that the shortage of midwifery staff led them to adapt their assessments of and support for women in labour, in order to ascertain that labour was progressing physiologically and to facilitate the normal physiological processes. The midwives engaged in doing short cuts which facilitated brief support for the women, while going about performing their other midwifery duties. The follow-up interview conducted with Odetta revealed the following episodes.

“It was difficult for me to provide appropriate care to that woman. I ended up doing shortcuts and performed inadequate assessments. I used that strategy to make sure that I could attend to the other women ... and this affected decision making as it was difficult to evaluate a woman’s current situation.” (Odetta, hospital A)

The literature suggests that most pregnant and healthy women experience a normal physiological process (UNFPA, 2014). However, when the normal physiological process does not follow a normal course, midwifery assessments and care would provide women with preventive and supportive care with timely access to emergency care when needed. Therefore, support and ‘being with woman’ is crucial to ensure the normal physiological progress of labour as complications are mostly unpredictable and might be life threatening. In contrast, findings by Gagnon and Waghorn (1996) study concluded that even when well-staffed, midwives spent a small amount of time providing supportive care to women in labour.

6.2.2.2 Being so busy and making decisions under pressure

The midwives attempt to provide care and support to women in labour reached its peak when the midwives had to spend valuable time walking in and out of the labouring cubicles so that women could be supported and observed. Midwives commented that the shortage of midwives in the labour and delivery units subjected them to a situation of high work overload demands that led them to: ‘run up and down’. ‘Running up and down’ was the expression the midwives used to explain how they acted to contain the situation, in order to ascertain normal physiological progress of labour and foetal and maternal responses to labour. The following recount illustrates this:

“I have been ‘running up and down’ trying to assist the women in labour. I needed to know how labour was progressing, including the foetal and maternal responses to labour” (Maureen hospital A)

This illustration show how the midwives were constrained by the heavy workload and their effort to ascertain that labour was progressing normally physiologically. The midwives showed that they were terribly busy all the time and overwhelmed with the work in the labour and delivery ward, and they were moving between tasks to assist the women in labour. The emphasis on ‘running up and down’ meant that the midwives lost the whole essence of providing appropriate labour care and support to women in labour. Take Zion for example in the following narrative:

“Considering the type of care that women who are in labour are supposed to receive ... I was supposed to help the women properly by providing support and the various assessments. However, I was just jumping up and down, it was a sad situation for me as a midwife and it compromised the care I gave to the woman.” (Zione, hospital B)

This data illustrates that the midwives were rushing to accomplish required tasks and ensure that every woman receives care, and this compromised the decisions made during the first stage of labour because the midwives seem to be in a ‘panic’ state. Take Linda, a NMT in hospital B, for example.

“What I was doing was that I would check on this woman, and then I would run and check on other women.” (Linda, hospital A)

This situation described by the midwives begs the question as to whether the current midwifery staffing system is helping the women it serves? Can the decisions made by the midwives under these circumstances really be described as always of benefit to the women, and are they being implemented in the best interests of the women? These findings resonate with Thorsen *et al.* (2011) who highlight that the problem of human resources in Africa has resulted in increased and complex workloads for the existing healthcare workers; consequently, this has severely debilitated the healthcare systems and quality of services. Mselle (2013) conducted a study in Tanzania to describe the limitations in the provision of acceptable and adequate quality care. Mselle (2013) has also reported on critical shortages of midwives and how the few midwives available were overwhelmed by the number of women in labour and the delivery wards that needed their support and care. The midwives strived to manage large workloads and strived to provide an equitable care to all women. These findings also lend support to the study by Blaaka and Schauer Eri (2008), conducted to describe how midwives experience their everyday work between a biomedical and a phenomenological belief system in a Norwegian labour ward. Blaaka and Schauer Eri (2008) identified similar themes where it was very difficult for the midwives to find enough time for each woman in labour and this compromised the support women received in labour.

6.2.2.3 Focusing on women with imminent birth and women with complications

The analysis further reveals that because of lack of time to provide support to all women in labour, the midwives re-directed their efforts towards women who were about to give birth and the ones who had complications. They left women, whom they considered as having no complications, to labour without any support; this being their strategy to deal with the increased workload. It was essential for the midwives to make wise clinical decisions about the priority and delivery of care to the range of women for whom they held responsibility. The following accounts provide this evidence.

Observing Linda, who is caring for five women in labour, Linda says she has had a very busy day so far since she has to support all the women in her work allocation. Linda tells me she has to rush to one of the women who screams that she is about to give birth.

(Field notes, hospital B)

Likewise Maureen made similar comments.

“I just had to rush where a woman was giving birth and leave everyone else, that's the strategy! What else can you do?” (Maureen, hospital A)

Where the midwives experienced an increased volume of work, the situation resulted in a limited time available to assess and provide support to the women in labour. Therefore, midwives made compromises in the decisions that they made, they turned their attention and focus towards women who were about to give birth and to the ones who had developed complications. The condition of these women looked more urgent and required more immediate attention than those women they assumed had no complications in labour. Take Alice for example.

“Each midwife had seven women and that affected the assessments and support for women in labour. I ended up running to assist those women who showed signs of imminent birth. It was a challenge for me to

monitor the rest of assessments for all the women, and you know assisting with birth takes quite some time.” (Alice, hospital A)

Prioritising care was seen as a comforting notion for the midwives because of their effective ordering of labour and delivery care demands. As midwives, they used their critical thinking skills to provide care to women in labour according to the priorities in order to save life. This was done at the expense of the women considered to be having normal labour. I would argue that whichever way was adopted reflects failure of midwifery care because women received incomplete, rushed or no labour care and support at all.

Similar themes were identified in a study in Tanzania by Mselle *et al.* (2013) where nurse-midwives often had to assist more than one woman at the same time, making them leave women by themselves half way through labour to take care of another woman who was in acute need of assistance.

On the other hand, the situation of leaving women with uncomplicated labour alone did not imply that everything was dealt with in a satisfactory manner. These women still required support and care, and leaving them without any support was a compromise as complications are largely unpredictable and prompt identification is crucial for the safety of the mother and the baby. The following account from Matilda provides this evidence.

“I ended up doing short cuts; I left the woman without assessing how labour was progressing, and the consequences were not good. I examined the woman on admission and left her to assess other women, by the time I returned I found that the woman had developed foetal distress because she had started convulsing.” (Matilda, hospital B)

These data show that although midwives are characterised as guardians of normal childbirth, this guardianship seems to be failing. Midwives sometimes had no chance of ascertaining that labour was progressing physiologically. Therefore, I would argue that there must be judicious thought given to the shortage of midwives in Malawi to improve the support for women in labour. It is imperative that the midwives provide the highest degree of support for women in labour to improve the women’s labour and their delivery experiences and outcomes.

In the preceding discussion, I have illustrated how midwives dealt with excessive workloads by using some ‘unappealing’ strategies which compromised the quality of care women received during the first stage of labour. The analysis also revealed that this situation was further compounded by the lack of resources to be used during care of women in labour. The analysis led me to conclude that decision making among the midwives was about recognising the normal physiological variations and the precise needs of each labouring women. In this context, the midwives also resolved to ‘run up and down’ in order to look for resources to use in order to ascertain that labour was progressing normally physiologically. The midwives were also observed running within or outside the labour and delivery ward to find supplies or equipment needed for an aspect of assessment and care of women in labour. Due to lack of necessary equipment and supplies, midwives saw themselves as working in challenging environments that hindered their ability to assess women’s labour progress and provide support to women in labour. I discuss the sub theme of restricted resources on the midwifery decision making in the following section.

6.2.3 Restricted resources

As stated in Chapter 2, the allocation of funds to hospitals in Malawi is insufficient for the needs of the population. This insufficient funding has contributed to a lack of the equipment and supplies that are necessary for midwives to discharge their work properly (Malawi Health Equity Network, 2013). The midwives unanimously commented that there is a severe shortage of the resources that are critical for them to execute their duties of supporting the normal physiological progress of labour, and the foetal and maternal responses to labour. The problem of limited resources has been explicitly depicted in vignette 1.

The labour in charge shouted to the matron when she arrived in the labour and delivery about the resources they lacked for use during care of women. She mentioned resources such as aprons and gloves as not being available in the ward. Similarly, the ward in charge also was observed calling other wards begging for resources. (Field notes, hospital A)

Similarly, midwives in the labour and delivery units reflected on the lack of resources that are necessary and essential tools to ensure that they can carry out their midwifery work. The following extracts provide an illustration of this.

“When I was assisting that woman, I needed to assess many aspects to make sure her labour was progressing well. ... I required sterile gloves for performing vaginal examinations but the sterile gloves were not available. ... There was no blood pressure machine as well. We share one BP machine with other wards such as postnatal and antenatal and in the end it gets damaged so easily as a result I did not check the woman’s BPs during labour.” (Zione, hospital B)

Likewise, Alice made the following comments.

“The BP cuffs were not available, maybe there were two BP cuffs but they stopped working and for that matter there was one which we borrow from the high dependency unit and it is a manual machine and it is always on high demand, so it becomes difficult to identify some of the women’s complications.” (Alice, hospital A)

This finding shows that organisational deficiencies operated in the labour and delivery wards of both hospitals A and B, which threatened the midwife's support and assessment of women during the first stage of labour. However, evidence suggests that a midwifery workforce, within a supportive health system, can ably help pregnant women (Smith, 2006, UNFPA, 2014). To this end, the WRA (2014) asserts that midwives’ performance needs to be optimised by enhancing the provision of equipment and supplies. Marshall (2005) highlights that workplace pressures have a negative impact on the midwife's freedom to make appropriate decisions with the woman. For example, in this study the midwife’s energies were focussed on supporting normal physiological processes of labour to facilitate and ensure safe practice. However, because of the lack of necessary equipment, midwives see themselves as working in challenging environments that hinder their ability to assess women’s labour progress, and foetal and maternal responses to labour. The midwives reported that they engaged in running up and down, making travels within or outside the

labour and delivery wards to find supplies or equipment needed for an aspect of the assessment and care of women in labour. Take Maureen for example.

“It was really difficult to assist the woman in time, when she arrived in the labour and delivery ward there were no gloves and I ended up jumping here and there, running to other wards to beg for gloves and I left the woman alone.” (Maureen, hospital A)

Alice made similar comments.

“Imagine the time it took for me to get a foetal scope to check the foetal heart rate. I had to go to the paying ward to find one. Sometimes the doctors put the foetal scopes in their pockets and yet the foetal scopes are already very few ... this contributes to time wastage.” (Alice, hospital A).

These accounts show that the problem of limited resources distracted the midwives from concentrating on the care that supports the physiological processes of labour and delivery. Therefore, this contributed to gaps and discontinuities of care. The midwives reported that the limited supply of resources such as blood pressure machines, and missing and non-functioning equipment required the midwives to constantly travel within and outside the labour and delivery wards to look for resources. Instead of focusing on individualised assessments and care of women in the first stage of labour, midwives were wasting valuable time managing and working around systems that distracted from rather than supported their work. However, the midwives reported that their engagement in making trips up and down the labour and delivery ward or to other wards hunting for resources to use during the first stage of labour led them to become exhausted, and this diminishes the midwives’ desire to help women during labour and delivery, as the following quotation from Mabel illustrates.

“It was difficult for me to provide care to a woman. I had many women under my care and with the shortage of resources, I was under pressure, running up and down and so forth. So because we were few of us I was tired, and I reached a point of saying ‘I don’t know what else I should do, let’s just wait and see what will happen’.” (Mabel, hospital A)

The wards were without essential resources and women were left alone without support as the midwives were running up and down spending precious time looking for the basic resources, leading them to exhaustion. In addition, compromises were made in the decisions that could be made, and women's lives were being put at risk because they could not be monitored properly. Instead of focusing on women's assessments, midwives were wasting valuable time managing and working around systems that interfered with, rather than supported, their midwifery work. Where the activity of looking for resources resulted in limited time available, compromises were made in the decisions that could be made. Midwives reported missing assessments, streamlining assessments and choosing interventions that would be adequate rather than optimal. Take Zione, a NMT, and Alice, a RNM, for example.

“You spend time walking around in search for resources instead providing care to women in labour, for example assessing the women in labour, sometimes you miss complications such as” (Zione, hospital B)

“I am a well-trained midwife and I knew what I was supposed to be doing when I had that woman in labour Since the resources were not there, I had to improvise and do short cuts or miss some other assessments ... and this puts women at risk!” (Alice, hospital A)

These data reveal that the midwives missed assessments and lacked comprehensive assessments because of the problem of restricted resources. However, Walsh (2006) states that in order to support normality and minimise risks, an efficient and effective assessment is required. This approach would ensure the highest standard of women's care and safety in a resource-constrained setting such as Malawi. To this end, Smith (2006) asserts that risks arise when equipment is not available or when equipment fails.

6.2.4 Strategies to protect and enhance physiological processes of labour

The analysis of the data from the preceding sections illustrates that midwives see themselves as working in challenging environments that hinder their ability to assess women's labour progress, and provide support to women in labour. The analysis further revealed that the midwives employed some strategies to protect and enhance the normal physiological processes of labour to make safe clinical decisions during the first stage of labour. For example, 'engaging midwifery students' and 'engaging childbirth companions' seemed to be some of the ways the midwives ensured that the women received support and other humanistic aspects of care to ascertain and facilitate the normal physiological progress of labour. I discuss these engaging strategies in section 6.2.4.1 and 6.2.4.2.

6.2.4.1 Engaging midwifery students

At the beginning of the data collection period for the study in 2012 at hospital A there were forty-one student midwives, and in 2013 at hospital B there were ten student midwives. These student midwives were getting labour and delivery clinical experience in both clinical settings and they were at various stages of their learning experience in labour and childbirth.

Midwives had to engage student midwives to make safe clinical decisions during the first stage of labour. The student midwives were employed to ensure the normal physiological processes of labour when the midwives were overwhelmed with the increased volume of work. I observed midwives contracting student midwives to assist them with providing physical and psychological support to women in labour. The following extract illustrates this.

I observed Odetta delegating a student midwife to be with a woman in labour. Odetta advised the student to promote ambulation in labour, encourage the woman to eat porridge and take fluids and massage the lower back for pain relief. Odetta walked out of the cubicle and entered another cubicle to care for another woman in labour. (Odetta, hospital A)

At 10.00am I observed the student midwife supporting the woman with ambulation, and also giving the woman some porridge to eat (Field note, hospital A)

These narratives confirm that midwives used existing resources such as the presence of student midwives in the clinical area to make sure that women in labour received continuous support. The student midwives seemed to be central to supporting the midwives who were significantly challenged with severe workloads. Student midwives therefore appeared to be working as additional midwifery staff during the first stage of labour. They assisted the midwives in accomplishing their desire to ascertain that labour was progressing normally and that the woman in labour received emotional support. Take Matilda for example.

“There were certain times that I would leave a woman alone to care for other women. I had to delegate the student to be with a woman and check the foetal heart rate, contractions and provide psychological support.” (Matilda, hospital B)

These findings support assertions by Snow (2010) who argues that midwifery students are an effective buffer for women giving birth in highly medicalised hospitals where the midwife is less present to provide continuous support to the labouring women. Conversely, a current study in Malawi by Msiska *et al.* (2014) found that the clinical learning experience was challenging for the students because of gross nursing shortages. Students appeared to be used as a potential workforce. In this study, students reported that qualified nurses viewed them as “additional nursing staff” (Msiska *et al.*, 2014, p.38). However, Msiska *et al.* (2014) argues that the rampant shortage of nurses in Malawi can lead to student exploitation where students are unintentionally being taken as an extra pair of hands.

Again, in the current study, I identified that the midwives delegated their work to student midwives whom they considered as ‘a pair of hands’. Take Mary for example.

“Sometimes when you have a student on your allocation you tend to think that you have a work colleague. Midwives end up doing other things assuming that the student will do the rest of the assessments.” (Mary, hospital A)

A novel finding from this study is that the midwives themselves acknowledge that they view student midwives as team members and consider them to be part of the staff to cover the

increased workload. In addition, midwives seem to acknowledge that students are placed in the labour and delivery ward to learn. However, the pressure the midwives are experiencing to ascertain the normal physiological progress of labour push them to utilise students as another pair of hands. In this case I would argue that student midwives could potentially be providing unsupervised care to women in labour regardless of their ability to do so. This, in turn, compromised women's care and the women's right to be cared for by qualified midwifery staff with the appropriate knowledge and skills.

6.2.4.2 Engaging childbirth companions

Evidence indicates that continuous support for a woman in labour by a health professional or lay person leads to positive pregnancy outcomes (Madi *et al.*, 1999, Aune *et al.*, 2014). In Malawi, supportive companionship for women during labour and birth is a highly acceptable norm among mothers and health professionals (Banda *et al.*, 2010, Kungwimba *et al.*, 2013). Any woman who escorts a woman in labour to the labour and delivery ward becomes a birth companion. The birth companions mostly include relatives of a woman in labour, such as mother-in-laws, mothers, friends, sisters and grandmothers. However, these birth companions are not oriented or trained in advance on how to assist a woman in labour (Banda *et al.*, 2010, Kungwimba *et al.*, 2013).

Midwives in this study realised their role of being responsible for the provision of support to women during the first stage of labour (section 6.2), however, they experienced limitations to provide this function because of midwifery staff shortages exacerbated by volume of work. Engaging birth companions to support women in labour is a common strategy that midwives adopted to ensure that the women received emotional and physical support during the first stage of labour.

Since the birth companions were not oriented on how to assist the women in labour, midwives reported that they engaged in orienting them to help the women during the first stage of labour. Take this quote by Alice, a RNM and Mabel, a NMT for example.

“That woman came with her mother and, I had to teach her how to provide some of the supportive care which I could not manage to do. I taught her how to provide back massage for pain relief; I

demonstrated to her what exactly she should be doing.” (Alice, hospital A)

“I could not manage to be with that woman full time. At least she had a companion and some of the support that I failed to provide I just showed the companion how to do it ... for example on pain relief, I showed her how to do back a massage, giving sips of fluids and porridge. I just demonstrated how to do it.” (Mabel, hospital A)

These extracts indicate that the use of family birth companions during labour is beneficial for the provision of support and assistance to the midwives during the care of women in labour. These findings have also been revealed in other studies conducted in Malawi (Banda *et al.*, 2010) and other countries in Africa (Madi *et al.*, 1999).

Midwives in this study seemed to cherish the services rendered by labour and birth support companions. For example, women in hospital B’s labour were in a shared space and this limited the accomodation of birth support companions. The companions were instructed to stay nearby where they could easily be contacted by the midwives when there was need. Accessing a birth companion to provide other care supported the midwife's work and consequently released time for other midwifery activities. For example, Zione illustrates this.

“I involved the woman’s sister to go and prepare porridge for the woman in labour. I also asked her to help the woman with ambulation outside the labour and delivery ward and I taught her how to provide a back massage when she experiences a contraction. Of course it was difficult for the woman’s sister to be with her full time during labour and childbirth because of the nature of our labour and delivery ward. All the same she assisted with providing some support to the woman.” (Zione, hospital B)

These findings indicate midwives consider the involvement of companions in supporting women in labour as an important aspect of care, although circumstances in the labour and delivery settings prevented them from performing this essential role in full. These findings are consistent with assertions by Hodnett *et al.* (2011) who argue that nurses and midwives may work in short-staffed environments and have simultaneous responsibilities for more than

one labouring woman, such situations prevent midwives from providing sufficient labour support to the women during their labour. Aune *et al.* (2014) found that Norwegian midwives experienced a workload that made it difficult for them to provide support for women in labour.

The analysis also reveals that there is an information gap regarding birth companionship as the midwives had to train and orient the birth companions regarding their role during labour and birth. These findings are in contrast to assertions by Banda *et al.* (2010) who argue that women must be given information about the need for a birth companion and their expected role before reporting to a hospital in labour. Hodnett *et al.* (2011) argue that birth companions from a woman's social network usually have no experience in providing support to women in labour. Maureen, an ENM, illustrates this in the following example.

“The woman's companion helped me provide support to the woman in labour. She assisted with helping the woman ambulate, massage the back for pain relief and provide emotional support. However, at times she did not know what to do and she looked aside leaving the woman alone on the labour bed. Most birth companions behave like that because they do not know what they should be doing; they have not been taught.”(Maureen, hospital A)

These findings resonate with a previous study conducted in Malawi by Kungwimba *et al.* (2013) who identified issues which indicated deficiencies in support rendered to women in labour by the birth companions. The birth companions, as well as the women, lacked knowledge on the role of a birth companion during labour and birth. In addition, some birth companions could not take up their position because they lacked both the physical and psychological preparation for their role. Banda *et al.* (2010) assert that companions who are not willing cannot play the role of birth companion and a woman who needs to be supported cannot benefit from them. In contrast, midwives in this study strived to orient the birth companions to assist them to provide continuous support to women in labour. The midwives perceived that the birth companions assisted them to render both physical and psychological care to women in labour as exemplified in the following examples by Mary, a NMT and Odetta a RNM.

“What made the care for that woman easy was that she had a companion whom I delegated to provide some support to the woman. She was giving some back massage for pain relief, helping the woman to go and urinate ... and to encouraging the woman to eat. It was my duty to ensure that the woman should eat, but her companion helped her to eat.” (Mary, hospital A)

Odetta checked the woman’s vital signs, contractions, descent of the presenting part and foetal heart rate. Odetta advises her companion to give support during ambulation. The companion was observed performing back massage for pain relief and encouraging the labouring woman to take deep breathing exercises. The companion brought porridge and encouraged the woman to eat. (Field note, hospital A)

The midwives’ initiatives to involve the birth companion as part of the caring team reflects their attempts to ensure the woman received support and care during the first stage of labour. These efforts corroborate the WHO (2014) assertions which emphasise that a woman in labour must never be abandoned. The WHO (2014) highlights that a birth companion should be continuously present to provide support to a woman in labour.

To recapitulate, the preceding discussion has described the complexity of the midwifery decision-making context. The analysis has revealed that midwifery decision making occurs within hierarchical contexts with a shortage of midwifery staffing and limited resources for the care of women in labour. It therefore follows that helping women make their own decisions during labour, arguably a fundamental aspect of midwifery practice, is, in reality, no easy task under such contexts. Cooke (2005) asserts that there will always be factors that would work positively or negatively in facilitating women’s decision making.

The focus of this study was not to explore how midwives involve women in decision making during the first stage of labour, however, ‘the woman’ was the central person in the decision-making process that the midwives engaged with. Pritchard (1996) asserts that encouraging choice and involvement in decision making is justified by appealing to the ethical principle of autonomy, which has been described as the central, and possibly most important, principle in midwifery. Midwives have the potential to work through a personal relationship with women.

‘Being with woman’ care is the cornerstone of the new midwifery philosophy that has been adopted in world-wide midwifery discourse underpinning midwifery practice (Kennedy, 2000, Hunter, 2002, Page, 2009, ICM, 2011). There is significant evidence to indicate that involvement of women in making decisions helps achieve a positive birth experience and improve psychological outcomes (Green *et al.*, 1990a, Lavender *et al.*, 1999, Page, 2003). Therefore, considering the importance of involving women in decision making during childbirth, it seemed worthwhile for me to consider how the midwives in this study facilitated this activity. In section 6.2.5, I discuss the implications of the context on involving women during the decision-making process.

6.2.5 Endeavouring to embrace the ‘being with woman’ ideology

“The maturity of an occupational or professional group may be measurable by its members’ ability to select an appropriate model for the situation, the locality, the clientele and the midwife’s philosophy ... force feeding of one particular midwifery model, irrespective of its strength, to a population of midwives is inconsistent with an occupational group’s aspiration and professional status.” (Mander, 2011 p. 315).

During observations and follow-up interviews, it often appeared that it was either the midwife or the medical professional who was in control of the care that a woman received. Besides, it became apparent that although the midwives had become advocates for the women in labour by striving to support them and be with them, challenging medical decisions and assessing labour progress to ensure the absence of physiological decline, they were challenged to get the women involved in decision making. The midwife’s relationship with the woman was important but the women appeared to be passive recipients of care and there was a sense that decision making was not negotiated or shared with a woman in labour. Therefore, I reflected on the observation and interview data I collected to develop some understanding on how women were involved in making decisions about their care during labour. In this section I give a glimpse of how the circumstances under which the midwives worked impacted on their relationship with women in labour.

Under the theme ‘endeavouring to embrace the “being with woman” ideology’, I draw upon the concept of ‘being with woman’ to explain the second professional dogma underpinning midwifery practice. I then explore some of the ways in which the participating midwives co-

created their relationship during decision making with the women they cared for within the contested environment they worked in.

The ethnographic observations which I undertook indicated that, at times, the midwives spent time interacting with the women and birth support companions during the first stage of labour. I gained the initial impression from the early stages of data collection that midwives cherished these relationships despite lacking ample time to spend with the women in labour. The following ethnographic observation of a conversation between Linda and a woman in labour illustrates this.

Linda: "What do you do at home?"

Woman: "Essentially I do not have a formal employment."

Linda: Is it? But I still believe there is something you do apart from not being in formal employment." Laughs!

Woman: "Oh yes, I do various household chores."

Linda: "Ok, so what does your husband do?"

Woman: "He is a tailor, he owns a tailoring shop."

Linda: "That's great! I will come so that he can make a dress for me!" (Field note, hospital B)

Similarly, during follow-up interviews, midwives identified their relationship with women as a friendship. The following interview conversations with Matilda illustrate this.

Researcher: "What do you enjoy about midwifery?"

Matilda: "I really like to care for women in labour. When I speak to them with good low tone voice and a smile as the woman is feeling the pain, I know the pain reduces because the woman sees the midwife as a friend. I know women require that type of relationship so that they should feel as if they are with their relatives." (Matilda, hospital B)

These data extracts illustrate a warm and friendly relationship between a midwife and woman in labour. Such expressions were notable for their warmth and sense of humour. Some

midwives seem to recognise that building a relationship with women in labour is indispensable. Establishing meaningful relationships with women has previously been acknowledged as a vital component of midwifery practice (Pairman, 2006, Lundgren and Berg, 2007). To that end, the midwife–woman relationship has been described in terms of “friendship, partnership and professional servant” (Hunter 2002, p.650). Page (2009) and Dykes (2009) postulate that such relationships are vital to human experience and more particularly during periods of vulnerability such as motherhood.

However, the analysis revealed that while the midwives upheld the wish to be ‘with women’ in labour, they appeared to be bound by the contextual factors in the labour wards which worked against achieving this relationship. Therefore, women were sometimes observed having been left alone without midwifery staff during the first stage of labour because the midwives were extremely busy attending to other women in labour or had decided to take a break. This is exemplified in the following field note when I worked with Monalisa, a RNM.

Today, I am working with a registered midwife Monalisa. Monalisa has four women under her care, and all the women are in active labour. Monalisa was observed working across the women’s cubicles attempting to attend to all the women. Women were observed left in agony for some hours without assessments or attention as Monalisa had to spend more time with one woman who had developed preeclampsia. (Field note, hospital B)

This observation illustrates that the midwives in this study seemed to lack the resources to support women in labour as they had no time to focus on their relationship with the women. Midwifery care is good for women because it concerns women’s needs (Edwards, 2005). However, Edwards (2005) notes that midwifery is under threat from contextual factors that impact on midwifery practice. While midwives support the ideology of being ‘with women’ in labour (ICM, 2011), this was rarely apparent in their practice. The midwives justified their approach by blaming the environment where they worked. In the following extract Mabel illustrates how she wished she had enough time to be with the women in labour.

“I wish I was staying with the woman most of the time to reduce her anxiety. The environment here is very unfamiliar to her home setting

and this sometimes makes the women anxious and they wonder what is happening, but when you are close to the woman all the time and talk to her with kind and encouraging words, it makes labour progress well. The only challenge here is that 'can a midwife afford to be full time with one woman in labour?' where have you put the other women?" Laughs! (Mabel, hospital A)

In this data extract, Mabel provides insights into the midwives' working philosophy suggesting their determination to support women in labour. However, lack of time caused constraints and limited the provision of individualised care and the ability to be with the women in labour. This finding is akin to the findings by Stapleton *et al.* (2000b) who reported about the extra time required to share complex information with women in antenatal care. Pressures of time restricted the information that midwives gave and limited their interactions with women. The study by Stapleton *et al.* (2002a) reported that midwives appeared to be so pressured that women were not given time to speak and were 'robbed' of their voice.

Further to the problem of the shortage of midwifery staff, the analysis revealed that the midwives were obliged to practice under the dominance of the medical professionals during the first stage of labour (section 6.2.1). This obligation threatened the midwives' ability to practice autonomously and focus on their relationships with women in labour. When the midwives adopted the 'with institution' ideology (Hunter, 2004), the concept of 'being with woman' was not recognised and the women were denied any choice in their care during the first stage of labour.

This practice is in contrast to assertions by Cronk (2000) who argued that the relationship between the midwife and the woman is intended to move power towards the woman. For this purpose, Kirkham (2000) notes the difficulty midwives would experience to empower women if they are not empowered themselves. In addition, Page (2009) points out that midwifery autonomy allows the midwife to take into account the woman as an individual in making decisions about labour and birth care. However, medical science has increasingly encroached into the territory of midwifery and midwives are being reduced to the status of obstetric nurses whose practice is determined by obstetricians. Guilliland and Pairman (1995) and Edwards (2005) posit that the medical model has discounted women's knowledge and placed the women outside their own experience, consequently reducing their autonomy. To this end,

Crooke (2005) proposes that a successful partnership occurs when the woman and her midwife exercise autonomy: where the woman exercises her right to choice and self-determination, and the midwife is able, in terms of her professional role and ability, to make decisions independent of others, during the care of women with uncomplicated pregnancy and childbirth.

The analysis also reveals that the participating midwives articulated their position in terms of differences in knowledge between themselves and the women they cared for during the first stage of labour. Therefore, power seemed mostly to remain with the midwives as exemplified by Mary in the following field note.

Mary was observed caring for a woman during the first stage of labour. The woman had been encouraged to pass out urine during labour. She had been passing out little amounts on several occasions. When Mary was performing her next assessments on the woman, she identified a full bladder which she related to the failure of the head to descend. Mary explained the problem to the woman and the need to drain the urine using a catheter, but the woman refused that she would feel pain. Mary explained the following to the woman:

“You have been failing to pass out urine and I believe the full bladder is the one delaying the progress of labour because the head cannot descend. The catheter is meant to assist you drain out the urine so that your baby should descend well and that you should give birth without problems. The woman, though looking uncomfortable, accepted to have the urine drained using a catheter”. (Mary, hospital A)

The data in the above scenario illustrates that Mary provided relevant information which enabled the woman to make an informed decision. Although a shared approach to decision making was adopted where sharing information was considered essential to attain a mutual understanding and agreement regarding care (Kealy and Liamputtong, 2011), on the other hand, Mary seem not to accept when the woman declined draining the urine with a catheter. Mary realised that a full bladder would compromise the woman’s ability to have a normal labour and birth. However, the literature suggests that enforced choice may be considered as

another form of control (Elwyn *et al.*, 2000, Carolan and Hodnett, 2007). Take Monalisa, a RNM, for example.

“Actually, the woman had chance to have an input on decisions made during labour. Women may have their perspective regarding the decisions on care and they do communicate to us, but as a midwife I do weigh what they are refusing and consider the consequences. My responsibility in this case is to explain to the woman so that she understands.” (Monalisa, hospital B)

Monalisa illustrates problems of inequality in the midwife–woman relationship due to disparities in knowledge. However, in order to maintain accountability to the woman, the midwives shared pertinent information thereby showing the woman their findings and intent. Surtees (2003) posits that equality with pregnant women may not be possible when midwives are differently positioned. In particular, Skinner (1999) observes that the different knowledge bases from which the midwife and woman come will affect the partnership. However, the findings of Freeman *et al.* (2003) propose a model that identifies power sharing between women and midwives without them being equal. Freeman (2003) argues that integrating such a model into practice would assist midwives and women to identify and use the differences in their experience and knowledge to achieve shared decision making.

The analysis also reveals that women in Malawi are generally not active in decision making because of a lack of empowerment as identified by Matilda, an ENM in the following quote.

“Generally speaking our women are not empowered to make decisions during labour, as a result, they are mostly passive receivers and they expect us to tell them what to do.” (Matilda, hospital B)

These data reveal that women in labour seem to have little understanding of their role in decision making during the first stage of labour. However, it is worth noting that some evidence suggests that some women prefer passive rather than active involvement in decision making, especially when they consider their pregnancy as high risk (Waterworth and Luker, 1990, Bluff and Holloway, 1994). These women would rather leave decision making to the experts (Harrison *et al.*, 2003). Debatably, this is a different scenario to the Malawian context where the main problem could be a knowledge deficit and the lack of women’s empowerment.

However, the study by Belenky *et al.* (1986) identified women's particular ways of knowing based on their individual life experiences. Arguably, the women's knowledge has been neglected by the dominant intellectual ethos of contemporary society. Therefore, the findings of the study by Belenky *et al.* (1986) has contributed to our understanding of knowledge as a socially constructed phenomenon and one in which women's voices play a significant role.

6.3 Summary of Chapter 6

In Chapter 6 I have argued that various contextual factors (Figure 6.1) directly influence midwifery decision making during the first stage of labour. The study results presented in this chapter reflect a variety of factors and challenges within the context in which labour and birth occur which interact with midwifery decision making during the first stage of labour. In hospital B, the impact of the medical model was lesser than in hospital A. Observational data and follow-up interviews highlighted how midwifery decision making within these settings is characterised by the overwhelming dominance of the medical model of care which mostly approaches labour and birth as a “catastrophe waiting to happen” (Mead, 2004, p.80). Midwives were expected to accept this approach. Medical professionals reviewed women who were under the care of the midwives and intervened in the midwife's care plan. However, this approach has been shown to impinge on midwifery decision making and women's autonomy to make decisions.

As the data demonstrated, the midwives lacked the autonomy to make decisions based on their principles of care and they acquiesced with the norms of the medical profession. The midwives felt disempowered and were sometimes frustrated. It is also important to note that most of the midwives in both hospitals occasionally felt able to challenge some of the medical decisions and advocate for the promotion of the normal physiological progress of labour. At times midwives seemed to demonstrate an overwhelming resilience in dealing with some of the contextual constraints such as the medical dominance over maternity care and the shortage of midwifery staffing.

The findings of the study presented in Chapter 6 further indicate how the organisation of the health system impacts on midwifery decision making during the first stage of labour. The midwives experienced difficulties in assessing women in labour and obtaining parameters they could use to base decisions on, because of the gross shortage of midwifery staff and lack of resources. As a consequence, midwives were placed in very difficult situations in making

decisions during the first stage of labour, as well as limiting their ability to be ‘with women’ in labour. In addition, the decisions they did make were, at times, based on incomplete data. Nevertheless, the midwives developed engaging strategies by working with student midwives and women’s birth support companions to assist in the assessment of women in labour and provide other humanistic midwifery care.

The midwives’ philosophy of being ‘with women’ in labour has been shown to operate at a theoretical level and a number of issues have been illuminated and discussed. Overall, the data illustrates that the midwives attach some significance to their relationship with women in labour. However, a variety of contextual factors threatened the building of such relationships between midwives and women in labour. The busy nature of the labour and delivery settings has been singled out, as well as the large workloads, the insufficient resources and the medical profession’s dominance over maternity care, as contributing to the midwives’ difficulties in engaging with women during the first stage of labour. To this end, the focus on the midwife–woman partnership model in a Malawian context shows that it is far from being equal.

In Chapter 7 I present and discuss the second part of the findings addressing the major theme of the decision-making approach that the midwives engaged with as they cared for women during the first stage of labour.

Chapter 7 : Midwifery Assessments and Management Decisions During the First Stage of Labour in a Hospital Setting

7.1 Introduction

In Chapter 6, I analysed and discussed midwifery decision making with regard to the subthemes of ‘dominance of the medical professional over maternity care’, ‘gross shortage of midwifery staffing’ and ‘restricted resources’. These comprised the multiple and complex contextual factors that influenced midwifery decision making during the first stage of labour in the hospital settings. I illustrated that midwifery clinical decision making was not a single process as it was always interacted on by a range of contextual factors. Nonetheless, the midwives demonstrated an approach in which they oriented their decision making when they had the chance and freedom to manage some situations. During these situations, the midwives gained the opportunity to assert their professional knowledge and decision making although they still worked within the constraints of the contextual issues.

In Chapter 7, therefore, I examine the assessment and management decisions that the midwives engaged in during the first stage of labour. The analysis of my data provides an improved understanding of a six-stage process of how the midwives drew upon their fundamental skills in to assess labour progress, drawing out salient details to inform their clinical decision making from the time a woman was admitted in labour. I have conceptualised this 6-stage process as the ‘role of cue acquisition’. The following are the stages of the role of cue acquisition.

1. a baseline for labour
2. deciding to admit a woman to the labour ward
3. ascertaining the normal physiological progress of labour
4. supporting the normal physiological progress of labour
5. embracing uncertainty: the midwives’ construction of unusual labour as normal
6. dealing with uncertainty and deciding to intervene in unusual labour.

I discuss the role of cue acquisition in section 7.2. Following on from the discussions related to the midwives decision-making approach, in section 7.3 I consider the role of the

partograph in midwifery decision making during the first stage of labour. The midwives utilised the partograph as a tool for the management of labour when undertaking assessments of women in labour and the tool appeared to inform their clinical decision making. The findings are discussed within the context of current evidence.

7.2 The Role of Cue Acquisition

“Cue acquisition” is defined as the information-gathering stage during the process of clinical reasoning (Elstein and Bordage, 1978). According to Elstein and Bordage (1978), information is obtained by the clinician from a variety of methods, including taking a history, performing a physical examination or administering laboratory tests, and the features from these assessments have an impact on the eventual decisions. “Cue acquisition”, alongside correct cue interpretation, is closely associated with diagnostic accuracy (Elstein et al. 1978). There were no other definitions on the “cue acquisition” identified from the literature and the description by Elstein and Bordage (1978) seemed to be the adopted understanding currently available in the literature.

The midwives’ data acquisition strategies in this thesis have high correspondence with the cue acquisition stage of the hypothetico-deductive reasoning model and it provides a substantive elaboration on this concept (Higgs and Jones 2000). This current study concurs with the hypothetico-deductive model, proposing that midwives’ decision making begins with the gathering of data or cues about a woman’s labour situation. The midwives observed and assessed the women in labour to collect cues. They used the cues to seek patterns within the information they were gathering. Therefore, the midwives classified the cues as to whether they supported, refuted or did not contribute towards the provisional hypotheses. To this end, I found cue acquisition as the initial component of the hypothetico-deductive reasoning process to be an integral part of the midwives decision making process in this thesis. It appeared to be a useful characteristic because the midwives based the diagnosis of the progress of labour on the assessment of current labour progress cues that had a bearing on the labour progress management decisions. The stages of the role of cue acquisition are outlined in Figure 7.1.

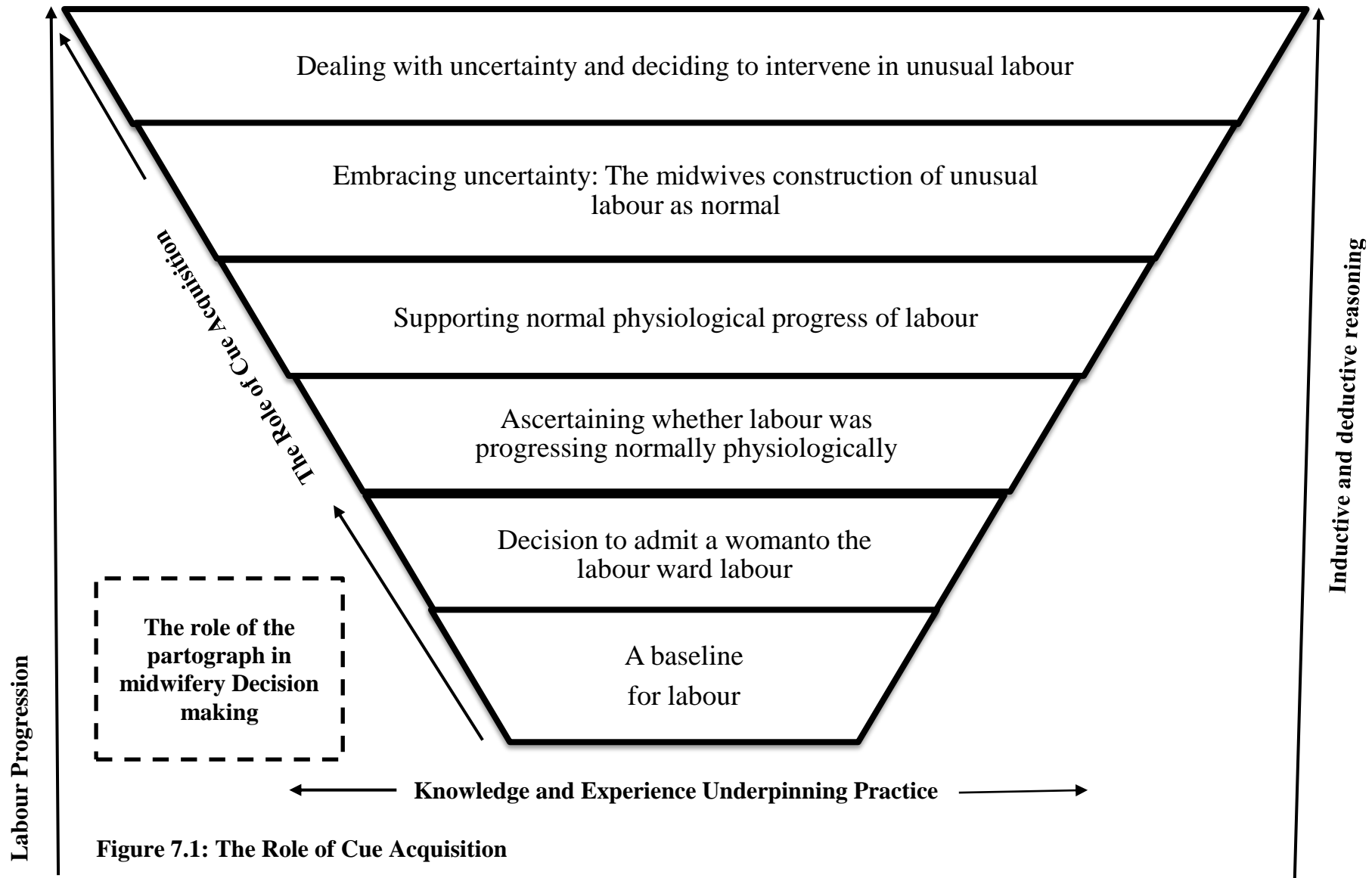


Figure 7.1: The Role of Cue Acquisition

I elaborate on this process in sections 7.2.1 to 7.2.6. First, in section 7.2.1, I examine the subtheme ‘baseline for labour’ which illustrates the midwives’ use of the information they gathered to establish if a woman was in labour or not and which provides the basis for comparison during labour progression. Section 7.2.2 explores how midwives utilised the information gathered in ‘deciding to admit a woman to the labour ward or not’.

This is followed by a discussion on the subtheme ‘ascertaining normal physiological progress of labour’ in section 7.2.3. This stage represents the various routine assessments that midwives performed on women in labour such as measuring uterine contractions, descent of the presenting part and cervical dilatation in order to ascertain that there was no physiological failure in labour progress.

The subtheme ‘supporting the normal physiological processes of labour’ in section 7.2.4 reflects the midwives’ use of data obtained to plan and implement relevant midwifery actions which were mainly used to support the normal physiological processes of labour.

The subtheme ‘embracing uncertainty: the midwives’ construction of unusual labour as normal’, presented in section 7.2.5, reveals that midwives at times made decisions to embrace variations in partographic presentation. The midwives demonstrated their initiative in striving to promote the normal physiological processes of labour. However, the subtheme ‘dealing with uncertainty and deciding to intervene in unusual labour’, in section 7.2.6, represents the midwives’ decision to implement interventions when they were convinced that it was necessary. These findings are linked to the following research question.

What assessments and management decisions do midwives make during the first stage of labour?

7.2.1 A baseline for labour

During data collection, I observed the midwives making various relevant assessments on women in labour wards. The initial assessment would typically involve general observations of the woman, obtaining medical, obstetric and personal histories, and performing a physical examination. The assessments provided the midwives with vital information about the

immediate health status of the woman and foetus, and the status of labour at that time. The following extract provides an illustration of an assessment from the observational data.

Observed Maureen making assessments during admission of a woman in labour – collects various histories from the woman such as history of danger signs: vaginal bleeding, draining of liquor and severe headache. She collects other histories; labour, medical and obstetric. Maureen also checks the woman’s vital signs: blood pressure, pulse rate and temperature. She performs head-to-toe examination and rules out presence of anemia and edema. On abdominal assessment she checks foetal heart rate, contractions, and descent of the presenting part. She finally performs vaginal examination and documents all assessment findings on a partograph. (Maureen, hospital A)

This observational data reflects that midwives consider cue acquisition as an important aspect of the early formulation of the decision-making process. This concurs with assertions by Basavanthappa (2006) who states that cue acquisition is an important part of the decision-making process because it gives insight regarding women’s care. A cue, according to Basavanthappa (2006, p.58) is a “piece of information or a raw fact”. Macdonald and Magill-Cuerden (2012) assert that the general examination for a woman in labour should focus on looking for the woman’s features of general health and wellbeing. The data that midwives obtained upon admission of a woman in labour provided them with information on the status of labour and also served as baseline information for labour, foetal and maternal conditions. The midwives explained how important it was to assess women upon arrival in the labour ward. Take Linda, an NMT I interviewed, for example.

“When the woman arrived I assessed the abdomen and checked foetal heart rate because I wanted to ensure the foetal condition was good. I checked the contractions, descent of the presenting part, cervical dilatation and her general condition to establish the status of labour.”(Linda, hospital B)

In this narrative, Linda signifies that the midwives were aware of the significance of the initial data obtained upon arrival of a woman in the labour ward. The gathering of cues from a variety of sources from the admission of a woman in labour reflects the theories described by Dowie and Elstein (1988). The midwives gathered information to develop hypotheses

about the status of labour. This is consistent with assertions by Macdonald and Magill-Cuerden (2012) who highlight that the initial assessment of a woman in labour provides the midwife with a baseline for labour. The initial assessments provided the midwife with vital information about the immediate labour status of the woman. When a woman was being admitted in labour, this initial assessment presented the baseline from which labour progress or non-progress could be determined along the labour-progression trajectory. Take Odetta for example.

“The first relevant assessment that I had done on the woman practically gave me the baseline information about the woman’s general condition, condition of the foetus and labour status. Therefore, I assessed the nature of contractions, the descent of the presenting part, and position of the foetus. I also assessed blood pressure, pulse rate as well as the temperature and respirations just to assess the condition of the foetus. All these data helped me to get baseline information which helped me to make decisions as the labour progressed.”(Odetta, hospital A)

Here, Odetta states that the initial data she obtained served as baseline information for decision making along the labour-progression trajectory. This is consistent with the significance of obtaining various assessment data, often mentioned in midwifery documents, emphasizing their importance (KCN, 2008, NMCM, 2008, 2012). In addition, this reasoning pattern reflects the hypothetico-deductive model of decision making discussed in Chapter 3. Previous midwifery studies, such as those by Danerek and Dykes (2001) and Cheyne *et al.* (2006), have indicated that midwives process the information they obtain from a woman in labour and formulate opinions about the situation. These studies demonstrate that a characteristic of midwives’ decision making is the acquisition and cognitive organisation of generated cues. To this end, Kelly and Vincent (2011) identified that midwives’ ability to make accurate assessments of the pregnant woman is central to the clinical judgement that ultimately underpins the decision-making process.

Again, as discussed in Chapter 6, during the course of my field work I observed midwives moving around the labour ward as well as going to other wards looking for equipment they could use to assess women in labour. The midwives could sometimes be observed in

conversation discussing how the gross shortage of resources affected the assessment of women in labour. The interview with Alice, an RNM in hospital A, revealed the following episode regarding the assessment of women in labour.

“The blood pressure cuffs were not available, maybe there were two blood pressure cuffs but they stopped working and for that matter there was one which we borrow from the high dependency unit and it is a manual machine and it is always on high demand, so it becomes difficult to identify some of the women’s complications.” (Alice, hospital A)

In this extract Alice strongly captures the organisational deficiencies manifest in the labour and delivery wards of both hospitals A and B, which threatened the midwives’ support and assessment of women during the first stage of labour. This supports assertions by Smith (2006) and UNFPA (2014) that a midwifery workforce can ably help pregnant women within a supportive health system. The midwives unanimously commented on how critical the supply of resources was in enabling them to execute their duties of ascertaining the normal physiological progress of labour, and foetal and maternal responses to labour. Take Zione, an NMT in hospital B, for example.

“When I was assisting that woman, I needed to assess many aspects to make sure her labour was progressing well. I required sterile gloves for performing vaginal examinations but the sterile gloves were not available. There was no blood pressure machine as well. We share one blood pressure machine with other wards such as postnatal and antenatal and in the end it gets damaged so easily as a result I did not check the woman’s blood pressures during labour.” (Zione, hospital B)

Zione here acknowledges how the gross shortage of resources impacted on her freedom to make appropriate decisions during the care of women in labour. This signifies how the midwives made decisions based on incomplete data. To this end, the (WRA, 2014) lobbied the government in Malawi for the need to optimise midwives’ performance by enhancing the provision of equipment and supplies.

In addition to establishing the baseline for labour, the midwife participants seemed to perform the initial admission assessments to confirm labour onset and decide whether to admit a woman to the labour and delivery ward or not. I illustrate this in section 7.2.2.

7.2.2 Deciding to admit a woman to the labour ward

As stated in Chapter 2, midwives in Malawi do not conduct home births because there is no policy supporting this practice. In addition, the country adopted the WHO recommendation of redefining the roles of TBAs who were conducting home births (Stanton, 2008, Ngozo, 2011). Therefore, women in Malawi usually diagnose the onset of labour themselves and then seek hospital care. Enkin *et al.* (2000) suggest that a pregnant woman practically determines the onset of labour herself and this is either confirmed or disputed by midwifery and obstetric staff when she reports to a hospital. In section 7.2.2 I demonstrate how the midwives relied upon their assessment findings during the admission procedure to confirm a woman's diagnosis of labour, decide to admit the woman and provide subsequent care during the first stage of labour. This is clearly illustrated in the following field note from Maureen in hospital A.

During initial assessment upon meeting a woman in labour, Maureen asked the woman presenting complaint and labour history, focusing on time the contractions had started, whether the woman had a sleep or not, whether she had seen show or not and whether the membranes were ruptured or not. Maureen checked descent of the foetal presenting part, assessed strength, frequency and duration of contractions, and performed a vaginal examination. The cervical dilatation was 4cm. Maureen indicated that she would admit the woman into the labour ward for monitoring of labour progress, foetal and maternal responses to labour. (Field notes, hospital A)

This data illustrates that midwife Maureen performed an initial assessment and obtained vital information regarding whether the woman had started labour or not. Maureen assessed the presence of contractions and ascertained labour onset from the cervical dilatation. This information informed Maureen whether to admit the woman to the labour ward or not. Therefore, midwives in this study interpreted and analysed the data, looking for indicators that a woman was in active labour, this helped them make the decision whether or not to

admit the woman to the labour ward. This approach by the midwives indicates their application of cognitive processes to interpret the data in the context of other known variables obtained from the assessment, the midwives were then able to make a decision on whether or not to admit the woman in labour. This approach is consistent with hypothetico-deductive reasoning discussed in Chapter 3. These findings are akin to findings from a study conducted by Cheyne *et al.* (2006) who found that midwives used information cues obtained from women which helped them to diagnose labour, these cues included the physical labour progress parameters such as strength, frequency and regularity of contractions along with how the woman was coping. However, this approach of diagnosing labour using physical cues differs significantly from that of Burvill (2002). Burvill (2002) proposed a midwifery model of diagnosing labour based on subtle clues which take place toward the onset of labour such as changes in movements, breathing, conversational and emotional states of women in labour. Although Burvill (2002) study found that midwifery knowledge can work outside the medical model that uses cervical dilatation and palpation of contractions, however, the suggested model clearly depends on previous knowledge of the woman by the midwife. As discussed in the background section of this thesis, midwives in Malawi have no chance of intimately knowing the women before admission to labour ward and as such, the findings of this study challenges this model.

The analysis revealed that the midwives in this study used a range of observations to assess the onset of labour. Among these observations the vaginal examination seemed to be one of the important clinical assessment tools that they used to confirm whether labour was established or not. In the following example Monalisa assessed the presence of contractions and had to ascertain labour onset through the cervical dilatation.

“I collected history of presenting complaint to know why the woman came to the hospital. The woman complained of lower abdominal pains and backache. I performed other physical assessments and vaginal examination which helped me to diagnose that the woman was in active phase of labour because the cervix was 4cm dilated. This information helped me to make the decision to admit the woman in the labour and delivery ward.”(Monalisa, hospital B)

The above extract exemplifies that midwives used the findings from vaginal examinations to ascertain whether a woman was in the active phase of labour, warranting admission to the labour ward or not. The use of vaginal examinations, when more information is needed to confirm the onset of labour, may be helpful (Hassan *et al.*, 2012). However, there is need to take into account both the potential benefits and harms. The literature suggests utilising less invasive methods of assessing labour progress in order to support normality (Shepherd *et al.*, 2010). Nonetheless, Shaban *et al.* (2011), Hassan *et al.* (2012) and Downe *et al.* (2013) point out that cervical dilatation measured by digital vaginal examination is a common practice used worldwide to guide decision making on the onset of labour and its progress. Take Mabel, an NMT for example.

“All the assessments I conducted on the woman on admission to labour ward were normal. The cervical dilatation was 5cm and I decided to admit the woman in labour ward and continue with assessment of labour progress, foetal and maternal conditions.” (Mabel, hospital B)

This data shows that admission of women to a labour ward depended on whether they were in active labour or not. Hospitals A and B required a clear-cut distinction to be made between the latent phase of labour and the active phase when there is increasing cervical dilatation. Midwives admitted to the unit only those women who were in active labour and sent those in the latent phase to the antenatal ward for support and monitoring of foetal and maternal conditions. Research suggests that women who are admitted to labour wards while in the latent phase are more likely to receive medical intervention during labour than those admitted in the active phase (Hemminki and Simukka, 1986, Jackson *et al.*, 2003, Rahnama *et al.*, 2006). However, it is not clear why women admitted to labour wards early receive more medical intervention than those admitted at a later stage in their labour. Possibly, there could be inherent factors specific to some women’s labours leading them to require medical intervention. In addition, studies by Hemminki and Simukka (1986) and Rahnama *et al.* (2006) suggest factors involved in the admission process itself, such as misdiagnosis of active labour, could be the cause.

During the course of observations that I made during the admission of a woman in labour, I noted that midwives used the presence of contractions to guide them to conduct a digital vaginal examination, which would definitively identify if a woman was in the latent or active

phase of labour. The findings from the vaginal assessment assisted the midwives in deciding whether or not to admit the woman to the labour and delivery ward as mentioned during an interview with Linda, an NMT.

“I assessed for presence of contractions for 10 minutes to find out the type of contractions the woman was experiencing. Presence of the contractions guided me to perform vaginal examination to ascertain labour onset. I could not proceed conducting a vaginal examination if the woman had not started experiencing contractions or had mild contractions. The cervix was 5cm dilated, and membranes were intact. The woman was in active phase of labour and I admitted her to the labour ward.”(Linda, hospital B)

The above quote illustrates that the midwives looked for further cues to confirm their initial diagnosis. They sought to supply adequate evidence for the truth of their conclusion by gathering information regarding the onset of labour, thus reflecting their use of inductive reasoning. This approach reflects the hypothetico-deductive model, which encompasses inductive reasoning by generating a hypothesis from many observations, recognise a pattern to make a generalisation, and infer an explanation (Higgs and Jones, 2000).

The data further illustrate the midwives’ behaviour about how important it was to ensure the presence of adequate contractions in order to avoid unnecessary vaginal examinations. The following observational data from Monalisa illustrates why she decided not to perform a vaginal examination on a woman she felt was having ‘niggling’ contractions.

Observing Monalisa attending to a new woman who reported to labour ward with a complaint of lower abdominal pains and backache since the previous night. Monalisa collected various histories and performed physical assessments. I heard Monalisa explaining to the woman that she would not perform a vaginal examination because the labour was still in early stage because she was having weak and irregular contractions. Monalisa asked the woman if she could go ambulating, frequently empty her bladder, take fluids and eat food as tolerated. Monalisa further explained to the woman that she appreciated her

painful contractions but she still needed a little bit more time to be admitted to the labour ward. (Field note, hospital B)

This finding is consistent with the literature which suggests that a vaginal examination is one of the options which can help the midwife to diagnose the onset of labour (Macdonald and Magill-Cuerden, 2012). However, several factors have been identified that contraindicate performing unnecessary vaginal examinations, these range from a lack of research showing the benefit of the procedure (Devane, 1996, Stuart, 2000), the extreme distress it can cause to the women, the discomfort and pain it causes to some women who have experienced sexual abuse (Robohm and Buttenheim, 1996), and post-traumatic stress disorder (Menage, 1996). Furthermore, the procedure is considered to be an intrusion into a person's private space (Bergstrom *et al.*, 1992, Stewart, 2005).

As discussed in Chapter 2, access to healthcare services in Malawi is a problem, this is particularly so in rural settings. Therefore, when women are in early labour, they are not sent home to await active labour because of problems such as physical distances, poor road networks and poverty which would prevent or delay them from accessing health facilities in good time (Seljeskog *et al.*, 2006, Combs-Thorsen *et al.*, 2012). The childbirth settings both in hospital A and B required a clear-cut distinction between a woman being in active labour and therefore admitted to the labour and delivery ward or not and sent to an antenatal ward to wait for active phase of labour.

Although the guideline was to admit to labour ward only those women who were definitely in labour, I observed that midwives could use their judgement to decide not to send some women to the antenatal ward based on some specific parameters. The midwives identified other signs and symptoms which assisted them to conclude that the woman would progress faster from the latent to active phase of labour. This was illustrated by Matilda during the interview.

“... on admission, the cervix was 3cm dilated and very thin. The descent was 3/5 meaning that labour could progress quickly. I assured the woman that she would be in active labour shortly. I did not see the reason for sending her to antenatal ward for admission. She was to come back to labour ward soon anyway. Therefore, I asked her to be walking around, pass out

urine frequently, take fluids and eat some food, to report back if she notices any danger sign or when she cannot cope with the contractions. The woman reported back to labour ward after she had ruptured membranes. When I performed vaginal assessment ... the cervix was now 5cm dilated and I admitted the woman in labour ward.”(Matilda, hospital B)

The above excerpt from Matilda shows that the midwives in this study seemed to demonstrate a cognitive understanding of the cues they obtained from the women in labour to make a decision regarding admission. In the above example, Matilda is making a decision by not only relying on the guideline to send the woman to the antenatal ward because the cervical dilatation was less than 4cm. She seemed to interpret the current data in the context of other known variables, such as the state of the cervix and the descent of the presenting part that further guided her decision making.

Matilda indicates her understanding of the physiology of labour and factors which could help the progress of labour, e.g. being well hydrated, keeping the bladder empty and eating regularly. She recognised that the state of the cervix was fully effaced and made a decision to help facilitate normal labour physiology by advising the woman to walk around, eat and drink until in well-established labour. However, Lauzon and Hodnett (2001) claim that such approaches to labour assessment, though beneficial, may have negative emotional effects for the woman such as psychological distress if the woman is very anxious or experiencing painful contractions, but is sent out of the labour and delivery ward because they do not meet the admission criteria.

In section 7.2.2 I have explored and discussed how the midwives utilised cues obtained from an assessment conducted on a woman on arrival to hospital. I have further highlighted that the midwives obtained cues which assisted them to confirm the onset of labour and make decisions on whether or not to admit the woman to the labour and delivery ward. In section 7.2.3 I explore and discuss how midwives used cues obtained from the assessment of women in labour to ascertain if the physiological progress of the labour was normal.

7.2.3 Ascertaining the normal physiological progress of labour

The provision of care to women in labour in health facilities in Malawi is based on National Reproductive Health Standards (MOH, 2008, NMCM, 2012). The procedure dictated stipulates that every woman in labour should have their labour progress checked by monitoring contractions, checking the descent of the presenting part, and assessing cervical dilatation. This ethnographic research allowed me to observe midwives assessing women during the progression of labour. They continued assessing the presence, frequency and duration of contractions hourly, descent of the presenting part hourly and cervical dilatation every 4 hours. They aimed to ascertain that the physiological progress of labour was normal. The following example from Zione in vignette 2, Chapter 5, depicts the assessments she conducted to ascertain the normal physiological progress of labour.

Zione was checking for progress of labour to ensure that labour was progressing normally physiologically. During post-observation interview Zione stated that “Regarding assessment of progress of labour, I aimed at ensuring that labour was progressing normally through checking the progressing of contractions, which progressed normally from mild to moderate. The foetal head was also assessed and it was descending into the maternal pelvis. I conducted vaginal examinations every 4 hours to ascertain cervical dilatation”. (Zione, hospital B)

These findings reveal that, where possible, the midwives demonstrated the capability of monitoring and assessing a woman’s labour progress, and this guided their care in promoting the normal physiological processes of labour. They made decisions to undertake vigilant assessments to assure continued normalcy. This is akin to Hastings-Tolsma and Nolte’s (2014) claim that active monitoring of women in labour would be a more suitable approach to the care of women in labour, particularly where the aim is to support midwifery care processes. In this study, assessment of women in labour was a practical approach in the promotion of normal labour for women with uncomplicated labour as exemplified by Linda, from hospital B, in the following quote.

“I ensured normal physiological progress of labour throughout the first stage. I checked the frequency, strength and duration of the

contractions, the descent of the presenting part every hour as well as a vaginal assessment to check the cervical dilatation. All these assessments progressed normally and I was happy that labour was progressing normally.” (Linda, hospital B)

Ascertaining that labour was progressing normally physiologically in this study involved focused and continuing collection, interpretation, and synthesis of data for midwifery decision making as identified by (Kelly and Vincent, 2011). It was a process that required the midwives to assess, evaluate, and act upon evolving indicators of change in the women’s labour status. These predominant data-acquisition strategies used by the midwives in the above extracts are similar to those identified in recent midwifery literature (Jefford and Fahy, 2015, Patterson *et al.*, 2015). Cioffi (2000) and Maharmeh (2011). These researchers identified that midwives’ ability to make accurate assessments of the women is central to the clinical judgement that ultimately underpins the decision-making process. The following extract from an interview with Matilda, an ENM, exemplifies this.

“During the first stage of labour, I was checking the woman’s general physical health and how the labour progressed until the end. On labour progress, I checked the contractions in terms of frequency, strength and duration. The progression of contractions was very helpful to assess the progress of labour. I also expect the descent of the presenting part to progress as labour was progressing. If it was static for some hours regardless of increased strength of contractions, I would suspect a problem. All these assessments helped me to care for the woman and ensure that labour was progressing well.” (Matilda, hospital B)

This extract demonstrates how the midwife relied upon her interpretation of the assessment to inform her that labour was progressing normally physiologically and to identify any unusual progress of labour. Davis (2010) highlights that midwives apply scientific processes of care in order to support the normal physiological processes of labour. Monitoring of women in labour seemed to be an essential source of information that underpinned the midwifery decision making during the first stage of labour. After obtaining an initial grasp of the labour situation, midwives also appeared to demonstrate reasoning in transitions and continuous reappraisal of the woman’s labour status. It seemed that the midwives were able to relate

various types of data to ascertain that labour was progressing normally physiologically and prevent unnecessary interventions.

For example, the following excerpt from an interview with Maureen demonstrates that the aim for routine surveillance of labour progress was to confirm that things were progressing normally physiologically and indicates that the midwife would intervene only when the individual situation required it.

“I was monitoring foetal condition; the foetal heart rate must range between 120 to 160 beats per minute. If less than 120 or more than 160 beats per minute it means she had foetal distress and I was supposed to take action. On the progress of labour, I checked contractions in terms of strength and frequency. All these assessments were normal and they helped me to care for the woman; they guided me on how I should take care of a woman.”(Maureen, hospital A)

The midwives showed vigilance in their approach to the frequent reassessment of essentially healthy women in labour and they sought information throughout the first stage of labour in order to reassure themselves that the woman's labour was progressing normally. They seemed to rely on it to ascertain the normal physiological processes of labour. This approach is consistent with assertions by Davis (2010, p.213) who argues that valuing normality in labour and birth “performs a critical role in midwives’ clinical assessment, decision-making, and care processes”. In contrast, the usefulness of monitoring and assessment of low-risk women in labour is considered harmful and can, in fact, be a basis for iatrogenic harm to women because it can be regarded as risk surveillance (Wickham, 2010, Scamell and Alaszewski, 2012, Scammel and Stewart, 2014).

Berg (2005) and Macdonald and Magill-Cuerden (2012) highlight that midwifery care in labour aims to provide a safe labour and birth for mother and foetus, and an enjoyable satisfying experience of childbirth for the mother and her significant other. Similarly, the midwives in this study explained that they also aimed to provide safe labour and birth for mother and foetus, and a pleasing experience of labour for the mother and the foetus. Take the following interview session with Alice for example.

Researcher: “Can you describe your personal goals when you were providing this care to the woman in labour?”

Alice: “I wanted the woman to have a baby with a good Apgar score and I also wanted the woman to have a good outcome and a good experience as well. I know that labour is painful but still more when a woman knows that there is a midwife who is around supporting her, she feels better. I just wanted that it should be a good child-bearing experience and that she should walk out of this labour ward a happy person.”(Alice, hospital A)

This extract demonstrates how the midwife relied upon her support for a woman in labour to facilitate a fulfilling and eventful labour experience that would lead to normal and safe birth outcomes for both the mother and her foetus. These findings resonate with evidence from the literature which suggests that midwives are the experts of normal pregnancy, labour and birth (Mead, 2004, Downe, 2006, Kennedy and Shannon, 2004). This claim is supported by the definition of the midwife (ICM, 2011). Therefore, the role of the midwife ought to be reflected universally considering the nature of the physiology of pregnancy, labour and postnatal period (Mead, 2004). However, normality in midwifery care and, more particularly, during labour and delivery has not been accurately defined (Downe *et al.* 2001). In section 7.2.4 I analyse and discuss how the midwives in my study focussed on promoting and supporting the normal physiological processes of labour when caring for women in labour.

7.2.4 Facilitating and supporting the normal physiological processes of labour

“Imagine that you are a midwife; you are assisting at someone else’s birth. Do well without show or fuss. Facilitate what is happening rather than what you think ought to be happening. If you must take the lead, lead so that the mother is helped, yet still free and in charge, when the baby is born, the mother will rightly say: ‘we did it ourselves!’” Lao Tzu, The Tao of Leadership (fifth century BC) cited by Leap (2010, p.34).

Having undertaken their initial assessments of the women in labour, the midwives then engaged in providing routine humanistic aspects of intrapartum care to the women who had been admitted in labour. The analysis reveals that midwives’ attempts to support and facilitate the normal physiology of labour seemed to stem from their trust in the physiology of labour and understanding of labour and birth as normal physiological events (Rooks, 1999,

Freeman *et al.*, 2006, Page, 2009, ICM, 2011). The following extracts from interviews with Matilda and Mary provide illustration of this.

Researcher: "I want us to discuss about the woman you cared for during the first stage of labour. What were you thinking when you were caring for that woman?"

Matilda: "Firstly when I admitted this woman I knew that her labour will progress well until she gives birth. I expected normal labour and have a normal baby, I did not anticipate that the labour could have some problems. Most of the times when a woman is in labour we always hope for the good, but sometimes problems may arise as labour is progressing but our normal expectation is normal progression." (Matilda, hospital B)

Mary made similar comments.

"When I was caring for this woman I was mainly thinking that this woman's progress of labour should be normal until she gives birth without any problems, I expected the progress which befits a woman who is in labour with the aim that the labour should progress normally without problems." (Mary, hospital A)

These types of beliefs described by Matilda and Mary illustrate the core of the midwifery model of care that affirms that labour and birth are normal processes (Fahy, 1998). To this end, Davis (2010) postulates that for midwives, normality describes the vital nature of women's life processes as healthy during pregnancy and childbirth. The stand adopted by the midwives regarding normal progression in labour seemed to be the driving force for the midwives' efforts to support normality during labour. These findings support Fahy's (1998, p.15) assertions that "midwives' 'non-stupidly' are optimistic that supported in their process, healthy women will have healthy babies". The midwives' support for the normal physiological processes of labour was evident from the time of admission of a woman in labour and all during the time that labour progressed during the first stage of labour. The following extract from Zion in vignette 2, Chapter 5, illustrates this.

Following on from the initial admission assessment, Zion outlined an initial plan of care which included some predetermined courses of

action such as to explain findings of the assessment to the woman, encourage ambulation, encourage frequent urination, encourage food and fluid intake, monitor urine output, provide pain-relief measures such as back rubs and involve the birth companion in care of the woman. (Zione, vignette 2)

In this extract Zione seem to interpret the data she collected and tested its preliminary inferences about what midwifery care issues were relevant. This approach is in line with Elstein's (1978) model of clinical reasoning discussed in Chapter 3. The data further illustrate that the midwives engaged with processes that supported the normal physiological processes of labour. These strategies, which included providing food to the woman in labour and encouraging her to ambulate, are considered to facilitate normal labour (Carolan-Olah *et al.*, 2015). The midwives made judgements and decisions to assist women in labour and undertook labour-care activities that would assist the normal progress of labour. They seemed to have understood the significance and evidence of maintaining these simple humanistic midwifery aspects of care for women in labour as illustrated by Maureen, an ENM from hospital A.

“I ensured that the woman was taking food because when a woman is in labour, she requires to be eating because her body is working a lot and she sweats a lot and with the painful contractions, she is always changing positions on the bed as a result she requires a lot of energy and she must be eating, therefore I gave her porridge that she ate. I also instructed the woman to be taking oral fluids to replace the water she was losing through sweat and to be well hydrated. I was also encouraging her to be walking around the aim was to promote the progress of labour. I encouraged the woman to be emptying the bladder frequently to promote the descent ... to be taking deep breaths and pant to help the woman get through each contraction ... I was also rubbing her lower back to help relieve the pain and chatting with the woman to divert her from concentrating on the pain. At times, I was staying with her or ask the student stay with her in order to relieve anxiety. The environment here is very unfamiliar to her home setting and this sometimes makes the women become anxious and they wonder what is happening, but when you are close to the woman all the time

*and tell her words of encouragement it makes labour progress well
(Maureen, hospital A)*

Midwives seemed to play a role in achieving a physiological approach to intrapartum care. They advised women in labour not to fuss too much about labour. Women were encouraged to undertake some of their normal activities that would encourage labour to progress, such as eating some food, walking around and passing urine frequently. Such processes have been identified as supporting normal labour and birth (Simkin and Ancheta, 2000, Fraser and Cooper, 2009, Macdonald and Magill-Cuerden, 2012). To this end, Davis-Floyd (1992) identified this approach as a holistic model of labour and birth where the body and mind are viewed as one self and as a whole. Mead (2004) argues that midwives and other medical professionals should reinforce the normal physiological approach to labour and pregnancy unless abnormalities appear that would require referral or other interventions. This is exemplified by Alice in the extract below.

“Basically, the assessment findings showed that the woman had no specific issues which would reflect that she needed any special care and her labour was generally progressing very well. Therefore, I cared for her as a normal woman. I just encouraged her to walk around, have some porridge and to be emptying her bladder frequently to promote descent and contractions.” (Alice, hospital A)

Alice appears to effectively use cognitive processes during her assessment of a woman in labour to ‘digest’ the data she collected then used to recognise subtle changes in a woman’s labour progress. These data helped Alice to make clinical decisions regarding the care of the woman. These components explain how the midwives use the assessment process to systematically collect information to make judgments and decisions about a woman’s labour status. This reflects the hypothetico-deductive reasoning approach where a practitioner evaluates the efficacy of treatment options relevant to the diagnosis (Elstein and Bordage, 1988).

Besides, the reasoning that Alice adopted reflects that she understood that labour and birth are not crises, but are normal, natural and physiological events that require her midwifery expertise to support the physiological processes. Alice illustrates that she did not identify any

specific health problems from the assessment she conducted on the woman in labour that would warrant any interventions apart from promoting the normal physiological processes. These findings resonate with assertions by Guilliland and Pairman (1995) who assert that midwifery knowledge and practice are constructed by the belief that pregnancy and childbirth are normal life events whereby pregnant women would achieve positive outcomes given the necessary support. Enkin *et al.* (2000) highlight that some aspects of care, such as the provision of physical, emotional and psychological support together with continuity of care, are beneficial for women in labour, for example they can reduce the use of analgesia (Hodnett, 2000). To this end, Mead (2004) and Crabtree (2004) encourage midwives to provide women with aspects of care that reduce the negative outcomes of pregnancy. These aspects of care include encouraging women to walk around during labour, and touch and massage techniques for pain relief. These are exemplified by Monalisa, a RNM, in the following field note.

Monalisa was looking after a woman during the first stage of labour gravida 1 para 0, 20 years old who arrived from home with complaints of lower abdominal pains and backache. Monalisa did a thorough assessment of the woman through history taking and physical examination. She outlined the care as follows: explain findings to the woman and the process of labour for better understanding and gain cooperation, encourage ambulation to promote descent of the presenting part, encourage frequent bladder emptying and monitor urine output to promote descent of the presenting part, back rub to reduce pain, and allow comfortable position. (Field notes, Monalisa, hospital B)

Monalisa demonstrates that the midwives had trust in the physiology of labour that enabled the women to labour from the norm perspective. Midwives seemed to find these routine practices useful as they provided the fundamental reasons for such aspects of care. These findings are consistent with findings from a critical analysis of three studies by Cragin (2004) which verified midwives' belief in normalcy as a primary aspect and process of midwifery care. Cragin (2004, p. 388) asserts that the theoretical development in midwifery consistently identifies "protection and nurturance" of the 'normal' in processes related to women's health, implying a judicious use of interventions. Similarly, the midwifery approach in my study seemed to be normalising individual women's labour processes when there were no

obvious abnormalities identified by providing women with physiological interventions. Take Matilda for example.

“When I was caring for this woman, I realised that I was caring for a woman with normal labour. Although her abdomen looked big but pelvic assessment also indicated that she had an adequate pelvis to accommodate the foetus. I was thinking that the woman can give birth to a normal baby through spontaneous vaginal delivery. However, when I started caring for her I saw that she had problems to pass out urine, I tried to assist her by opening the tap. Women in labour sometimes experience this, but they still progress normally especially after helping them to pass out the urine.”(Matilda, hospital B)

The findings of this study suggest that midwives’ decisions about the normal physiological progress of labour are given greater emphasis. Matilda demonstrates how she relied upon her interpretation of the assessment data to alert her to any physiological decline of labour progress, and make decisions to continue monitoring the woman in labour. These findings suggest that there is some evidence of hypothetico-deductive reasoning by midwives during the course of assessing women in labour.

These findings also resonate with findings from other studies such as Kennedy (2000) and Kennedy and Shannon (2004) with similar themes where ‘support of normalcy’ was identified as a significant process of midwifery care during labour and birth. In addition, evidence in the literature espouses the importance of focusing on positive outcomes of birth and framing maternity services by the concept of salutogenesis⁵ and not focusing on birth as pathology (Downe and McCourt, 2004, Schmid and Downe, 2010). To this end, Downe and McCourt (2004) assert that midwives must endeavour to seek opportunities to maximise normal birth instead of concentrating on risky factors that rule women out of the opportunity to experience normal physiological birth. Therefore, in section 7.2.5, I explore and discuss further how the midwives in this study embraced uncertainty and promoted salutogenic thinking through the use of labour assessment parameters.

⁵ Salutogenesis is a term conceived by Antonovsky, an American researcher who proposed looking at health and how to promote it, and not illness and how to cure it (Antonovsky, 1979).

7.2.5 Embracing uncertainty: the midwives' construction of unusual labour as normal

“Are this woman and baby actually at imminent risk in this specific situation, although what is happening is unusual could it be normal for them?” (Schmid and Downe, 2010, p.159)

During this ethnographic study, another interesting phenomenon observed was when the partograph showing the progress of labour indicated ‘deviation from the normal’. This deviation is commonly associated with predetermined rates of cervical dilatation (Friedman, 1954, 1955). However, participant observations and follow-up interviews with midwives contributed to my analysis of ‘embracing uncertainty when unusual labour occurred’. This approach appeared to be identified as ‘an option’ in the practices of the participating midwives regardless of their experience, qualification and practice setting. The midwife participants appeared to make decisions to embrace tolerance for variations in the partograph and promote the physiological progress of labour. The midwives seemed to tolerate unusual progress of labour because their labour assessments did not indicate a specific labour complication. The following extract from Odetta, an RNM, illustrates this.

“When the progress of labour had deviated from the normal on the partograph, I decided to give the woman a chance and see if the cervix would still dilate because I did not identify any problem and I did not identify any risk for the mother and baby. I decided that if the cervix doesn't dilate after some few hours then I would think of other management options for delivery. In this case I just decided to continue assessing the foetal and maternal condition and the progress of labour.”(Odetta, hospital A)

In the above extract Odetta provides an example of the midwives' decision making in situations of unusual labour. The midwives seemed to make decisions based upon their assessment of the woman in labour, their existing knowledge of the presenting labour situation and the risk assessment for the mother and the foetus. Therefore, Odetta did not respond to the cues as they arose but gave consideration to the additional assessments required for the particular woman. This approach would seem to contradict the hypothetico-deductive approach which suggests that clinicians respond to cues as they arise and then generate hypotheses. However, decision making as displayed by Odetta in the above scenario seem to be a forward and backward decision-making process and not a one-time occurrence.

Alongside the midwives' apparent use of the partograph to document assessment findings and make decisions, discussed in section 7.2.6, it appears that midwives did not always experience feelings of uneasiness about the woman's labour status in the face of some evidence of labour progress deviation, although this doesn't mean that midwives ignored the unusual progress of labour. Hastings-Tolsma and Nolte (2014) highlight that it could be ethically wrong not to do anything in the name of preserving normal physiological processes of labour and birth when there are subtle changes. In this study, midwives seemed to endeavour to preserve normality by giving the woman space for labour to progress normally while continuing to observe the woman's labour status. This is illustrated by Odetta in the above scenario. These findings are consistent with assertions by Lankshear *et al.* (2005) who argue that it is the practitioners' ability to cope with uncertainty that determines how risk is perceived. However, Page and Mander (2014) assert that midwives' tolerance of intrapartum uncertainty can enhance their construction of labour as normal. In this study, the midwives were able to articulate what was happening and, at times, decide to wait for further progress prior to intensifying their apprehensions that might seem as increasing risk to the women because the midwives waited for further progress. Take Zione for example.

“The woman was admitted while the cervical dilatation was 4cm dilated and descent was 4/5. The descent progressed well for 2 hours but thereafter it was static despite that the woman was ambulating and had eaten some food. When membranes ruptured spontaneously, I performed a vaginal examination to rule out cord prolapse ... following this vaginal examination, I found that the cervical dilatation was now 7cm which was good progress. However, the descent was static at 3/5, but I did not despair too much because the cervical dilatation was progressing well. This time around the contractions were strong and the cervical dilatation was moving and these assessments gave me hope that the woman will give birth without problems, and I also believed that the head would descend.” (Zione, hospital B)

This example from Zione is consistent with assertions by Schmid and Downe (2010) who argue that long labour is unusual but not necessarily pathological. The perception of risk and how it influenced care of women in this study is different to findings by Scamell and Alaszewski (2012) who noted that midwives were so concerned about possible negative

outcomes of childbirth that normality and safety only existed as a negative and absence of danger. Similarly, the findings in this study are in contrast to assertions by Scammel (2011) who argues that although midwives claim to work within the paradigm of normality as suggested by Gould (2000), they have inadequate practical skills to police the boundaries of normality.

The midwives in this study seem to focus on what was optimum care for the women based on their individual labour circumstances rather than focusing on risk factors. This has resonance with assertions by Smith *et al.* (2014) who claim that valuing adverse factors in labour and birth may lead to a paradoxical decrease in wellbeing. The midwives responded analytically to the situation of labour progress through seeking measurable evidence to support their lack of concerns through labour-progress assessment cues. Once they were confident in their assessment findings, including the baseline data obtained during admission that informed them about the positive aspects for a normal progression, they continued caring for the woman in labour. Maureen illustrates this.

“I did not identify what was delaying the progress of labour for this woman however, I realised that her admission assessment showed the pelvis was adequate and moreover she had given birth vaginally three times. Actually I was wondering what was wrong with her labour this time. She had adequate contractions ... and therefore I just advised the woman to come out of bed, walk around and empty bladder frequently to promote the progress.” (Maureen, hospital A)

This data illustrates that midwives were open to rethinking an individual woman’s situation and also valued the significance of viewing assessment findings and progress across the time span of labour from the time of admission. For example, in the above extract, Maureen reflects on her findings from the pelvic assessment made on admission of a woman in labour, and on the woman’s obstetric history showing that she had given birth before. Schmid and Downe (2010) suggest that midwives should compare a woman’s current labour progress to her previous labour to identify if the current progress is normal for her. These findings support assertions by Fahy (1998, p.15) who proposes that midwives do not always assume that “any deviation from the ‘norm’ is a biological problem requiring a solution”. Midwives need to be flexible and use their judgement to move between the focus of ‘being with women’ and ‘scientific problem solver’. To this end, Bourdieu (1990) highlights that

recognition of the nature of the situation is central to the logic of practice. An interview with Monalisa revealed the following episode.

“When I looked at the partograph, I noticed that the woman had just started having strong contractions and they had been present for a short time. This made me think that the woman may experience prolonged labour but I believed I still needed to give her time and she could still give birth normally. This time around the cervix was 8cm and this really gave me hope that the dilatation and the descent could still progress well.” (Monalisa, hospital B)

Monalisa reflects the skilled practice beyond the basic level of performing routine clinical skills according to standard procedures by striving to deal with uncertainties, changes and non-changes in the progress of labour. Midwives noticed some changes in the pattern of progress and they were able to articulate what was happening, depicting metacognition (Flavell, 1979) and working to justify their judgements and actions. Martinez (2006) highlights that metacognition consists of monitoring and control of one’s thoughts. Similarly, Monalisa noticed that the woman would experience prolonged labour however, she decided to give the woman time because strong contractions had just commenced and there was substantial dilatation of the cervix. This move of reflecting on the nature of a woman’s progress of labour is described by Schmid and Downe (2010) as being a question of whether what is happening is really pathological or not given the variability of labour-progress patterns among women. The interview excerpt below with Matilda, an ENM, illustrates decision making after consideration of the situation at hand through assessment.

“When I assessed this woman, she looked younger and smaller and she was just 16 years old. Despite this, I still expected that she would have normal labour and birth because the size of the baby was small and pelvic assessment showed that the pelvis was adequate for the size of the baby, the woman had a roomy pelvis!” (Matilda, hospital B)

Smith (2014, p.e152) claimed that “a key component of salutogenesis is that of a ‘sense of coherence’, which postulates that an individual who can view the world as manageable (i.e. easily find resources for coping), comprehensible (perceived clarity, order and structure) and meaningful (has purpose) is more likely to view their life as coherent. In this sense, no matter how extreme an individual’s experience might be, they will have the ability to cope positively

with adverse events.” Similarly, Matilda realised that there was a possibility for a primigravida who is small in stature and age to experience some problems related to labour progress. However, she decided to give the woman the chance to progress through labour and birth by focusing on the positive aspects obtained on assessment of the woman. As already discussed in the preceding sections, Downe and McCourt (2004) and Schmid and Downe (2010) argue that labour-care practitioners should strive to focus on salutogenic thinking rather than on potential abnormality in all cases. Midwives in this study did not seem to always view labour progress from the ‘potential disaster’ perspective as suggested by Crabtree (2004 p.107). Take Mary, a NMT, for example.

“The descent remained at 3/5 for almost 3 hours but I was not very much concerned because there was no major problem identified. Of course when I assessed her at 2.30pm I found that the cervical dilatation was 8cm and the woman had gone past the time I expected her to give birth. However, I was not very worried because the liquor was clear and there was no presence of caput and moulding, indicating good foetal condition. Contractions were still strong, almost all the assessments were normal and this really gave me hope that despite this slight deviation, the woman could still have normal birth.” (Mary, hospital B)

These findings are akin to the approach proposed by Schmid and Downe (2010) that labour and birth should be viewed as normal until evidenced otherwise. In the example above, Mary observed that descent of the presenting part remained static but cervical dilatation had advanced and the contractions were strong indicating positive labour progress. In addition, she identified that the woman was draining clear liquor and there was no caput and moulding indicating good foetal condition. Mary focussed on these positive aspects of labour and gave the woman time in labour to progress. Therefore, I would theorise from these findings that some midwives may be using ‘salutogenic thinking’ as highlighted by Downe and McCourt (2004) and Schmid and Downe (2010). According to Schmid and Downe (2010, p.165), salutogenic thinking focusses on “what makes things go well, as opposed to what makes them go wrong”. This finding supports assertions by Downe and McCourt (2004) and Schmid and Downe (2010) who argue that practitioners must search for signs of health and personal resources rather than signs of risk and pathology.

Although this study was not specifically investigating intrapartum uncertainty, the theme of ‘embracing uncertainty: the midwives’ construction of unusual labour as normal’ is consistent with the findings of other research (Page and Mander, 2014, Patterson *et al.*, 2015).

Rooks (1999) points out that midwives may allow for a greater variation within the range of normal as long as the woman is doing well. To this end, Hansen *et al.* (2002) point out that there is no good evidence to intervene in long labours which start spontaneously, whose progress is steady and, most importantly, the mother and her foetus are doing well. This is highlighted by Linda an NMT.

“When I examined the woman for the second time, the descent did not change it was still at 4/5 but the contractions had changed to two moderate contractions in 10 minutes, the foetal heart rate was also fine. I was not very concerned with this progress because I believed that the woman would progress though the contractions had reduced from three to two moderate contractions in 10 minutes. The pelvic assessment showed that the pelvic capacity was adequate for the size of the baby. I continued monitoring the woman and asked the woman to eat some porridge and walk around.” (Linda, hospital B)

Linda seemed to be using abductive reasoning to lessen her doubt about the labour progress as well as to be certain in what she thought was occurring in order to allow labour to progress after she had identified unusual progress. These findings also illustrate assertions by Schmid and Downe (2010) who view labour as both a physiological and psychological process that is non-linear. In this process, Schmid and Downe (2010, p.167) argue that “the cervical dilatation can increase or reduce and the foetus can descend or move up again or rotate in anterior or posterior positions. Therefore practitioners need not overreact to the changes in these cycles but the alternative is to watch and wait, providing support, rest and nutrition to the woman while focusing on the physiological upswing into the next phase of the woman’s labour.” Such processes are attributed to the labour progress as governed by hormonal surges where endogenous oxytocin is released in pulses and not in a smooth linear fashion (Buckley, 2003, Schmid and Downe, 2010). Midwives, therefore, are expected to recognize the distinctively normal physiological rhythm of most women in labour. This is demonstrated by Odetta.

“Well the other thing was that this woman was a primigravida and usually labour progress for primigravida does not progress according to the prescribed 1cm per hour on the partograph. I am talking out of my little practical experience from the time that I have been in labour ward, what I have seen. Labour progress usually tends to delay for primigravida. Even when I refer back to the literature, it indicates that ‘under normal circumstances cervical dilatation for a primigravida would be expected to go by 1cm every 1 hour and 30 minutes’. So it was not really worrisome because with a primigravida there is some delay in progress of labour compared to multigravida” (Odetta, hospital A)

Odetta demonstrated the knowledge that not all women will progress in labour at the same rate. Therefore, the use of the partograph for Odetta did not necessarily create interference with the woman’s labour progress. In addition, there is evidence for Odetta’s assertions that cervical dilatation is slower for a primigravida. Albers *et al.* (1999) and Neal *et al.* (2010) suggest that the widely accepted progression of cervical dilatation of 1cm per hour for nulliparous women in labour was overrated and contribute to over diagnosis of dystocia, and subsequently to an overuse of interventions aimed at accelerating labour progress. Current research suggests that the cervical dilatation for nulliparous women is likely to be slower than 0.5cm per hour in the early active phase of labour (Bugg *et al.*, 2011). These rates are slower than the traditional faster dilatation rate of 1cm per hour in the active phase of nulliparous women.

In contrast to the findings of this study, Scamell and Alaszewski (2012), in their ethnographic study in England on midwives’ practices and the tacit knowledge which underpins them, noted that midwives were so concerned about possible negative outcomes of childbirth that normality and safety only existed as a negative, as the absence of danger.

In section 7.2.5 I have discussed how the midwives in this study tolerated uncertainty during labour progress as long as maternal and foetal conditions were satisfactory. In section 7.2.6, I discuss how the midwives reasoned and intervened when they perceived that things had gone wrong and required interventions.

7.2.6 Dealing with uncertainty and deciding to intervene in unusual labour

“If conditions which will minimise normal birth are recognised but not acted upon, midwifery ‘failure to rescue’ occurs.”(Hastings-Tolsma and Nolte, 2014, p.592)

Under the theme ‘embracing uncertainty: the midwives’ construction of unusual labour as normal’, discussed in section 7.2.5, it was noted that using the labour-progress parameters of progression in descent of the presenting part, pace and pattern of uterine contractions and dilatation of the cervix, midwives at times observed a pattern that deviated from the ‘norm’. However, the midwives appeared to use ‘salutogenic thinking’ in certain situations. The participating midwives commented that they sometimes experienced uncertainty from labour-progress parameters. During this time, they reappraised the labour situation and felt they had enough reasons and convincing arguments to intervene in the labour progress. Odetta illustrates this.

“The descent of the presenting part was static at 3/5 for 3 hours ... and there was delayed dilatation of the cervix despite that the woman had been ambulating. This type of progress made me think critically to identify what could necessarily be causing these two parameters not to progress and find the best solution possible. Therefore, during the next vaginal examination I decided to rupture the membranes so that there should be direct contact of the foetal head to the cervix which could help to dilate the cervix further, and hence also improve the contractions. (Odetta, hospital A)

Odetta appeared to demonstrate an understanding of labour physiology and her commitment to midwifery beliefs, however, she also showed the ability to discern the difference between healthy progress and the potential for pathological development during the progression of labour. These findings are congruent with findings from other midwifery research (Page and Mander, 2014, Patterson *et al.*, 2015) in which midwives identified a ‘normality boundary’ where labour progress had reached the limit of what could be accepted as normal. However, these findings are in contrast to the report by Kirkup (2015) who highlights an account of poor outcomes in an NHS trust due to a combination of factors including a “drive to achieve normal childbirth ‘whatever the cost’ and a reckless approach to detecting and managing mothers and babies at higher risk” (Kirkup, 2015, p.183).

Odetta appears to show that the midwives used an approach of thinking which reflected some of the influential studies that defined a hypothetico-deductive reasoning approach where health workers gathered data, made provisional hypotheses and then sought evidence to support them (Elstein *et al.*, 1978, Carnevali *et al.*, 1984). The predominant data-acquisition strategies of problem solving reflected in these studies aimed at making a diagnosis. However, in this study the novel finding is that midwives were motivated to maintain the normal physiological processes of labour, and when their assessment findings revealed factors that indicated the non-progress of labour, the midwives took measures to reduce the risk to both the mother and the foetus. Take Mary, an NMT, for example.

“My main concern when the labour was not progressing was the welfare of the mother and her baby. For the mother, there were issues of maternal exhaustion and unpleasant labour experience because she had been in the first stage for quite some time. But the concern was for the foetus as well. I was not sure whether the baby was going to come out with good Apgar score or not after being exposed to long labour therefore, I decided to consult the doctor.”(Mary hospital A)

Mary is responsive to pathology where necessary, seizing the situation when she found that the lack of labour progress exceeded her ability to cope. The WHO (2014) suggests that there should be a valid reason to intervene with the natural processes. To this end, Walsh (2006) points out that women must have access to high quality essential maternity services by supporting normal processes which would help midwives identify potential pathology. Zione, in vignette 2, Chapter 5, illustrates this.

During follow-up interviews following observation, I interviewed Zione to find out the basis of the decisions she made while providing care to the woman in labour. Zione explained the following “I felt the contractions were not forceful enough to effect cervical dilatation and descent of the presenting part. I thought about the progress that the head was not descending into the pelvis. This happened despite inserting a catheter. I gave the woman food, ambulation was done, the contractions have been strong but still there was no progress in descent and the cervical dilatation has also remained static. However, I also considered that my first assessment had shown that despite the

fundus being broad, this woman can deliver. Because of this, I told myself that the right decision I can make based on this type of progress was to augment labour rather than expose the woman and her foetus to unnecessary dangers.”

This data shows that Zione was using clinical parameters to make sense of the woman’s labour progress and build an authentic case for intervening. The midwives’ decision-making process comprised inductively building a bigger picture where they sought evidence to support their decision to intervene; that is they used abductive reasoning. This abductive approach reflects the cognitive continuum theory discussed in Chapter 3 (Hammond, 1996b). Midwives had to make decisions on whether labour would progress or not and ‘account’ for their assumed impressions prior to implementing an intervention during the first stage of labour.

These findings are consistent with assertions by Fahy (1998) who argues that the problem-solving approach is acceptable when the midwives’ assessments indicate a physical or biological problem. In addition, Beck (2006) points out the importance of addressing women’s psychosocial and physical needs during labour and birth. This approach would possibly prevent unnecessary physical and emotional suffering where birth is perceived as traumatic. For example, in this study once the midwives believed they had convincing reasons to intervene they did so, as illustrated by Zione in the above scenario. The midwives seemed to recognise labour that was not progressing well and could identify the need to instigate correct interventions in a timely fashion. This is illustrated by Maureen in the following example.

“... Despite such type of intense labour pains, the descent was still poor, then I realised that this was a problem and the baby may not come out or may come out with a bad outcome. When I assessed the abdomen, I found that it was ascending to the chest and not descending into the pelvis; based on all these assessment findings I knew that labour progress was not satisfactory and I had to do something.”
(Maureen, hospital A)

Maureen seemed to interpret the presenting cues she collected, and she used them as the basis for her decision to intervene in the labour process. This method of information gathering

corresponds with the principles of social judgement theory by Hammond *et al.* (1980) and Elstein and Bordage (1988). The social judgement theory explains how decision makers combine and weigh up cues to reach a judgement, and the selection of cues that they use influences their overall judgement. The following observational data, exemplified by Linda, an NMT illustrates the assessment and management approaches undertaken by the midwives and how the data acted as precursors to intervention.

During observations on a woman in labour, Linda identified slow progress of labour. She identified a thick cervix non progressive on three subsequent vaginal assessments conducted at 4-hour intervals, static descent at 3/5 for 2hours. Linda decided to explain findings to the woman and augment the labour with oxytocin. (Field note, hospital B)

Linda appeared to respond appropriately in providing care that might be described as timely and correctly managing the labouring woman consistent with the woman's needs. The midwife's ability to recognise abnormal labour progress and her ability to manage it signifies the application of knowledge and judgment in making the right decisions for the women in labour (Sullivan, 2005, Muoni, 2012, Orhue *et al.*, 2012). Page (2015) argues that there should be a balance between accomplishing normality and knowing when a woman requires medical care. Similarly, Berg (2005) asserts that focusing on normality does not necessarily mean avoiding the provision of reasonable and imperative treatment for women who genuinely require it. To that end, Page (2015) proposes that supporting normality requires skill, knowledge and experience as well as a working and functional system with provision for consultation, referral and transfer of women who require medical care.

In section 7.2 I have discussed a six-stage, decision-making approach to how Malawian midwives reasoned and made sense of physical assessment data to implement care decisions as they cared for women in labour. In section 7.3 I discuss further how the midwives used intuitive knowing to make care decisions for women in labour.

7.3 The Midwives Intuitive Knowing

Midwifery decision making during the first stage of labour in this study involved a far-reaching and multifaceted list of tasks concerned with the care and support of women in labour. In the preceding sections of Chapter 7, I have illustrated that the majority of the clinical decision-making tasks made by the midwives in this study were mainly centred on the assessment and monitoring of women in labour and the implementation of midwifery supportive interventions. The assessment was mainly based on the physical data the midwives obtained on women in labour.

However, the analysis of the data further illustrated that besides the objective physical assessments performed by midwives on women in labour, the midwives also used other more covert ways of ‘knowing and doing’ (Benner, 1984). Experienced midwives at times appeared to be using tacit knowledge. The midwives used subjective observations such as the appearance, and the verbal and non-verbal behaviour of the women in labour to make decisions. Maureen explained this during an interview.

“The woman was in serious pain and she was curling up. I was wondering what really was wrong with her. She had just arrived, but I saw that she was not feeling well. I had assessed her and the labour was not in advanced stage. I asked her mother if at all she gave her some traditional medications, but she refused. I decided to ask the doctor to prescribe pethidine for her because she could not cope with the pain.” (Maureen, hospital A)

As this excerpt illustrates, Maureen interpreted the woman’s reactions as intense and decided to relieve the pain. Her perception of the woman being in severe pain influenced her thought processes which alerted her to ascertain the woman’s need for support. The midwives seemed sensitive in the way they perceived, understood and interpreted women’s actions and behaviours; they searched deeper to gain more knowledge and understanding about the woman’s situation. As identified in Chapter 3, intuition is an important type of midwifery knowledge and has been given legitimacy as a sound approach to decision making (Orme and Maggs, 1993, Davis-Floyd and Davis, 1996, Mok and Stevens, 2005, Siddiqui, 2005, Walsh,

2010, Jefford and Fahy, 2015). Mok and Stevens (2005) assert that intuition allows a midwife to arrive at rapid judgements based on visual, verbal and non-verbal cues.

Although the midwives demonstrated an ability to relate the physical appearance of the woman in labour to its physiological cause, they seemed to respond logically to their intuition, looking for tangible evidence of their uncertainty in the cues of the woman in labour. The following interview data with Mary, a NMT, displays how the midwives were able to apply their knowledge intuitively to each situation.

“The way that woman looked and behaved did not match with the cervical dilatation which was indicated to be 4cm. She behaved as a woman who is in advanced labour, all the same I gave her a back massage and reassured her as I waited for the next vaginal examination to confirm the labour progress” (Mary, hospital A)

This example demonstrates that the midwife based the impressions she made during her first encounter with a woman in labour, such as uneasiness and feelings that things were not quite right, on her intuitive knowledge. These findings are consistent with assertions by Ruth-Sahd (2014) who acknowledges that intuition is a useful aid to good judgement. When Mary examined the woman during the next vaginal examination, she indeed found that the cervical dilatation was 8cm and she was right to conclude that the woman’s behaviour was one expected of a woman in advanced labour. The literature reflects that intuition is a good aid to judgement only when used as a prompt that would lead the decision maker to engage in analytical reasoning and the use of correct cues that may lead to formulation of accurate decisions (Cioffi, 1997, 2012, Jefford and Fahy, 2015).

Similar findings have previously been identified in a study by Patterson *et al.* (2015), which found that midwives engaged in a more objective and probabilistic process by analysing patterns and cues as a form of confirmatory or contradictory evidence, rather than relying on heuristic strategies, when they experienced a poor fit in a situation which required them to transfer a woman with slow labour.

The analysis of the interviews also revealed that experienced midwives had acquired this type of knowledge and experience after they had looked after many women in labour. They were

then used to the patterns of normal labour and tended to have better instinct or intuition about the progress of labour. Their knowledge and experience facilitated decision making on what they should do in various situations. Maureen, an ENM, explained the following.

“I am just an old midwife and I don’t use any guidelines for care of normal labour. I am just used to the way labour progresses. I have been in labour ward for some years now and I have seen women who come like her. Therefore, I know how I should assist the woman instead of leaving her to go and be operated on.” (Maureen, hospital A)

Maureen was talking about her intuitive knowledge, a knowledge that underpinned the motive to prevent the woman from undergoing a caesarean section, and promote the physiological process of birth. She had experienced similar situations with women in labour which provided her with an understanding of the woman’s condition and needs. Benner (2000) argues that the experienced practitioner has an intuitive grasp of the situation and zones in on the accurate region of the problem without ‘wasteful’ consideration of cues. This was demonstrated by Matilda in the following excerpt.

“From the time I learnt from my tutor in class in those old days, I have been practicing care of women in labour and it is part of my daily work. I always know how normal labour progresses and I know what to do.” (Matilda, hospital B)

This example demonstrates that intuition comes from knowledge and experience which is gained through being with women in labour, seeing how labour progresses, and getting on helping the women until they deliver their babies. Hunter (2008) described intuition as grounded knowing which the midwife gains from the lived experiences of attending women during birth. Mok and Stevens (2005) assert that such vivid memories of past experiences, actions taken and labour outcomes help the midwives respond with certainty. Mok and Stevens (2005) note that pattern matching is the process of categorising a new case by its similarity to a client seen previously, and the new case is then given the same diagnosis. Cioffi and Markham (1997) also found that midwives use heuristics such as representativeness (how it relates to the previous experience) and availability (how easy it is to recall) and anchoring and adjustment (favouring originally held beliefs, but some adjustments on the basis of new evidence) when making judgements about women admitted to their care.

The analysis further reveals that the experienced midwives possessed embodied knowledge through numerous encounters with women in labour. Davis-Floyd and Davis (1996) assert that intuition is another kind of knowledge which is deeply embodied. Thelin *et al.* (2014, P.117) assert that the word “embodied” focusses on the fact that the “knowledge is deeply rooted and integrated, meaning that the midwife is her knowledge”. Similarly, Berg (2005) points out that the midwife’s embodied knowledge is based on genuineness to oneself and consists of various knowledge such as theoretical, practical and intuitive knowledge. To this end, Berg (2005) describes midwifery embodiment as a useful tool in midwifery practice. The physicality of this knowing was clearly expressed in this description by Matilda.

“I know what to do in normal labour because it is now in my blood, I have known this from school and I am used to doing this. These things are now sunk in my head, I do them every day and I just know what I am supposed to do when I am caring for a woman in labour.” (Matilda, hospital B)

Additional to the psychological and emotional dimension, intuitive knowledge seemed to facilitate the midwives’ physical sensation and experience which in turn helped them to act in all prevailing situations during labour as exemplified by Matilda in the above example. As reflected in the review of the literature, intuition is another kind of knowledge that is deeply embodied in midwifery (Davis-Floyd and Davis (1996). Berg (2005, p.14) stated that “the midwife is her knowledge, meaning that midwifery knowledge is deep-rooted knowledge obtained from the things they learn every day that sink in” as highlighted by Matilda “*it is now in my blood*” and “*these things are sunk in my head.*” In their study to understand midwives’ utilisation of and reliance on intuition as a guide to action and decision making during homebirths, Davis-Floyd and Davis (1996) found that the use of intuition by midwives and the physicality of knowing emanated from the entire body or were recognised in certain areas of the body. Their use of intuition was reflected in statements that included “it’s in my stomach’, ‘my heart, my chest and my throat” (Davis-Floyd and Davis, 1996, p.247). Similarly, this finding resonates with findings of a recent Swedish study by Thelin *et al.* (2014) which found that midwives who possessed embodied knowledge described the journey of getting knowledge into their bodies through their eyes, voice and body.

However, it is unclear whether this information may be used to assist midwives’ diagnosis and management of labour. Such processes would reflect an element of making assumed problems for women in labour and initiating midwifery interventions that have not been

adequately considered and might lead to errors. In addition, this facility to access knowledge automatically, on the basis of particular salient cues, may lead to systematic ‘biases’ in reasoning known as heuristics (Cheyne *et al.*, 2006). Jefford *et al.* (2010) have likewise rejected Benner’s (2000) research as providing a basis for understanding decision making arguing that if advanced practitioners use intuition, then they are less likely to use formal reasoning processes and are more prone to making errors in decision making. Furthermore, Hofmeyr (2004) asserts that health workers must rely on objective evidence rather than individual clinical convictions, acknowledging that individual clinical convictions and intuitions may be wrong. Raynor and Bluff (2005) further claim that the use of tacit knowledge such as intuition that cannot be articulated raises the issue of how a student can learn to make decisions.

In the preceding sections, I have linked the key findings of my study to one of my research questions ‘What assessments and management decisions do midwives make during the first stage of labour?’ This question has been adequately addressed through the role of cue acquisition; a six-stage process which highlights the assessment and management which the midwives make and the subsequent clinical decision making based on the identified data. The subthemes identified under the role of cue acquisition have provided a detailed picture of how Malawian midwives make decisions during the process of labour. The analysis has also offered rich accounts on how the assessments and management decisions made by the midwives during the first stage of labour play a significant role in supporting the normal physiological processes of labour. This approach identified one of the unique aspects of the midwifery profession which shows that midwives are the specialists in normal labour and birth, and they hold the potential to support normal healthy outcomes.

In section 7.4 I examine how the midwives used the partograph to document and interpret the data they obtained from the assessments they made on women in labour.

7.4 The Role of the Partograph in Midwifery Decision Making

When an assessment of labour progress parameters was undertaken, the midwives recorded the parameters on a partograph then continued to assess progress. As discussed in Chapter 1 of this thesis, the WHO recommends universal use of the partograph as a decision-making

tool during the care of women in labour (WHO, 1994a, Mathai, 2009, Lavender *et al.*, 2008). The partograph has been widely implemented across Malawi. It is used in Malawian hospitals as the standard tool for assessing the progress of labour and assisting midwives in making decisions during the first stage of labour. At the two study sites (hospitals A and B) a version was used called the WHO partograph.

During the course of the field work in hospitals A and B, it was clear that the midwives were using the partograph to record assessment data obtained during the care of women in labour and this was a norm at both hospitals. The observational and interview data revealed that the midwives found it useful to use the partograph during the care of women in labour. All the midwives, whether newly qualified or experienced, saw the partograph as the most useful aspect of their work.

Another interesting phenomenon observed was the way in which the midwives' heavy reliance on the partograph influenced the provision of medical interventions to women under their care. I argue that the midwives are striving to promote normality but they are sometimes challenged by their strong dependence on the partograph. Section 7.4 relates to the following research question.

What is the role of the partograph in midwifery decision making regarding assessment and management of progress of labour?

The use of the partograph was an essential part of the labour and delivery care when midwives were undertaking assessments of women in labour. The analysis of this study revealed that the midwives routinely documented on the partograph all the data they obtained from the initial and subsequent assessments of women in labour. The way in which the midwives used the partograph for documentation of data obtained on women in labour was explicitly illustrated by Matilda, an ENM.

“We usually use a partograph when caring for women in labour. The partograph has a provision for documenting information on maternal condition, foetal condition and progress of labour.” (Matilda, hospital B)

Matilda's account of the use of the partograph relates directly to the purpose of the partograph discussed in Chapter 3, which is to document data obtained on assessment of women in labour. Midwives in this study seem to use the partograph as an integral tool for recording observations made on a woman during the first stage of labour in a hospital setting. As discussed in Chapter 3, the use of the partograph has been heralded as one of the most important developments in obstetric practice (Safemotherhood, 1990). Similarly, I noted during data collection that the use of the partograph to document and interpret data was equally emphasised among medical staff as well as among midwives. I observed, during participant observations, that the medical staff checked the partograph to determine how a woman's labour was progressing. The medical staff seemed to be concerned when partographs were not completed during the care of women in the first stage of labour. The following field note, as highlighted in vignette 1, Chapter 5, illustrates this.

A consultant lamented on non-use of partograph among obstetric staff during a maternal mortality meeting: one obstetrician recommended that staff should go back to school and learn about how to use the partograph. He complained that action lines were not followed and doctors did not document their assessment findings on the graph (Field note, hospital A).

As the above field note illustrates, it was not only midwives who viewed the partograph as an integral part of labour care. The data illustrates that the partograph offers a language for midwives that echoes with the medical profession. Arguably, the medical profession seems to react mainly from a positivist perspective to knowledge which rests on direct cause-effect relationships. The training and practice for the medical profession values objective data which is worth their attention and action. As discussed in the review of the literature, the seminal work by Friedman (1954, 1955) defined labour progress using the partograph. Friedman (1954, 1955) developed the partograph to provide health workers with an objective way of measuring labour progress. The most classic feature of the partograph is the graphic representation of observations of progress of labour with an important section dedicated to plotting findings obtained from the assessment of the cervix, contractions and descent of the foetal presenting part (Fraser and Cooper, 2009). The following excerpts from Linda and Alice illustrate how the tool appeared to be part of the midwives' vocabulary as far as labour progress was concerned.

“The partograph was very useful because without the partograph it was going to be difficult to assess how the labour was progressing, and because of the partograph, I was able to compare one finding from the other and to see how the labour is progressing” (Linda, hospital B)

Likewise, Alice made similar comments.

“The partograph was very useful because it gave me a picture of how the woman’s labour was progressing, and by looking at the partograph I was able to see how the contractions and descent of the foetal head were progressing.” (Alice, hospital A)

These findings resonate with the guidelines from the NMCM which indicate that midwives in Malawi are expected to diligently monitor the progress of labour and record findings of cervical dilatation and all other findings on the partograph (NMCM, 2002). Therefore, the midwives could be using the partograph as a commitment to their work and supporting the normal physiological progress of labour. The tool was developed to enable maternity care providers to identify labour dystocia (Philpott and Castle, 1972a). However, as identified in Chapter 3, the benefits and harms of using a partograph are still under debate (Lavender and Malcomson, 1999, Lavender *et al.*, 2012)

Scammel and Stewart (2014) posit that the partograph is used in many maternity units as a prescriptive timetable for the midwives to document their findings from the assessment of women in labour, and from which they can detect any deviations from the normal progress of labour. As discussed in Chapter 1, labour is said to ‘divert’ from normal when it crosses to the right of the alert line on the partograph (WHO, 2006). However, midwifery researchers have raised worries about defining abnormal labour as being a deviation from normal rather than describing the actual pathology (Downe *et al.*, 2001). As reviewed in Chapter 3, recent research by both obstetricians and midwives is challenging the logic of this model reflecting a growing awareness that this approach to labour management merits consideration (Albers *et al.*, 1999, Davis *et al.*, 2002, Buckley, 2003, Walsh, 2010, Zhang *et al.*, 2010a, Zhang *et al.*, 2010b, King, 2012). However, in this study the partograph appeared to be a valuable tool for the midwives to use when providing labour care. During interview sessions, most of the midwifery participants expressed various advantages of using the tool.

1. Acts as a pathway

“When you plot on the partograph you actually observe and see what is happening and it is like your path way.” (Maureen, hospital A)

2. Tool for referral

“The partograph the way you saw it, it was helpful because it is the one which guided us to see that things are not ok the doctor has to come. If it were that on my next vaginal examination I found may be 8cm with a descent of 3/5 or 2/5 I would say that the labour progress was ok, there would be no reason for me to call the doctor.” (Zione, hospital B)

3. Warning tool about labour progress

“I feel that it is very important because it surely gave me a warning. For example that descent started worrying me because it was showing 5/5, 5/5, had been that it still continued making 5/5, 5/5, 5/5, still going straight it would have worried me further.” (Monalisa, hospital B)

4. Abnormality detection

“The partograph, it was very instrumental in seeing the abnormalities of the labour that woman was having.” (Odetta, hospital A)

These pieces of data demonstrate that the midwives viewed the partograph as an integral part of labour care during the first stage of labour. The midwives' accounts resonate with some evidence which suggests that use of the partograph has some practical benefits for midwives in terms of ease of use, time resourcefulness, continuity of care and pictorial overview of progress (Lavender and Malcomson, 1999, Bosse *et al.*, 2002, Lavender *et al.*, 2007, Fawole *et al.*, 2008). Conversely, the literature also suggests that use of the partograph in some maternity units may limit clinical practice, reduce midwifery autonomy and limit flexibility to treat each woman as an individual (Lavender and Malcomson, 1999). These factors could also impact on women's clinical and psychological outcomes. In contrast to the findings of this study, Lavender *et al.* (2011) conducted a qualitative study in Kenya where student midwives reported the lack of status held by the partograph among midwives and obstetricians; this, they suggested, created a barrier to its partograph use.

The analysis further revealed that the midwives relied so much on the use and interpretation of the partograph to guide their decision making during the care of women in labour, that it became their only guide for the care of women during labour. The following quotes from Matilda and Alice reflect this.

“The partograph was everything to me, I was able to compare how the woman was progressing from one point to the other and I was able to care for the woman based on the picture of the graph.”(Matilda, hospital B)

*“The partograph was very useful because it gave me a picture of how the woman’s labour was progressing, and by looking at the partograph I was able to know how I should care for the woman in labour.”
(Alice, hospital A)*

The data illustrate that midwives seemed to rely on the partograph to enhance their confidence in the care of women in labour. It appears the partograph assisted their decision-making during the first stage of labour by providing tangible parameters which helped them to implement actions on women in labour. These findings are consistent with assertions by Lavender *et al.* (2012) who point out that the partograph is used as a decision-making tool in labour and is considered to be an effective tool for labour management in developing countries. Literature reflects that the evidence base for the use of partograph as a tool for decision making in labour is not clear. Apparently, midwifery researchers have expressed concerns about the routine use of the partograph for monitoring all labours (Lavender *et al.*, 2008, Walsh, 2010).

The presence of the alert and action lines acted as visual prompts for the midwife’s identification of poor labour progress and the time to correct the deviations in labour progress respectively. The midwife’s decisions on when to intervene and when not to intervene during labour were based on where the findings from vaginal examinations were plotted on the partograph. Take Alice, an RNM, for example.

“When I plotted the vaginal assessment findings on the alert line of the partograph it indicated that the progress was fine. But when the progress was plotted on the right of the alert line, it showed that the

progress was poor and it would be prolonged. This knowledge guided me in decision making on care of the woman.”(Alice, hospital A)

The midwives’ use of the partograph is based on the assumption that it facilitates early recognition of slow labour progress through the use of the alert line. In addition, it helps to optimise the timely provision of interventions through the use of the action lines. Take Mary for example.

“Just because labour progress had reached the ‘action line’ that means I was supposed to do a certain action ...” (Mary, hospital A)

The data illustrate the functions of the alert and action lines developed on the partograph by obstetricians Philpot and Castle (1972a, 1972b). Based on Friedman’s (1954, 1955) partograph, the functions of the alert and action lines are to facilitate diagnosis and timely intervention of slow and obstructed labour through the concept of the ‘alert line’ and ‘action line’ for implementation of timely intervention. However, Schmid and Downe (2010) argued that the use of the action lines on the partograph assumes that labour is a uniformly linear process and not a physiological process governed by hormones. To that end, Walraven (1994) points out that the use of the partograph can create unnecessary interference. By assuming that all women will progress in labour at the same rate, partograph use could lead to increased use of medical interventions and more negative labour experiences (Lavender *et al.*, 2008, Weerasekara, 2014). The following extracts from Alice, an RNM illuminates how the use of the partograph influenced the use of medical interventions.

“The partograph guided me in decision making because it reached a point when the cervix was 6cm. It dilated further to 8cm after 4 hours. This was slow progress of labour and I saw it on the labour graph. I decided to intervene by putting oxytocin so that the labour should progress.” (Alice, hospital A)

Likewise, during a follow-up interview, Mabel mentioned using alert lines that facilitated the use of interventions as highlighted in vignette 1, Chapter 5.

Mabel expressed that she noticed poor progress of labour when she had plotted findings on cervical dilatation to the right of the alert line. Mabel commented that the picture portrayed on the partograph influenced her to

make a decision to consult a doctor who ordered oxytocin 2.5 units. In the process of labour progress, the foetus developed distress and the woman ended up having a caesarean section. (Mabel, vignette 1)

The data illustrate that the midwives were at times implementing medical interventions when labour appeared to be stalling. However, Crabtree (2004) points out that a medicalised approach to childbirth pathologises a woman's uniqueness as deviance. Arguably, the cultural construction of labour through the use of the partograph is deeply entrenched in a medicalised approach that introduces rigid boundaries that mean women will 'fail' (Crabtree, 2004).

7.5 Summary of Chapter 7

In Chapter 7 I have argued that midwives are making decisions towards supporting normality as they care for women during the first stage of labour. Midwives from both hospital A and B orient their decision making by taking into account a number of actions aimed towards supporting the normal physiological processes of labour during its first stage. The role of cue acquisition is a significant finding of my research incorporating many facets. It comprises six stages through which the midwives made sense of the data they gathered from the women in labour. The theme illustrated the basic decision-making approach followed by midwives in both settings. This was depicted in the approach by the midwives upon contact with a woman in labour. Through the theme of the role of cue acquisition the midwives valued regular assessments and observations on women in labour. The data revealed that the midwives in this study used both objective assessments as well other covert ways of 'knowing' such as intuition and embodied knowledge.

The literature suggests that intrapartum care suffers from 'risk surveillance syndrome' which manifests itself as a situation where every labour is treated as a potential disaster unless proven otherwise by clinical events (Crabtree, 2004). However, the midwives in this study were conducting regular assessments of labour-progress parameters on women in labour in order to ascertain that labour was progressing normally physiologically. The midwives maintained this approach until there was enough evidence to show the presence of a complication. Their energies were directed towards supporting normality and the early detection of complications in order to facilitate appropriate interventions and ensure safe practice.

The midwives appeared to utilise hypothetico-deductive reasoning by interpreting the data they collected from assessments. They formulated ideas and made decisions about the progress of labour. However, in complex situations, the midwives attempted to reduce their uncertainty by obtaining more labour progression parameters to build evidence of their concerns in an iterative manner. Therefore, the clinical decision-making process of the midwives appeared to be a fluid rather than a completely linear process. Although the midwives began with the process of data gathering and moved forward in the process, they moved in a more iterative manner, more especially when the labour progress was unusual.

The partograph assisted the midwives' decision making by providing assessment details to suggest appropriate interventions for women in labour. However, alongside this apparent acceptance and use of the partograph, the analysis revealed that the midwives were able to tolerate uncertainty despite the partograph indicating deviation from normal.

In Chapter 8 I translate the findings of Chapters 6 and 7 into a further development of theoretical understanding of the midwifery decision-making process during the first stage of labour. Chapter 8 also explicates my research contribution to midwifery knowledge.

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Chapter 8 : Discussion

8.1 Introduction

In this ethnographic study I aimed to understand midwifery decision making during the first stage of labour in a hospital setting within the Malawian context. I identified specific gaps in our knowledge of midwifery decision making from the literature review presented in Chapter 3, and from these gaps I developed the following research questions in relation to the overall aim of the study.

1. What assessment and management decisions do midwives make regarding labour progress during the first stage of labour?
2. What is the role of the partograph in midwifery decision making regarding assessment and management of the progress of labour?
3. What are the contextual factors that influence midwifery assessment and management decisions regarding labour progress during the first stage of labour?

These research questions were tackled by studying and exploring the midwives' behaviours, and the events and practices in their environment. Drawing on data collected to address the research questions, its analysis has enabled me to gain several significant insights into Malawian midwifery decision making. The analysis revealed three major themes which I have explicated in section 8.2.

In Chapters 6 and 7 I have analysed the findings of this study with reference to the relevant theoretical and empirical literature. The first major theme analysed in Chapter 6 has depicted the multiple and competing contextual factors that broadly influence midwifery decision making. Chapter 6 further provides evidence that the midwives accounted for the context in their decision making by developing strategies to manage and control the context of their practice.

In Chapter 7 the second major theme, the role of cue acquisition, was analysed as a six-stage midwifery reasoning process during the first stage of labour. This process illustrated how the midwives enacted their care to formulate decisions during the care of women in labour. The third major theme, the role of the partograph, is also analysed in Chapter 7. The analysis

demonstrated that the partograph is a practical management tool for documenting and interpreting labour assessment data during the care of women in labour.

In Chapter 8 I discuss these key findings to illustrate how aspects of midwifery decision making during the first stage of labour can best be understood. I integrate these major themes to present ‘supporting normality’ an inductively developed conceptual framework for Malawian midwifery decision making during the first stage of labour (Figures 8.1, 8.2). The proposed conceptual framework is presented exploring how this study strengthens or challenges previous relevant theoretical and empirical literature. I highlight the contributions of this study to the development of midwifery knowledge by indicating both the similarities and differences between the findings of this study and the existing midwifery literature.

The emerging model conceptualised in this study provides a structure that focuses on the process of making decisions based on objective assessment during the care of women in labour. However, inclusion of some intrapersonal characteristics of the midwife such as personal values and beliefs might enhance the explanatory power of the conceptual framework. These attributes could be useful in understanding midwifery decision making because they seem to be apparent in the midwives intuitive judgement. Midwives seemed to relate to themselves and what their preferences were in certain situations. Ultimately, personal values and beliefs appeared to condition the midwives’ decision making in a particular woman’s labour situation.

The analysis of this study, therefore, provides an emerging model of practice knowledge as interpreted by Dreyfus and Dreyfus (1986) that uses different levels of practice based on experience and expertise – skill acquisition. The model posits that individuals, while acquiring and developing skills, pass through five levels of proficiency: novice/beginner, advanced beginner, competent, proficient, and expert. Benner’s (2004) work is based on that of Dreyfus and Dreyfus (1986) who argue that good decisions are made intuitively by professionals with expertise. Understanding the work of Dreyfus and Dreyfus (1986) and Benner (2004) gives us a viable alternative to traditional ways of understanding practice, theory, and knowledge not to devalue science. However, the central importance of intrapersonal characteristics such as values and beliefs could be further investigated to understand their influence in midwifery decision making.

During the critique and analysis of the literature on decision making approaches in Chapter 3, I drew the conclusion that none of the models analysed was, in itself, sufficient to account for midwifery decision making during the first stage of labour. In this thesis I have developed a conceptual framework of decision making that does account for, and better illustrates how, Malawian midwives make decisions during the first stage of labour. Thus, when discussing my findings, I have largely drawn on a comparison in the literature of three existing midwifery decision-making frameworks.

1. the International Confederation of Midwives framework (ICM, 2002)
2. the Malawi Midwifery Management Process framework (NMCM, 2002, MOH, 2009a)
3. the midwives' clinical reasoning framework during the second stage of labour by Jefford and Fahy (2015), discussed in Chapter 3, section 3.4.1.

These midwifery frameworks are of relevance to midwifery practice and the findings of this study. Table 8.1 compares and contrasts concepts from these previous midwifery decision-making frameworks with the conceptual framework developed in this study.

Table 8.1: Comparing and contrasting models of decision making in midwifery

International Confederation of Midwives framework	The Malawi Midwifery Management Process framework	Clinical reasoning framework in the second stage of labour	Conceptual framework of midwifery decision making in the first stage of labour
Collect information from the woman, from the woman's and infant's records, and from any laboratory tests.	Assessment (obtaining subjective and objective data).	Cue acquisition.	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Supporting Normality</div> <div style="text-align: center;"> <p>Contextual factors present</p> <ul style="list-style-type: none"> • Strategies used <p>↓ ↓</p> <p>The role of cue acquisition and midwives' clinical reasoning</p> <ul style="list-style-type: none"> • Cue acquisition • Cue interpretation • Formulation of ideas • Implementation of decisions • Focused search of data • Reanalysis of data • 'Building a bigger picture' • Reflection • Implementation of decision <p>*Linking intuition to cues and decision making*</p> </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Inductive and deductive reasoning</div> </div>
Identify actual or potential problems based on the correct interpretation of the information gathered.	Formulation of a midwifery diagnosis.	Cue clustering.	
Develop a comprehensive plan of care with the woman and her family based on the woman's or infant's needs.	Planning of care.	Cue interpretation.	
Carry out and continually update the plan of care within an appropriate time frame.	Implementation of care.	Generate multiple hypotheses.	
Evaluate the effectiveness of care given with the woman and her family, consider alternatives if unsuccessful.	Documentation.	Focused cue acquisition.	
	Evaluation of care, consider alternatives if unsuccessful.	Rule in and rule out hypotheses.	
		Make a diagnosis.	
		Evaluate treatment options relevant to the diagnosis.	

		Prescribe and implement the treatment plan.	
		Evaluate treatment outcomes.	
		Use intuition to aid decision making.	
		Link intuition to cues and reasoning.	

As Table 8.1 shows, there are both similarities and differences between the midwifery decision-making frameworks identified from the literature with the conceptual framework proposed in the present study. The previous midwifery decision-making frameworks outlined in Table 8.1 depict decision making as a linear process. Similarly, the framework developed in this study demonstrates an approach of using linear and explicit steps in clinical reasoning. However, it further depicts that a linear process is not completely representative of the process that midwives use when they care for women during the first stage of labour. There is continuous forward and backward decision making that is different from a one-time process of several stages. The dynamic steps of midwifery decision making during the first stage of labour identify that midwives move in an iterative manner, depending on the situation rather than strictly following the stages in sequential order.

The new conceptual framework for midwifery decision making developed in this study and Jefford and Fahy's (2015) framework are different from other frameworks in terms of the clinical reasoning aspect. The other midwifery decision-making frameworks, i.e. the International Confederation of Midwives' framework and the midwifery management process framework, are very explicit in asserting that midwives use a rational approach to decision making. However, the framework proposed in this thesis and that of Jefford and Fahy (2015) reflect qualities of intuition as well as a rational approach to decision making.

The conceptual framework of midwifery decision making during the first stage labour that I have proposed in this study includes the contextual element of the decision-making process which determines how a decision may be formulated. In contrast, the other midwifery frameworks do not recognise the importance of the context and its influence on midwifery decision making.

In the current decision-making conceptual framework, there is emphasis on the concept of 'supporting normality' which emerged as a significant factor in midwifery decision making. None of the previous midwifery decision-making frameworks outlined in Table 8.1 integrates this key midwifery philosophical concept. I discuss further the similarities and differences between these frameworks in section 8.3.

In section 8.2 I illustrate how the conceptual framework in this study developed while focusing on concepts grounded in the practice context. In section 8.3 I discuss the

relationship of the current framework to other decision-making frameworks identified in the literature. I have conceptualised this debate under the following sub-headings: the contextual nature of the midwifery decision-making process during the first stage of labour is presented in section 8.3.1. In section 8.3.2 I present about reflecting on assessment to make decisions. A discussion then follows in section 8.3.2.1 about using embodied and intuitive knowledge when assessing women in labour. The role of the partograph in midwifery decision making is discussed in section 8.3.3. In section 8.3.4 I debate the core concept of the model ‘supporting normality’ exemplified by the midwives in this study. A further argument then follows on woman-centred decision making in section 8.3.5. Finally, in section 8.4, I present reflections on the conceptual framework followed by a review of the research aim and questions in section 8.5.

8.2 ‘Supporting Normality’: a Conceptual Framework of Malawian Midwives’ Decision-Making Processes

‘Supporting normality’ is an inductively developed, substantive, decision-making conceptual framework derived from simultaneous data collection, data analysis and comparison of the study findings with the literature. The conceptual framework provides an abstract picture of Malawian midwifery decision making during the first stage of labour. The conceptual framework was constructed through the integration of the three major themes and subthemes discussed in Chapters 6 and 7. A central concept, ‘supporting normality’, was identified as the explanation for how hospital-based Malawian midwives reason, formulate and make decisions about the care of women during the first stage of labour.

I have summarised the midwifery decision-making conceptual framework elucidated in this study in two figures. The first of these, Figure 8.1, shows the interrelationship between the three components of the decision-making framework. These are contextual factors influencing midwifery decision making, the role of cue acquisition and the role of the partograph in midwifery decision making.

The second, Figure 8.2, explicates the whole cognitive process related to the midwifery assessment of labour progress during the entire labour progression span. This process, explained in Figure 8.2, can be layered onto the role of cue acquisition in Figure 8.1, because the two occur in tandem. The role of cue acquisition in Figure 8.1 can be considered to be the

midwives' use of assessment cues working out how to account for their decisions and actions, with Figure 8.2 depicting cognition and action during this process.

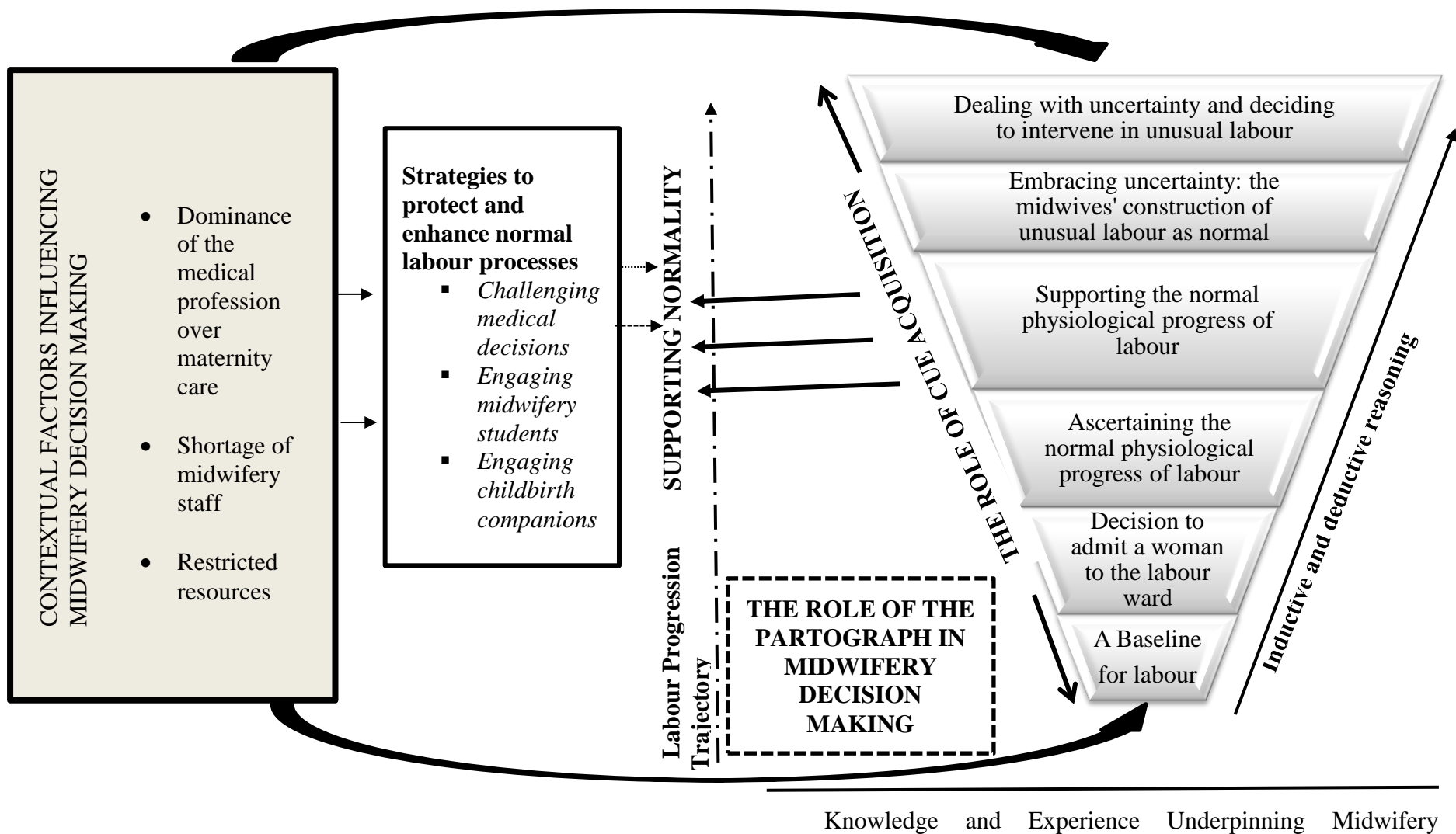


Figure 8.1: The Midwifery Decision-Making Conceptual Framework During the First Stage of Labour in a Hospital Setting – ‘Supporting Normality’

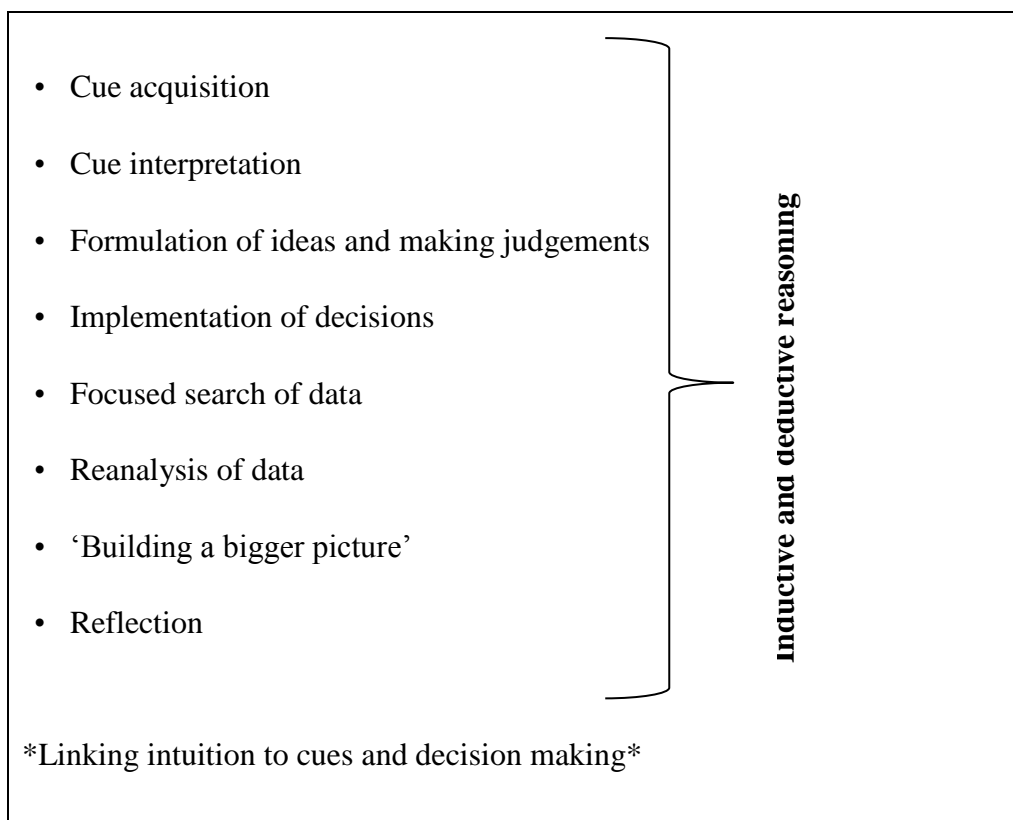


Figure 8.2: Midwives’ Clinical Reasoning During the First Stage of Labour

I found that the decision making of the Malawian midwives during the first stage of labour could not be understood by reference to any one of the previous decision-making theories discussed in Chapter 3. The process of decision making occurred in a complex context, it was cyclic and diverse and included components representative of various aspects of the theoretical frameworks analysed in Chapter 3. This finding is congruent with post-modernist philosophy defined by a “cynical distrust of universal theories and a tendency to question predominant and accepted universal theories” (Sim, 1993, p.3).

The decision-making process among Malawian midwives during the first stage of labour is a complex and contextually dependent undertaking. The competing and multiple contextual factors placed on the left side of the conceptual framework in Figure 8.1 appear to have exerted broad influences on the role of cue acquisition. These influences are the dominance of the medical profession over maternity care, excessive workloads and restricted resources. In Figure 8.1, the big arrows indicate the influence from the contextual factors on all parts of the decision-making process. The interaction between context and midwifery decision making was complex and dynamic.

It is within this context that the midwifery participants experienced their professional concern of failing ‘to be with women’ in labour. The findings indicate that midwives had trouble in making decisions when the contextual factors exist. In the absence of such contextual influences, the midwives appeared to demonstrate their professional role of supporting and facilitating the normal physiological processes of labour identified under the role of cue acquisition in Figure 8.2.

The analysis of the study revealed that the midwives adopted some strategies to help them adapt to the contextual factors. The midwives demonstrated the capability of managing the context, being more aware of its impact and better able to interact rationally with and handle contextual factors to protect and enhance normal labour-care processes. They developed strategies (placed adjacent to the contextual factors in Figure 8.1) which influenced decision making in the framework. These include challenging medical decisions, engaging midwifery students and engaging childbirth companions to manage and control the context of their practice and facilitate decision making. They reacted, accommodated and adapted to manage the complexities of the environment.

By adopting such strategies, the midwives reflect the attempts they made to ensure that, physiologically, labour was progressing normally. The inclusion of the strategies as part of the supporting normality framework reflects how the midwives accounted for the context in their decision making, and how they responded to ensure positive labour outcomes and women’s experiences.

The role of cue acquisition, depicted in a pyramid format on the right side of the conceptual framework along with the midwifery reasoning process illustrated in Figure 8.1, was found to be a six-stage midwifery reasoning process. These sub-processes emerged from my data analysis illustrating how the midwives utilised the assessment data obtained from a woman during the first stage of labour. Midwives appeared to draw upon their fundamental skills in the evaluation of labour progress, drawing out salient assessment details to inform their decisions and support the normal processes of labour during the care of women in labour.

The role of cue acquisition emerged when the midwives had to ‘make sense’ of the clinical data they obtained from a woman in labour. They appeared to make sense of the parameters as they unfolded during labour for each particular woman that they cared.

In Figure 8.1 the vertical line drawn on the left side of the pyramid represents time passing during the progression of labour in the first stage. This line represented varying lengths of time depending on how quickly, or how slowly, a woman's labour progressed. During this period, different reasoning processes were taking place depicting cognition and action in progress (Figure 8.2). Therefore, the stages of the role of cue acquisition encapsulate the midwives inductively building a case for each woman's labour progression by analysing segments of assessment data they obtained about the progress of labour.

When the progress of labour was normal, decision making was characterised by planned routine surveillance of the progress of labour. The midwives collected this information as part of standard and routine midwifery care, which they used to direct their decision making. Decision making within these circumstances was routine and was based on ensuring the normal physiological progress of labour. This approach reflected sequential and linear processes in decision making as identified in previously published midwifery decision-making conceptual frameworks (ICM, 2002, NMCM, 2002, MOH, 2009, Jefford and Fahy, 2015). These approaches reflect the hypothetico-deductive reasoning processes discussed in Chapter 3, section 3.4.1.

The midwives continued with the hypothetico-deductive reasoning approach while the progress of labour was normal. However when the progress changes and deviates from normal, then midwives used abductive reasoning to address the situation. They crosschecked labour-progress parameters such as strength of contractions, progression of cervical dilatation and descent of the foetal presenting part. The midwives had to 'account' for their intuitive assumptions of unusual labours prior to intervening during the first stage of labour. They accounted for what they inductively recognised by employing deductive reasoning to confirm or dispute their initial intuitive assumptions. The midwives searched for evidence through assessment cues to support their clinical decision making throughout this process. There was a constant forward and backward moving of thought processes backed by clinical actions that they hoped would uncover real case-building evidence for intervening or not intervening during the progress of labour. The concept of supporting the normal physiological progress of labour encompassed this whole decision-making process. Supporting normality is perceptible during each of the six stages of decision making identified in Figure 8.1. The midwives drew on their knowledge and experience to inform their reasoning as they worked to ensure positive labour outcomes. The data from this study evidences a new conceptual framework

that illuminates that clinical reasoning in midwifery is dynamic, diverse and cyclical. This finding indicates that midwifery decision making is not adequately reflected in the conceptual models of decision making outlined in Table 8.1. It is intended that this supporting normality framework helps to describe and enable a better understanding of midwifery decision making during the first stage of labour within the Malawian context.

The partograph assisted the midwives' decision making as a tool providing tangible parameters for normal versus abnormal labour (Figure 8.2 with the partograph inserted alongside the role of cue acquisition). The midwives used the partograph as a labour-management tool to document, interpret and analyse data to make labour-care decisions. However, the tool was not always adhered to within the labour and delivery settings. Midwives still acted on intuition, previous experience and labour-progress parameters to determine the progress of labour.

8.3 Relationship of the 'Supporting Normality' Framework to Other Decision-Making Models

As stated in the preceding text, the review of the literature identified numerous decision-making theories (Chapter 3). This study found that Malawian midwives use certain decision-making concepts that have some similarities with, but also some differences to, existing decision-making models of midwifery care identified in the literature (Chapter 3, section 3.3). In the following sections, I compare and contrast the 'supporting normality' conceptual framework with the existing midwifery theoretical frameworks identified in the literature. First, in section 8.3.1, I discuss the contextual nature of midwifery decision making during the first stage of labour.

8.3.1 The contextual nature of midwifery decision making during the first stage of labour

The first key concept from my conceptual framework suggests that midwifery decision making during the first stage of labour did not occur in a vacuum. It was influenced by a variety of contextual factors: the dominance of the medical profession over maternity care, shortage of midwifery staffing and restricted resources. Therefore, midwifery decision making in this study was a complex and contextually dependent undertaking in which the midwives engaged with situational factors in the immediate environment surrounding the

decision maker. This reflects elements of the naturalistic decision making that is particularly focused in natural settings that include specific characteristics (Orasanu and Connolly, 1993).

These findings are further substantiated by the literature which indicates that real-world decision making rarely occurs in an entirely complete and orderly format; various factors are often present to complicate the decision-making task (Orasanu and Connolly, 1993). Therefore, context is important in understanding human behaviour and motivation (Orasanu and Connolly, 1993, Higgs *et al.*, 2008). This study has revealed critical features of the real world that drives decision making. Clearly, contextual factors were of relevance.

The approach in this study, of describing midwifery decision making in context, differs significantly from that of previous authors on midwifery decision-making frameworks, such as the International Confederation of Midwives (ICM, 2002), the midwifery management process (NMCM, 2002 and MOH, 2009a) and Jefford and Fahy (2015). These decision-making frameworks are context free, to date none of them has identified contextual factors and how they impact on midwifery decision making. In contrast, the supporting normality decision-making conceptual framework developed in this study differs to the existing midwifery decision-making frameworks by addressing the contextual factors that influence midwifery decision making. As a result the findings of this research challenge the utility of the existing decision-making conceptual frameworks in helping midwives to understand and develop appropriate decision-making skills. This thesis does not underestimate the value of existing frameworks in decision making, however, it is important to uncover contextual factors rather than continue to identify midwifery decision making as a context-free phenomenon. Therefore, I suggest the need to consider the diversity and complexity of such influencing factors to inform our understanding of the decision-making processes of midwives.

The review of the empirical literature revealed a dearth of studies that offer persuasive evidence of what and how contextual factors affect the decision-making processes of intrapartum midwives. The contextual factors that affected decision making in this study include professional relationships and organisational factors, yet to date this is not evident in the midwifery literature on midwifery decision making.

However, regarding professional relationships in maternity care, a sharp distinction is often made in the literature between the focus of midwifery care, which has positive attributes such as promoting emotionally, socially, culturally and spiritually meaningful pregnancy and birth experiences, and medical care, which, in contrast, is rationalistic and focuses on the potential pathology of labour and birth (Wagner, 1994, Rooks, 1999, Davis-Floyd, 2001). These differences seem to be reproduced in the perceptions of decision makers in the contemporary maternity-care settings of Malawi. Professional relationships in maternity care have previously been shown to have a large influence on midwifery practice and subsequent clinical decision making (Kitzinger, 1990, Sleutel *et al.*, 2001, Hyde and Roche-Reid, 2004, Lavender and Chapple, 2004, Freeman *et al.*, 2006, Keating and Flemming, 2009). These studies identify a role imbalance and a loss of midwifery autonomy in decision making. This study found that the medical professionals interrupted midwives in their decision making and this influenced the way midwives made decisions during the care of women in labour.

In Chapter 6 the analysis indicated that workloads and resources influenced the midwives' ability to optimally make decisions during the care of women in the first stage of labour. The midwives reported that these factors influenced the quality of their decision making, for example, heavy workloads reduced the time available for them to make assessments that were valuable for making appropriate decisions. Thus, time constraints led the midwives to make decisions based on incomplete data. This had a profound impact on the ability of the midwives to provide appropriate care. These challenges are akin to Lipsky's (1980) 'street level bureaucracies' where the requirements within many public-sector organisations made it impossible, within the allocated time, for workers to achieve their ideal conceptions of the work. The challenges of perceived lack of time to care for women as reported in my study are highly consistent with those reported by Dykes (2009), whose work indicted that midwives strongly expressed dissatisfaction with their workplace culture where they experienced pressures of time, staff shortages and rapid client turnover. The midwives commented upon the extreme business of the wards and the emphasis was on "efficient processing of and rationing of care rather than engaging in meaningful relationships" (Dykes, 2009, p.92).

The review of the empirical literature revealed few studies reflecting the influences of organisational infrastructure and shortages of health professionals on the quality of maternity care. The challenges faced by the Malawian midwives, as reported in my study, are consistent with those reported in the wider literature, and their influence on the quality of maternity care

has been reported in Africa (Mselle *et al.*, 2013, O'Donnell *et al.*, 2014, Bradley *et al.*, 2015) as well as in western settings (Dykes, 2005, 2009, Davis, 2008, Kirkup, 2015). These studies reported organisational infrastructure such as lack of resources and the shortage of maternity-care providers resulted in compromises in the care of women in labour.

Working in stressful situations may make the midwives react subjectively with hesitation, and cause feelings of uncertainty and emotional distress that would decrease their capacity to cope with decision making; they might opt for less optimal decisions by choosing interventions that would be adequate rather than optimal. For instance, Hochschild (1983, p. 125) explains that in circumstances where the “conveyer belt” speeds up, “the job of ‘enjoying the job’ becomes harder and harder” and workers reduce their emotional involvement and become detached. Should midwives become detached in their work it is reasonable to deduce that they will make sub-optimal decisions when caring for women.

Central to the concept of the influence of contextual factors on decision making are the strategies that the midwives in this study tried to apply in response to the contextual influences on decision making. The findings of this study illustrate that within the challenging context that the midwives worked, they experienced professional concern about failing ‘to be with women’ in labour and make the necessary assessments regarding the progress of labour. However, the midwives demonstrated their capability of managing the context by being more aware of the impact of context and thus better able to rationally interact with and handle adverse contextual factors to protect and enhance the normal physiological processes of labour.

Therefore, strategies to protect and enhance normal labour processes is a sub-concept of the supporting normality framework, which illustrates the midwives’ ability to deal with contextual factors, particularly negative aspects of these factors, and as such forms an important part of the midwifery decision-making process. This suggests that for some aspects of the midwives decision-making approach, they assumed a proactive approach to the assessment and care decisions for women in labour. This proactive approach helped the midwives to feel more successful and more effective in their decision making. Such strategies have, to date, not been reflected in midwifery decision-making frameworks. This thesis therefore, suggests that if we are to understand and improve midwifery clinical decision making, it is imperative that, in addition to understanding the cognitive elements of the

midwives as decision makers during intrapartum care, we should make explicit the contextual factors that must be taken into account and include the strategies that midwives adopt to counteract the contextual constraints.

The concept of developing strategies to protect and enhance normal labour processes and deal with contextual constraints, illustrated by the midwives in this study, is not a new phenomenon in midwifery practice. Indeed, despite this concept not being debated in the formulation of actual midwifery decisions, it has been discussed in respect of midwives' care of women in labour and its therapeutic value. For example, Crabtree (2004) referred to this concept in a study where midwifery was practised in a contested environment that was firmly entrenched in a medically dominant model of care. The midwives in Crabtree's (2004) study sought ways to challenge, resist and frame their practice with a strong commitment to supporting women. As explained by James *et al.* (2003, p.820), midwives had to "have the guts in order to do what you believe is right and in the best interest of the woman and her baby". In addition, consistent with my findings, other previous research also reported the initiatives midwives adopted to advocate for their professional ideologies (Kennedy and Shannon, 2004, Zhang *et al.*, 2014).

To conclude, the concepts within the framework developed in this study pointed to a larger perspective of factors influencing clinical decision making. Understanding the contextual influences on midwifery decision making exemplifies how evidence-based practice needs to be integrated with other influences on practice. To promote effective decision making, there is a need to understand how to educate midwives in midwifery clinical decision making that considers and manages the multiplicity of factors that influence it, rather than focusing only on the cognitive aspects of clinical decision making. The review of the literature in Chapter 3 highlights the dearth of empirical studies on the context and factors that influence midwifery decision making. Thus, my study makes a significant contribution to the existing literature by providing nuanced accounts of the factors that influence decision making in contemporary midwifery practice settings in Malawi. The study further demonstrates how the midwives incorporate the context as part of their decision-making process.

8.3.2 Reflecting on assessment to make decisions

The conceptual framework in this study has elucidated that the contextual factors led the midwives to practise and make decisions under very difficult situations. The framework has

further illustrated that despite contextual constraints; the midwives strived to support and facilitate the normal physiological processes of labour. The analysis of data in Chapter 7 provides an in-depth description and interpretation of the assessment and management decisions midwives made during the care of women in the first stage of labour. The concept of the role of cue acquisition illuminated a range of ways in which midwives utilised cues for clinical reasoning and formulated decisions during the care of women in labour. The midwives' support of normality in this study was supported by ongoing assessments throughout the labour-progression span. Midwives viewed assessments as the solid foundation for their care of women in labour. They were recognising the progress of labour by interpreting the data they collected from assessments, formulating ideas and making judgements to inform their decisions about the progress of labour (Figure 8.2). In some circumstances it appeared that hypothetico-deductive reasoning could account for the midwives' decision making.

This approach of using linear and explicit steps in clinical reasoning resonates significantly with that of the midwifery decision-making theories outlined in Table 8.1. The literature reflects that such linear and explicit steps used in clinical reasoning provide a systematic approach to decision making (Standing, 2010, Jefford *et al.*, 2011). It is asserted that a clear decision-making process promotes transparency and allows for consensual agreement of decision making (Jefford *et al.*, 2011). In the literature on midwifery decision making there are only a few studies explicating the use of hypothetico-deductive reasoning in midwifery practice. Two study findings, Danerek and Dykes (2001) and Cheyne *et al.* (2006) provide evidence of midwives' use of hypothetico-deductive reasoning in clinical practice. The midwives who participated in these studies were found to be making decisions mainly based on linear collection of cues in order to generate hypotheses. They first sought cues through the assessment of women in order to make hypotheses and implement actions.

A contribution of my study in relation to the concept of cue acquisition is that it points to another dimension of the process of gathering data and decision-making strategies. This study takes a step further by illuminating the process of cue acquisition in more complex assessment situations. A linear set of steps seems not to be representative of the midwifery decision-making process of midwives. The assessment process in this study revealed a back-and-forth process rather than a one-time event of several stages. The dynamic steps of

decision making are fundamental in the proposed framework, which recognises that midwives may move between steps rather than strictly follow the steps sequentially.

The complex situations were the ones where labour progress was deemed slow, the midwives attempted to reduce their uncertainty by obtaining more labour-progression parameters to build more credible evidence of their concerns in an iterative manner. They used higher-level modes of thinking and cognitive justification based on assessment data. In these complex situations, the midwives employed a more focussed search for information. They searched for evidence through assessment cues to support their clinical decision making throughout labour progression. They reanalysed the information obtained during admission and all the data obtained across the labour-progress trajectory in an attempt to reach an overall decision about labour-progress management (Table 8.1).

There was a constant forward and backward moving of thought processes by the midwives which they hoped would uncover real case-building evidence for intervening or not intervening during labour. These processes involved both inductive and deductive reasoning that helped the midwives to build a 'bigger picture' to make decisions, particularly when they were faced with complex and uncertain situations regarding the progress of labour. The midwives' approach to the assessment task in complex situations is consistent with assertions by Schön (1987) who highlights that complex and uncertain situations require reflective practice and clinical reasoning. To this end, the clinical reasoning process is dependent upon a critical thinking 'disposition' (Scheffer and Rubenfeld, 2000).

A possible explanation for how the midwives in this study interpreted the presenting cues on which to base their final decisions can be found in the principles of social judgement theory by Hammond *et al.* (1980) and Elstein and Bordage (1988). Social judgement theory explains how decision makers combine and weigh cues to reach a judgement. Brunswik's (1956) lens model uses the analogy of a convex lens to illustrate the relationship between the judged state (diagnosis) and the actual state as mediated by a set of cues. The actual state may be thought of as something hidden from the judge and to reach a judgement, one must process the cues emerging from the situation to infer the real state of affairs. The selection of cues used by the judge will influence their overall judgement.

Therefore, the midwifery decision making identified in this study did not fit neatly into any one of the conceptual frameworks discussed in Chapter 3. Cue acquisition in this study indicated the reflexive nature of assessment, and the decision-making process did not appear to be the linear and sequential process suggested by the previous frameworks. The decision-making process was cyclical, dynamic and diverse in nature, and it involved responses to the cues in the present situation. This mode of cognition employed by the midwives in this study relates to the nature of the assessment task. This assertion may be explicated by Hammond's (1978) cognitive continuum theory of cognition, which proposes that the model of cognition used depends on the nature of the task (Hamm, 1988). The CCT suggests six modes of cognition and practice that range from intuition to analysis (Chapter 3, section 3.3.2.3). The CCT further suggests that the decision maker should ensure that the cognitive mode is appropriate to the task situation. Any inconsistency between task structure and cognitive mode may result in less precise decision making and poorer outcomes.

A more comparable study in the literature is one by Patterson *et al.* (2015). The researchers studied midwives' decision-making processes when transferring women with slow labour progress from rural areas to specialist care. They found that the midwives engaged in a more objective and probabilistic process by analysing patterns and cues to provide confirmatory or contradictory evidence, rather than relying on heuristic strategies when they experienced discomfort or poor fit in these situations.

In light of the above explanations, the current conceptual framework from this study suggests that the assessment stage within earlier frameworks for decision making may be rigid and may not accurately reflect the complexity of the cue-acquisition stage, especially in uncertain and unusual labour-progression situations. Therefore, the use of these abstract midwifery decision-making frameworks does not seem to suit the reflective nature of the assessment process in midwifery practice, especially when there is unusual progression of labour. The current framework can help as it is a utility framework to guide midwifery practice and encourage reflective thinking.

Thus, during the care of women in labour, this conceptual framework has made a contribution towards an understanding of the midwifery decision-making process. The conceptual framework is detailed and specific on the role of cue acquisition; it establishes assessment as a critical and important stage during the care of women in labour. The significance of

assessment is more pronounced and it reveals that proper assessments, accompanied by reflective thinking, help midwives to be more confident in their decisions. To this end, current midwifery decision-making models need further development by making the assessment stage conspicuous and illuminating the clinical reasoning behind midwifery care actions during the first stage of labour. These identified processes within the care of women in labour may help to enhance midwives' clinical reasoning and performance when caring for women in labour. I hope that this conceptual framework will contribute to continuing improvements to readdress the phenomenon of 'failing to rescue' women, and reduce their suffering from prolonged and obstructed labour.

8.3.2.1 Using embodied and intuitive knowledge in labour assessments

In the preceding text I have discussed the concept of cue acquisition that explicates how the midwives in this study used cues obtained from physical assessments to provide care for women in labour. Similarly, the previous midwifery decision-making frameworks seem to place emphasis on the scientific ways of knowing. However, to maintain a sharper picture of the nature of cue acquisition is to be cognisant of 'the ways of knowing' and the sources of knowledge that the midwives in this current study used. The analysis of the data revealed that the midwives in this study also used other covert ways of 'knowing' such as intuition and embodied knowledge. These have not been adequately reflected as valued ways of knowing in the previous midwifery decision-making frameworks.

While the model of clinical reasoning created by Jefford and Fahy (2015) includes intuition as a valued way of knowing in midwifery practice, my study also points to the use of embodied knowledge as another way of knowing embedded within the contemporary midwifery practice. According to Berg (2005), the term 'embodied' emphasises the fact that the knowledge is inherent within the midwife because the midwife always learns new things that stay in her mind. This knowledge is described as "deep-rooted knowledge" (Berg and Dahlberg, 2001, p.263). To this end, the midwives' knowledge is lived out through all their six senses: smell, sight, hearing, taste, touch, and intuition. Therefore, embodied knowledge is identified as a component of genuine care, the most important kind of knowledge for the midwife in caring for women (Berg, 2005).

The midwives in this study gave examples of non-analytical clinical reasoning; essentially, they relied on pattern recognition and embodied knowledge. The use of intuition occurred as the consequence of deep cognitive processes that the midwives engaged in as an integral aspect of their midwifery practice during the care of women in labour. Therefore, the current framework suggests a more integrated level of cue acquisition that includes intuitive knowledge and embodied knowledge as well as hypothetico-deductive reasoning. These ways of knowing are considered exceptional in understanding and defining a woman's situation and needs during the progression of labour (Davis, 1995). Berg (2005) suggests that intuitive knowing is frequently based on the impressions the midwife receives in the encounter with the woman. These may include a sense of concern or apprehension, or feelings that things are not quite right. Intuitive knowledge can also occur when unanticipated events arise during the care of women (Berg and Dahlberg, 2001). To this end, Pairman *et al.* (2015) suggest that in some situations during the care of women in labour, midwives need to step back and objectively acknowledge the feelings that arise from their bodies. Berg (2005) recognises that embodied knowledge is inextricably linked to the mind and body.

The review of the literature identified some comparable studies where midwives use intuition and the physicality of knowing during midwifery practice. For instance, Davis-Floyd and Davis (1996) identified that midwives in their study followed their 'inner voice' rather than operating only according to standard guidelines when caring for women during childbirth. Berg (2005) identified that embodied knowledge is an important tool for midwives in their work that is deeply rooted and integrated, meaning that the midwife is her knowledge. Similarly, Guiver (2004) identified midwifery knowledge in relation to normal birth indicating that midwife participants spoke about their gut instinct, which helped them to know whether the labour was normal or not.

In contrast with the findings in my study, the study by Jefford and Fahy (2015) identified that midwives used intuitive judgements in their assessments but did not adequately check their intuitive feelings against assessment data, and failed to implement appropriate decisions. The analysis in my study revealed that the midwives seemed to use intuition and embodied knowledge as a prompt that led them to engage in a more analytical reasoning and the use of cues to formulate clinical decisions. To this end, Ruth-Sahd (2014) asserted that intuition is valued in clinical reasoning, especially when used as a prompt to engage in analytical reasoning. Therefore, in this thesis, I argue that the use of intuition and embodied knowledge

is an important and relevant element of reasoning for the practice of midwifery. It focuses on the use of immediate recognition of certain features of the situation that carries considerable meaning and significance in midwifery decision making.

8.3.3 The Role of the partograph in midwifery decision making

The role of the partograph in decision making is a particularly illuminating component in my conceptual framework, offering rich details of how the partograph is utilised as a tool within the Malawian labour and delivery settings. Analysis of the data in this study showed that the midwives used the partograph extensively during the care of women in labour. This approach by the midwives is substantiated by the recommendation of the WHO (WHO, 1994a) which recommends universal use of the partograph as a decision-making tool during the care of women in labour. The Malawi Ministry of Health has adopted the partograph for labour management and the WHO partograph is recommended for use in all delivery units. Both study hospitals used the WHO partograph.

The analysis of this study revealed that use of the partograph was an integral aspect of the labour and delivery ward routines for assessing the status of women in labour. Midwives often referred to the partograph as they described the progress of a woman's labour and the tool appeared to inform their clinical decision making. Midwives described the partograph as a practical management tool for the care of women in labour. The findings of this study suggest that Malawian midwives' views about the use of the partograph for labour management are largely consistent with the views of midwives in Kenya and in the UK (Lavender and Malcomson, 1999, Lavender *et al.*, 2007). Evidence from this study points to the acceptability of using the partograph as a practical management tool for the care of women in labour, both in African and European countries. In this way my findings expand on previous research by illuminating how midwives use the partograph during the care of women in labour in Malawi.

Several studies have attempted to evaluate the efficacy of the partograph and its role in the decision-making process, and there has been evidence from non-randomised trials of the potential benefits of partograph use (WHO, 1994b, Bosse *et al.*, 2002, Lavender *et al.*, 2006, Fawole *et al.*, 2008, Lavender *et al.*, 2008). In contrast, a recent Cochrane database systematic review was unable to make any clear recommendations regarding the practical

benefits of the partograph (Lavender *et al.*, 2012). However, Lavender and Malcomson (1999) highlight that the partograph can be a valuable tool for exchanging information, and it can be helpful in the handover between caregivers, especially when there are multiple caregivers who have no pre-existing relationship with the labouring woman.

An important difference between my study and the previous studies is that I have identified the partograph as having some practical benefits such as providing a warning about abnormal labour progress and the possible need for referral. Although the midwives in my study appreciate the partograph as a valuable tool with practical benefits, they also seem to be wary of its interpretation. The midwives earnestly continued to seek information, focusing on the safety of the woman and the foetus and constantly reassessing the situation while deciding the best possible action for the woman and her foetus. The midwives illustrated an element of providing individualised care to women in labour despite identifying the partograph as a useful tool.

As indicated in Chapter 3 of this thesis, the partograph was developed over 60 years ago, based on research by Friedman, (1954, 1955, 1956). However, current literature suggests that much of the evidence on which the partograph is based is methodologically weak and arguably outdated. To that end, the work of Albers *et al.* (1999), Zhang *et al.* (2002) and Lavender *et al.* (2006) has challenged the rigid interpretation of the partograph. Midwifery researchers have also argued that the evidence for using the partograph as a decision-making tool is not clear and they have expressed concern about its use (Lavender *et al.*, 2008, Walsh, 2010). Lavender and Malcomson (1999) argued that if the partograph is incorrectly used, it might become a rigid dictator leading midwives and medical professionals to action rather than basing action on their assessment. Fraser and Cooper (2009) also point out that the disadvantage of using such prescribed parameters of normal is the temptation to make all women fit predetermined criteria of normality. Arguably, paper technologies such as the partograph can encourage dependency and midwives can lose and forget their fundamental midwifery clinical skills. Therefore, caution when interpreting the partograph for decision making should be exercised to ensure that its use is effective, efficient and makes a positive contribution to women's care. Further work in this area is required. However, my findings regarding the use of the partograph indicate that the midwives were cautious about its interpretation and they corroborate the position of Lavender and Malcomson (1999), Lavender *et al.* (2008) and Walsh (2010).

8.3.4 ‘Supporting normality’

The conceptual framework of ‘supporting normality’ is a new and unique contribution from my research as this approach has not been made apparent in the previous midwifery decision-making frameworks identified in the literature review. I have described ‘supporting normality’ as being integral to the Malawian midwifery decision-making process.

This finding is consistent with assertions by Hastings-Tolsma and Nolte (2014) who contend that identifying women with low-risk pregnancy and placing emphasis on care processes that promote normal birth would offer women a considerable benefit. The emphasis, in this study, on the midwives’ use of clinical reasoning to support the normal physiological processes of labour captures the essence of one of the beliefs of the midwifery profession (Kennedy, 2000, ICM, 2011). The recognition and promotion of normal labour and birth is viewed as an integral part of the role of the midwife (Rooks 1999, Downe, 2006, Kennedy and Shannon, 2006, ICM, 2011). The International Confederation of Midwives’ (ICM, 2011) definition of a midwife provides an aspect of midwifery practice that makes the profession unique. Midwives are regarded as specialists in normal labour and birth and that they hold the potential to support normal health outcomes. The findings from this study would support this claim. The work of Kennedy (2000) and Kennedy and Shannon (2004) is not directly related to midwifery decision making, but their study findings have identified the support of normal physiological processes of labour as a significant midwifery care practice undertaken during labour and birth.

However, there is dearth of literature providing substantive analysis of how midwives practically employ the midwifery model of care that promotes desirable outcomes (Vedam and Goff, 2007). In addition, Hastings-Tolsma and Nolte (2014, p.587) argue that the promotion of normal physiological process related to labour and birth has “suffered from lack of both theoretical and practical clarity.” Although the surveillance undertaken by the midwives in this study reflects the medical model of care, I would argue that their approach to care provides some clarity regarding how they serve to promote normal birth through surveillance.

In addition, birth, by its very nature, can be associated with unexpected events. Furthermore, labour and birth in Malawi, as a low-income country, occurs in institutional settings despite

being deemed to be of low-risk status. Scammel and Stewart (2014) highlight that childbirth; even in countries where it is perceived to become safer and more manageable, for example the UK, has become a locus of risk and expert surveillance and intervention. Arguably, this scenario would be worse in Africa where the standard of maternity care is poor and maternal and neonatal mortality is high compared to Britain and other European countries where maternal and foetal mortality have reduced significantly over the past 50 years (Walsh, 2006).

This study has made an original contribution to midwifery practice by providing theoretical and practical clarity regarding the midwifery philosophical commitment of supporting normality. The conceptual framework in this study provides conceptual guidance on how midwives can use assessment data through reasoning to achieve normal physiological processes. Thus, the study serves as an extant concept of the development of processes descriptive of the midwifery model of care. Redesigning the midwifery decision-making frameworks must take into account midwifery philosophy and how this can be implemented in real practice. This may be seen as a prudent adaptation to the midwifery profession.

8.3.5 Woman centred decision making

Through the observations and interviews conducted in this study, it was revealed that informed decision making played a role in midwifery decision making, but the right to autonomous women's decision making was not seen as an absolute practice in Malawi. In contrast, the International Confederation of Midwives model of decision making (Table 8.1) reflects that a woman is involved in the development of a plan of her care and evaluation of the care given. However, the model of clinical reasoning by Jefford and Fahy (2015) does not reflect involvement of the woman in decision making because the authors claim that it might not be essential to negotiate some decisions with the woman during the second stage of labour. The midwifery management process and the 'supporting normality' conceptual framework do not emphasise woman-centred decision making.

The findings of this study revealed that the Malawian midwives' commitment to the philosophy of 'being with women' in labour operated at a theoretical level and they struggled to build reasonable relationships where they could negotiate decisions with women in labour because of contextual factors. However, the literature reveals that midwifery, as a woman-

centred discipline, places the woman as a partner in decision making. 'Being with woman' care is the cornerstone of the new midwifery philosophy that has been adopted in worldwide midwifery discourse as an underpinning philosophy for midwifery practice (Kennedy, 2000, Hunter, 2002, Page, 2009, ICM, 2011). Therefore, effective involvement of a woman in decision making would depend on the nature of the relationship between the woman and the midwife, and it is more effective in a relationship built over time with a known midwife (Cooke, 2005).

However, this thesis concurs with arguments in the literature that the partnership between midwives and women may not truly be possible and that developing such relationships may not always be a realistic approach to midwifery care (Carolan and Hodnett, 2007, Kirkham, 2010, Mander, 2011).

Page (2003) suggests that the restoration of the relationship between midwives and women is a significant step in humanising labour and birth. I agree with assertions by Page (2003), but argue that building these relationships with women in labour would pose a significant challenge for midwives in Malawi for various reasons. Midwives in Malawi look after many women in labour and have a very short contact time with the women to build a partnership in decision making. The midwives meet women for the first time when they are in labour and the women are often cared for by more than a single midwife. Also, the woman is the focus of other healthcare workers in the maternity care setting such as the medical professionals. Further, the literature has identified many other factors that affect the relationship. These factors include social context (Kirkham 2010), different knowledge bases, experiences and social status (Skinner, 1999, Mander, 2011), inclusion of the medical professional in the labour and delivery settings where the medical professional is the lead practitioner in the maternity unit and an insufficient knowledge base for the model (Mander, 2011) and an unwillingness to participate in decision making (Mander, 1993, Skinner, 1999), and they all affect the relationship. Most importantly, Jefford *et al.* (2010) argue that there is a lack of evidence to guide how the midwife-woman relationship should occur in rapidly unfolding situations of labour and birth, more particularly when the midwife and woman have never met before. Therefore, based on individual midwifery contexts and situations, midwives may or may not involve the woman in decision making. However, considering the potential that the concept of partnership in decision making has in transforming women's experiences and maternity services (Cooke, 2005), there is need for further exploration of this area in a

Malawian context. This would help in developing thoughtful models of care that are tailor made for the particular context of care.

8.4 Reflections on the Development of the Conceptual Framework

This research has built on and developed further the current knowledge and understanding of the theoretical concepts related to midwifery decision making. The study has made a substantial contribution to the body of midwifery knowledge by specifically addressing issues of decision making during the first stage of labour in a hospital setting from a Malawian cultural perspective. The research in this area is relatively limited from the western perspective and almost unavailable in African settings. The challenges for midwifery care in Malawi and other African countries are in themselves unique and different to those experienced in western countries and these findings are therefore a contribution to the body of knowledge for this continent.

The conceptual framework developed in this study illustrates that, in a number of respects, decision making by midwives resembled the approach of facilitating and supporting the normal physiological processes of labour. With these unique aspects, midwives, as specialists in normal labour and birth, employed what I have described as a framework for supporting normal physiological labour processes to promote healthy labour outcomes (Sandall, 2009, Page, 2009, ICM, 2011).

Therefore, this conceptual framework informs us that midwives were sensitive to, and thought extensively about, their commitment to support the normal physiological processes of labour. Their decision making was both rich and diverse in nature. It did not represent any one of the theories of decision making discussed in Chapter 3, but consisted of some of the elements from both analytical and intuitive theoretical frameworks, and these were used in a mutually complementary and supportive way.

The framework included elements of the context which impacted on decision making as well as various elements of decision-making theories, such as the hypothetico-deductive theory, intuition, the cognitive continuum and the naturalistic decision-making theory. From this, it follows that while the difficulty of building on and developing a decision-making theory that is seen as universally compelling is recognised (as discussed in Chapter 3), midwives used a

theoretically rich decision-making framework. Their approach did not simply fit the pattern of existing decision-making theories.

The conceptual framework supporting normality also informs us of the importance of understanding how midwifery decision making is influenced by contextual factors. Such factors gave rise to the challenges faced by midwives and influenced their assessment and management decisions during the care of women in labour. Difficult environmental factors not only exposed midwives to a variety of challenges on a daily basis, but also constrained and impeded their assessments and decision making. Such situations gave rise to frustration and feelings of moral distress.

However, the model also informs us that the actions of midwives were not determined by such contextual constraints, they were simply influenced by them. It is important to acknowledge that midwives were sometimes empowered, particularly with respect to their field of professional knowledge. In essence, midwives practised as supporters of normal physiological processes and were at liberty to make decisions during the first stage of labour. While other midwives found constraining contextual factors difficult to resist, others employed various forms of resistance. As such, midwives contributed to, and were in part responsible for, the moral nature of contextual factors.

To this end, the decision-making context was to some extent shaped by the response of midwives. If bad decisions regarding the care of women in the first stage of labour occur in labour wards, they could primarily be caused by deficiencies in the healthcare delivery system rather than by midwives' deficiencies in clinical decision making during the first stage of labour. However, this assertion requires further exploration as this thesis did not link the decision-making process to outcomes of care.

With regard to women-centred decision making, the conclusion must be considered tentatively, partly because the midwives' ideas about what constitutes women-centred decision making are vague, possibly because midwives have not been adequately trained on how to practise woman-centred decision making. As stated in the preceding discussion, this area needs further development.

8.5 Review of the Aim and Research Questions

The study has successfully addressed its aim and research questions as identified in Chapter 1. The aim was to understand the decision making of Malawian midwives during the first stage of labour in a hospital setting. The following research questions have been addressed.

1. What assessment and management decisions do midwives make regarding labour progress during the first stage of labour?
2. What is the role of the partograph in midwifery decision making regarding assessment and management of progress of labour?
3. What are the contextual factors that influence midwifery assessment and management decisions regarding labour progress during the first stage of labour?

First, the developed substantive conceptual framework clearly illuminates the organisational complexity of midwifery work processes and decision making, and provides a thorough and complex picture of the context in which midwifery decision making takes place in a Malawian setting. The findings have offered rich accounts of how the contextual factors played a significant role in shaping the decision-making processes of the midwives. They also show how the midwives played a significant role in advancing the agenda of providing midwifery care under such difficult conditions. The framework has also demonstrated the midwives' capability of managing the context and striving to handle the contextual factors to protect and enhance normal labour-care processes. These complex and diverse influencing factors, and the strategies adopted by the midwives, inform our understanding of midwifery care and decision making during the first stage of labour within a Malawian context. Therefore, this study has successfully expanded the focus of midwifery decision making during the first stage of labour. The study includes a revelation of the contextual factors directly impacting on midwifery decision making, an area which was previously unexplored, underscoring the need to consider such factors in future research on decision making in labour and birth.

Second, the study explored the assessment and management decisions that midwives make as they care for women during the first stage of labour. The model reveals that Malawian midwives drew upon their fundamental skills in the assessment of labour-progress parameters, drawing out salient assessment details to inform their care decisions and support for women in labour. This process involved the midwives building a case for each woman's

labour progression by piecing together the segments of information they obtained. The process continued even when a woman's progress of labour was deemed unusual; the midwives used deductive thinking by cross checking labour-progression parameters from the time of admission and across the labour progression span.

Third, the study explored the use of the partograph in midwifery decision making and its role in the assessment and management of the progress of labour. The framework illustrated that the partograph assisted the midwives' decision making by providing tangible parameters to guide midwifery care actions and interventions for women in labour. The midwives used the partograph as a labour management tool to document, interpret and analyse data in order to make labour-care decisions, but they were sometimes wary of its interpretation.

Finally, my hope is that this substantive framework has helped to inform us of the Malawian midwives' decision-making processes during the first stage of labour and that it will contribute to continuing improvements to readdress midwifery decision making during the first stage of labour thereby improving the care of women in labour.

Chapter 9 : Conclusion

9.1 Introduction

In Chapter 9 I conclude the thesis. I reflect upon and confirm how I have addressed the research aim and questions, providing précis of the findings in section 9.2. This is followed by a discussion of the implications and recommendations of the research findings for practice, education, policy and future research in section 9.3, while the conclusion of the chapter is presented in section 9.4.

I set out on this study in order to understand Malawian midwives decision making during the first stage of labour in a hospital setting. The study was conducted in two labour ward settings, one in a tertiary hospital and the other in a district hospital, providing midwifery care services to women with both uncomplicated and complicated labour. These settings provided the opportunity to explore midwives' decision-making approaches during the first stage of labour in their existing context.

National and international evidence suggests that the maternal mortality rate for Malawi remains a public health challenge (NSO, 2014, UN, 2015). Maternal mortality is caused by a variety of childbirth complications, with obstructed and prolonged labour being the most complex and significant complications putting women in labour at risk of dying or developing various morbidities (Ratsma *et al.*, 2005, MOH, 2005, 2010).

Nevertheless, a variety of reports such as WHO (1994a), MNH (2002), NMCM (2002), Sullivan (2005), Raynor and Bluff (2005), WHO (2006), Hussein *et al.* (2007), Fistula Care and Maternal Health Task Force (2012) suggest that efficient and effective clinical decision making regarding the progress of labour is key to the prevention and treatment of prolonged and/or obstructed labour and the resulting complications. Accurate identification of cues indicating deviation of labour progress from its normal course, and the ability to manage labour, are defined as essential features of clinical decision making. To this end, in an effort to diagnose obstructed and prolonged labour, emphasis has been placed on the appropriate use of the partograph to guide assessments and subsequent decision making regarding labour progress during the care of women in labour.

As discussed in Chapter 2 of this thesis, midwifery staff in Malawi form the bulk of health workers responsible for caring women during labour and birth. Their work involves supporting women during labour, assessing and monitoring labour progress as well as foetal and maternal conditions, identifying unusual labour progress and instituting appropriate interventions. Central to midwifery decision making is midwives' reasoning and knowing the appropriate interventions as labour progresses.

9.2 Summary and Personal Reflections on the Research

Following a review of the literature on decision making, I identified decision-making research in a variety of healthcare professions underpinned by different decision-making theoretical approaches. The theoretical underpinnings for decision-making research ranged from analysis to intuition, suggesting that a number of decision-making models have been employed to guide decision-making research. However, no specific decision-making theory was identified that was considered relevant to the midwifery decision-making process during the first stage of labour.

Overall, the review identified that there has been little research on midwifery decision making during labour and birth. Traditionally, decision making in this context has been studied either in simulated settings or by recall interviews. None of the studies identified had specifically engaged with midwifery decision making during the first stage of labour. Furthermore, no studies to date have examined the context of midwifery decision making during labour and birth or the factors that influence it, and there is no published research on this subject in the context of contemporary African and Malawian midwifery.

With the aim of understanding how Malawian midwives make decisions during the first stage of labour in a hospital setting, I developed the following research questions.

1. What assessments and management decisions do midwives make regarding labour progress during first stage of labour?
2. What is the role of the partograph in midwifery decision making regarding the assessment and management of progress of labour?

3. What are the contextual factors that influence midwifery assessment and management regarding labour progress during first stage of labour?

My purpose was to fill the gap in research on midwifery decision making during the first stage of labour, particularly within the Malawian context, and to gain an in-depth understanding of this process using qualitative and exploratory methodology. I thus decided that the most suitable research approach to realise this aim was ethnography. This methodological approach enabled me to examine the contextual factors of the real clinical environment, such as the dominance of the medical profession over maternity care, the limited resources available and the shortage of midwifery staff that increased workloads. These factors had a significant influence on midwifery decision making.

I conducted this ethnographic study at two hospitals in the Western region of Malawi – a district hospital and a tertiary hospital – from October 2013 to May 2014. I recruited nine midwifery participants using purposive sampling. To capture in-depth information about midwifery decision making, I comprehensively collected data using a combination of participant observations, post-observation interviews and document analysis. Initially, I found the processes of conducting interviews challenging but later on this proved to be an enjoyable and worthwhile undertaking. A deep reflection on my interviewing skills helped me to adjust my wording of questions as well as my interview manner. To this end, I adjusted my interviewing techniques by using probing questions, allowing midwives to explain their story without interruptions and ensuring I generated meaningful data.

In addition, the process of undertaking this research study has given me some crucial ideas which have helped me to examine my professional values as well as providing guidelines for changes to my future practice and teaching of midwifery students. I used a number of strategies to ensure a reflexive approach throughout this research. Fundamental to this was being mindful of how my perspective integrated with the data. In Chapter 4 I discussed how I managed my reflexive stance and in section 4.8 I described how I informed my thinking and how I undertook an audit trail of my methodological decisions to ensure credibility of the study. I took into account my experience and knowledge and spent time challenging myself and considering the impact I had on the fieldwork. I used a reflective diary and memos to capture these thoughts and then modify my approach. I recognised the multiple identities I

presented when interacting with participants during the observations and follow-up interviews.

Analysing the data using principles of category and theme formation as suggested by Ely *et al.* (1997) and Braun and Clarke (2006) revealed how the midwives enacted their care to formulate decisions as they cared for women during the first stage of labour. Furthermore, the findings highlighted the features of the context that influenced midwifery decision making. However, as a novice researcher, the process of analysing the data was a daunting task as acknowledged by Thorne (2000). I analysed the data inductively and developed several codes to avoid missing important information. Nonetheless, the process of immersing myself in the data, which began with transcribing the interviews and maintaining diaries and documents while in the field, enabled me to make initial impressions about, and develop sensitivity to, the data.

Finally, I identified three themes from the study: contextual factors influencing midwifery decision making, the role of cue acquisition and the role of the partograph. The integration of these overarching themes enabled the development of the conceptual model 'supporting normality during the first stage of labour in a hospital setting' which proposes the idea that midwifery decision making is a context-dependent undertaking with multiple contextual factors, namely medical dominance over maternity care, shortage of midwifery staffing and limited resources, exerting major influences on the midwifery decision making. With the presence of these contextual factors, the midwives experienced difficulty in making decisions. The midwives developed strategies to manage the context in order to assert their professional role and facilitate decision making. These strategies included challenging medical decisions, engaging midwifery students and engaging labour and birth support companions.

Before undertaking the research, I assumed that midwives deliberately leave women without supporting them and that they use shortage of midwifery staffing as scapegoat. However, the midwives in this study expressed a clear sense of striving to support women in labour and displayed their ideological concept of advocating for normal labour as a central belief of their profession. The midwives demonstrated considerable effort to enact this ideological construct in order to provide quality care for the women in labour. This was done despite the difficulties of their working environment. Therefore, I have gained new understandings of the

complexities of Malawian midwives' decision making and learned the various strategies they use to meet the practical demands of their work.

The second major finding of the study related to the role of cue acquisition. The six stages identified within this theme demonstrated how Malawian midwives utilised the assessment data obtained from a woman in labour. Midwives appeared to draw upon their fundamental skills when assessing labour progress, drawing out salient assessment details to inform their decisions and support the normal processes of labour. Midwives made different decisions while caring for the woman in labour starting from the time of admission to the labour ward. They collected information and drew conclusions from what they observed and constructed a case for each woman's labour progression by piecing together segments of the information they obtained about the labour progress.

They continued with this approach even when a woman's labour progress parameters seemed unusual. They used rational thinking after cross checking labour progress parameters such as strength of contractions, progression of cervical dilatation and progression of descent of the foetal presenting part. The midwives 'accounted' for their assumptions of unusual labours prior to intervening; searching for evidence through assessment cues to support their clinical decision making throughout this progression. There was a constant forward and backward moving of thinking supported by actions that they hoped would uncover real case-building evidence for intervening or not intervening during labour progress. The concept of supporting normal physiological progress of labour encompassed this whole process. The midwives drew on their knowledge and experience to inform their thinking as they worked to support and facilitate the normal physiological processes of labour in order to ensure positive labour outcomes.

The third and final theme is related to the role of the partograph, a paper-based system of recording the physiological parameters that indicate the progress of labour across its time span. The partograph informs midwives about the progress of labour and alerts them if labour deviates from its normal course. There is usually a protocol for midwives to follow when using a partograph, which informs them of the appropriate care for the type and stage of labour depicted on the graph. The midwives referred to the protocol in the interviews but it was not available in the ward. When the progress of labour reached the alert line it was described as slow, and when it reached the action line it was described as poor and, in each

case certain actions had to be undertaken. Although the partograph acted as an adjunct to the midwives' decision making which could afford opportunities for early intervention in labour progression, the midwives were sometimes cautious about its interpretation.

Before the period of data collection, I personally assumed that Malawian midwives may have been very committed to using the partograph. Surprisingly, the midwives demonstrated a clear sense of having highly developed reasoning skills which they used to interpret labour-progress parameters, and they did not necessarily rely on how labour progress was portrayed on the partograph. They made decisions during labour based on individual women's needs and, accordingly, provided the appropriate midwifery care.

9.3 Overview, Implications and Recommendations of the Research

To suggest prescriptive recommendations based on the findings of this research study may not be appropriate given the inductive nature of the research study and its small sample. However, from being in the real world with the midwives, sensitising myself to their world and exploring the phenomenon from their perspectives, new and significant insights into decision making during the first stage of labour have been illuminated. This study has developed the conceptual framework of 'supporting normality' contributing to the knowledge about midwifery clinical decision making during the first stage of labour in a Malawian setting. I now consider this unique contribution from four perspectives: its implications for practice, educational contexts, policy and future research.

9.3.1 Implications and recommendations for practice

This study has illuminated the processes by which midwives reach clinical decisions during the first stage of labour. The development of the conceptual model 'supporting normality' offers a deep insight into how Malawian midwives make decisions during the first stage of labour. It revealed six stages through which midwives enact their care to formulate clinical decisions as they care for women during the first stage of labour. Many aspects of these findings are very positive. Midwives are seen as motivated and at liberty to advance their professional role and make appropriate decisions when they have the chance to do so. It is hoped that such a convincing picture of the capacity for decision making is encouraging for midwives, providing them with positive reinforcement.

The clinical decision-making approaches used by midwives in this study were cyclical and diverse. The processes were largely attributed to the perspectives midwives held about labour progress based on their surveillance strategy to promote the normal physiological processes, it was this strategy that guided their reasoning and actions. The findings suggest that the assessment of women in labour is a highly skilled undertaking based on a complex and integrated knowledge base. An extensive range of skills involving the ability to assess, comprehend, interpret, analyse and synthesise data is evident, more especially when labour progress is unusual. The implications on midwifery practice are that it is crucial for the midwife to hold the correct perspective in order to initiate the right actions. Accuracy in decision making was not explored in this research, but a significant aspect of practice is that midwives need to be able to make clinical decisions during the first stage of labour, especially when labour progress is unusual.

The literature reflects that there is insufficient midwifery theory to guide practice and research. Therefore, the conceptual model ‘supporting normality’ developed from the findings of this study could be identified as a proactive model which midwives may use to facilitate and support the normal physiological labour processes. However, the model indicated that there is dominance of the medical profession over maternity care. Therefore, provision of care within the maternity system needs to be redesigned to ensure midwives are the primary carers for women in normal labour, i.e. those with no medical risk, since midwives have been identified as specialists in normal pregnancy, labour and birth.

The findings of this study indicate that women with uncomplicated labour are subjected to routine unwarranted clinical interventions that are not necessarily beneficial to either the mother or foetus. These interventions include artificial rupture of the membranes, labour augmentation with oxytocin, caesarean sections and unnecessary vaginal examinations, all of which have potential negative consequences such as depriving women of their autonomy and dignity during labour and they may negatively impact the women’s childbirth experience (WHO, 2014). Therefore, revisiting these practices in order to promote normal physiological labour and birth has significant implications for midwifery practice. The midwives’ experiences during the care of women in labour need to be heard in order to improve team working in labour wards.

Following on from these research findings, the medical profession needs to consider seriously the different perspectives that they and midwives hold. This would require the medical staff to broaden their appreciation of the issues raised and engage with the midwives' philosophy of care rather than just focusing on the pathology of labour. Equally, the midwives need to be more empowered to continue questioning medical staff orders. In addition, promotion of collaborative and shared decision making for women in labour should aim to clarify the professional roles surrounding the care of women in labour and encourage the input of midwives' knowledge, experience and skills. The care of women in labour should not be considered to be a task led by the medical profession since the contribution of midwives is equally important. Maintaining a collaborative approach towards implementing, evaluating and sustaining a change in the responsibilities for decision making during the care of women in labour would increase midwifery staff morale, motivation and job satisfaction, and would also improve satisfaction for the women in labour and the quality of their care. An obvious starting point for these changes would be to engage all stakeholders, including obstetricians, general practitioners, midwives, women and professional bodies, in meaningful discussions and research to establish how best to promote midwifery care for low-risk women and allow the spontaneous process of labour.

Similarly, the findings of this study call for the need for a strong midwifery leadership to support midwives in their work as midwife practitioners. Midwives are sometimes challenged to use their rightful authority to safeguard women from processes interfering with normal physiological labour and birth. A united midwifery voice from the NMCM, the Association of Malawian Midwives and other stakeholders is needed to support good midwifery practices and decision-making processes, practices that are stable enough to provide positive experiences and labour outcomes for women and their babies.

The partograph originated from the seminal work of defining labour progress undertaken during the 1950s by Emmanuel Friedman (1954, 1955). Friedman developed the partograph to provide clinicians with an objective way of measuring labour progress. However, the literature does not reflect much evidence supporting the use of the partograph and its clinical benefits in labour and birth outcomes. Regardless of these shortcomings, its use is recommended in under-resourced clinical settings. The findings of this study revealed that midwives have accepted the partograph as a tool to be used as part of an overall assessment of labour progress and decision making during the care of women in labour. The findings also

revealed that reliance on the partograph to determine the progress of labour failed to disclose the complexities involved in the midwifery assessments which could not be captured easily using objective assessments on a paper-based tool. Therefore, caution should be exercised when interpreting the partograph to ensure that its use is effective, efficient and makes a positive addition to women's care.

There is need to consider the use of the partograph along with other sources of midwifery knowledge and skill when identifying poor labour progress. In particular, tacit and intuitive embodied knowledge were recognised within the findings of this study as sources of knowledge relied upon by midwives in preference to the partographic representation when assessing women in labour. This thesis argues that midwifery knowledge, skills and experience surpass the ability of the partograph in identifying poor labour progress, indicating that the tool on its own may not offer the solution to improving labour and birth outcomes. Therefore midwives must be fully educated and competent to identify poor labour progress, with the ability to demonstrate underpinning knowledge of relevant labour physiology.

Transforming midwifery decision making in Malawian hospital settings would require interventions to target all the various areas impacting on midwifery decision making. Most of the factors identified within this thesis, for example the shortage of midwifery staffing and restricted resources, are structural problems requiring long-term solutions which are beyond the scope of this thesis. However, the midwifery staffing shortage emerged as a significant influence on midwives' decision making processes; midwives expressed real frustration at having a heavy workload. As identified in the Chapter 2, staffing remains a contentious issue in Malawi healthcare settings and the current economic state suggests that this may not change immediately. In reality midwives have to 'work' with what is currently available for making effective and sound decisions.

However, this study clearly highlights that some action needs to be taken precisely because there is a critical shortage of midwifery staff and the current state of affairs is unjustifiable. Therefore, it is necessary to adopt a strategic approach to try to match the supply and demand of midwifery staff in the labour wards. This approach would involve measuring the workload indicators, i.e. the number of admissions and births, and identifying the key roles of midwives in labour wards. Such measures would provide evidence of the workload in labour wards and

improve staff allocation to allow effective performance of the midwifery staff who are already in the system.

There is a general view among midwifery staff that maternity-care settings, especially the labour ward, are different to other wards in terms of workload and should be treated as a separate unit that needs adequate staffing levels (Bradley *et al.*, 2015). Therefore, there is a need to consider allocating more staff to the labour ward in comparison to other wards. Midwifery managers need to be more proactive and thoughtful about best supporting and utilising existing midwifery staff. For example, redesigning shifts is one of the simple solutions that could be employed in consultation with midwives, including them in the decision-making process would demonstrate support for the midwives and the difficult situation they face. It would generate a degree of autonomy that is a key driver of midwives' motivation and satisfaction, while allowing them more choice and flexibility.

Arguably, if childbirth companions could be oriented to their role during labour, it may help women to receive some support during labour, while freeing up some time for the midwives to attend to assessments on other women.

9.3.2 Implications and recommendations for education

There are several conclusions regarding the implications of this study for education. I suggest that the findings of this research study have implications on the way midwifery students are taught decision making as they care for women in labour both in Malawi and the wider context. The findings of this research have illustrated a broad perspective of factors influencing midwifery decision making. This illustrates how the care of women in labour needs to be integrated with other influences on midwifery practice. Consideration of the context is critical in optimising the quality of clinical decision making in order to promote effective decision making. It is important to understand how student midwives can be taught decision making that considers and manages the multiplicity of factors that influence it, rather than focusing only on the immediate clinical decision-making tasks of diagnosing and implementing interventions. Therefore, the content of midwifery education needs to be broadened to incorporate the difficulty and diversity of the decision-making environment. In particular decision-making education needs to address contextual factors so that, by

understanding their influence and appreciating their significance, student midwives become better equipped to deal with them.

Finding appropriate ways to help midwifery students understand and develop their knowledge, attitudes and skills in decision making is challenging. However, the conceptual model developed from the findings of this study has provided information about the midwifery decision-making approach which would help student midwives to understand the nature of the assessment of the labour process. The model, which identifies six stages of reasoning during labour progression, can offer some valuable principles which are lacking in the current literature for midwifery assessment practice. There exists the potential to develop a midwifery student learning package to combine the conceptual model's constructs with practical examples.

Based on the midwives' highly developed clinical reasoning that was evident in the findings of this study, there is a need to reinforce the current practice by incorporating the reasoning skills identified in Chapter 8, Figure 8.2 in the current midwifery curricula. By doing that the current midwives' practice will be sustained to seek further improvements. Therefore, the findings of this study suggest that the Malawi midwifery regulatory body should consider revising the professional decision-making approach currently in practice (the midwifery management process) to more explicitly reflect analytical clinical reasoning. Likewise, they may wish to consider mandating that midwifery curricula specifically teach and assess clinical reasoning.

The findings of the study showed that the midwives strived to support and facilitate the normal physiological processes of labour. However, the medical professionals controlled the decisions being made in maternity care. The medical profession's approach to care is grounded in a biomedical mechanical perspective of labour and birth which sees labour as an essentially faulty and defective process, needing surveillance and intervention. The medical approach to care disempowers midwives and undervalues their decision-making skills. The International Confederation of Midwives (ICM, 2011) promotes the philosophy of midwifery in normal childbirth as a key component of midwifery education programmes. However, the implementation of this is difficult for student midwives when most of their experience of labour and childbirth takes place in settings where the medical profession, whose orientation is in pathology, dominates labour care. The findings of this study raise some questions about

the implementation of teaching and learning approaches that would facilitate the adoption of practices that are based on research. To this end, the findings suggest that the clinical environment in which midwives work needs to change to enable them fully practise midwifery and provide adequate role models for students.

Achieving a balance between allowing the normal physiological progress of labour and knowing when medical care is required is crucial. The findings of this study suggest that the care and support of women who are healthy, with uncomplicated labour and who should have every chance of a normal birth, requires skill, knowledge and experience as well as working systems for consultation, referral and transfer. Therefore, midwifery educators should strive to enable student midwives to become competent in normal birth practices; they need to reflect on the quality of the learning environment available to students that enables them to experience appropriate decision-making practices during the care of women in labour. Students should be encouraged to emulate and learn from midwives who are confident and assertive in decision making.

In addition, consideration of the clinical environments where students are attached during their 'low risk' (care of women with uncomplicated labour) clinical learning can also have a substantial role in developing confident and autonomous midwives. There is a need to ensure that student midwives encounter low-risk cases while getting their clinical experience in midwifery-led settings such as primary health facilities where decision making is exclusively a midwife's task. In these settings, student midwives will be able to appreciate the full scope of the midwife's role and her or his ability to make decisions without interference from others.

Having a greater understanding of the approach, behaviours and values that embody the midwives is highly influential in learning and professional development. This study has illustrated how clinical decision making is a complex, multi-dimensional phenomenon which is influenced by various contextual factors. The interpretations generated in this research may be used as frameworks for the design of the midwifery educational curricula or continuing education sessions aimed at promoting the development of clinical decision making learning.

9.3.3 Implications and recommendations for policy

The maternal mortality reduction agenda remains a key area of concern at international policy level (UN, 2015). The complications of prolonged and obstructed labour remain some of the significant causes of the death of a woman in labour. To address this requires a midwifery workforce that is able to respond effectively to these complications. This study revealed new insights into how midwives account for their reasoning and have confidence in their hypothesis prior to intervening during the care of a woman in labour. This has an impact on the development of education policy around equipping midwifery staff with the skills and competencies to enable them to make accurate and timely decisions in an increasingly complex environment. Close collaboration between the policy makers and education providers is essential in order to address this issue.

While the conceptual model developed from the findings of this study shows that midwives are striving to support the normal physiological progress of labour, there is still much work that has to be done to redirect the balance of labour and birth so that they are seen as normal physiological processes. The findings of this study suggest the need for midwifery regulatory bodies to develop midwifery training modules on midwifery decision making in liaison with the midwifery training institutions, with emphasis on supporting the normal physiological processes of labour and birth. This initiative could be conducted along with labour and birth seminars to sensitise midwives to normal labour and birth and help them to develop their autonomy in decision making. By reaffirming confidence in their knowledge of normal physiological labour alongside their clinical abilities, such continuing professional development could be the motivating force for midwives to consider when making autonomous decisions.

9.3.4 Implications and recommendations for research

In this study I have focused on the midwifery decision-making process during the first stage of labour. I did not consider midwifery decision making during the second and third stages of labour. The challenge was the time available to conduct the research; combining all stages would yield a lot of data that I would not handle within the time frame. However, while it was not an expectation of this study that the findings should be representative of other stages of labour, I strongly suspect that in many ways, they are relevant. It is clear that more

empirical research is needed to investigate the clinical decision making of midwives in the different stages of labour and hospital settings.

In this study I examined the world of two labour wards in hospitals in the western region of Malawi. The study included the cultural world of one group of staff (midwives). There is a need to explore the implications of the conceptual model in other settings in Malawi and in other African countries. It would be interesting to explore the way other professions who care for women in labour reason and undertake decision making. This approach may help enhance our understanding and may try out the model's 'fit' across different professional groups.

I did not examine whether or not the approach the midwives used when providing care to women in labour was the correct mode for the clinical scenario they were facing. This requires further exploration and this may offer an opportunity to develop the model.

An in-depth comparison across midwifery roles, experience and educational qualification was not made in this study. This again provides an opportunity for further research to ascertain what specific needs midwives may have according to their experience and role.

With regard to woman-centered decision making, I suggest that research be undertaken to find out what childbearing women in Malawi actually think of midwives' care and if the comment by Matilda in Chapter 6, section 6.2.5, is correct "*they expect us to tell them what to do.*"

9.4 Summary of Chapter 9

The quest to conduct this study emanated from a concern with the high maternal mortality rate in Malawi, where prolonged and obstructed labour are significant childbirth complications which predispose women to death or severe morbidities. Recent reports have implied that appropriate and timely decision making during the first stage of labour is a viable strategy to reduce deaths associated with prolonged and obstructed labour. Nurse-midwives in Malawi form the backbone of the health service and provide care for women in labour. In Chapter 2 I identified gaps in the literature that highlighted the need to examine the important phenomenon of midwifery decision making during the first stage of labour in a hospital setting.

In this thesis I have explored and shed light on Malawian midwives decision-making processes. Through analysis of the findings, I have identified contextual factors that are impacting on midwives' decision making during the first stage of labour. I have elaborated various strategies that individual midwives use to deal with the contextual factors. I provided details on the decision-making approach of the midwives through a six-stage process. Midwives drew upon their fundamental skills in their assessment of labour progress, drawing out salient assessment details to inform their decisions on how to care for women during the first stage of labour. Finally, I clarified the role of partograph in midwifery decision making during the first stage of labour. The conceptual model 'supporting normality' that I developed has facilitated a deep understanding of how Malawian midwives formulate and make decisions within the contested environment of the labour ward. This conceptual model has implications for the practice, education and policy of Malawian midwifery. Finally, my hope is that this study will contribute to ensuring effective midwifery decision making and thereby advocate for better care for Malawian women during the first stage of labour.

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APPENDICES

Appendix A: The partograph

Name	Gravida	Para	Hospital Number
Date of admission	Time of admission		Ruptured membranes
			hours
Fetal heart rate 200 190 180 170 160 150 140 130 120 110 100 90 80			
Amniotic fluid Moulding			
Cervix (cm) [Plot X] Descent of head [Plot O] Hours 10 9 8 7 6 5 4 3 2 1 0 Hours Time			
Contractions per 10 mins			
Oxytocin U/L drops/min			
Drugs given and IV fluids			
Pulse ● and BP ↑ ↓ 180 170 160 150 140 130 120 110 100 90 80 70 60			
Temp °C			
Urine { protein acetone volume			

Appendix B: Results of the search performed in Cochrane, CINAHL, Medline and MIDIRS

	Search terms	Cochrane	CINAHL	Medline
1	First keyword related to decision making	718,621	38,719	8765
2	Second key word related to midwife	12,111	14,105	13530
3	Third key word related to labour	5203	863	67,098
4	First, second and third key word string combined	2597	1,936	3,254

A search of midwifery decision making was also performed in the Midwives and Information and Resources Service (MIDIRS) database. The search provided general content related to nursing decision making and medicine. The table below summarises the findings from the MIDIRS database.

Midwives and Information and Resources Service: Maternity and Infant Care		
	Search statement	Results
1	Decision making.mp. [mp=abstract, heading word, title]	3216
2	Decision making	1896
3	Labour stage – first	258
4	2 and 3 combined	2

Appendix C: Summary of the Empirical Evidence reviewed in chapter 3.

Authors and year	Aims	Sample	Methodology and methods	Key findings	Limitations
Scholes <i>et al.</i> , 2012	<p>To explore student midwives decision making and response to an obstetric emergency.</p> <p>To enhance student midwives' decision-making and clinical skills in response to a simulated post partum heamorrhage</p>	35 midwifery students	Simulation using a patient actress of postpartum hemorrhage scenario.	<p>There was a varying clinical management of the scenario.</p> <p>Students experienced problems to prioritise care actions especially where they were expected to provide multiple responses to a clinical cue.</p> <p>Students also showed reluctance to use inductive and deductive reasoning in order to formulate a diagnosis. This revealed lack of elimination of fixation error since they had no data to base their refutation or confirmation of a diagnosis.</p>	<p>Using a patient actress cannot replace real clinical context and its complexity.</p> <p>It is possible that the findings of the study relate only to the student nurse population of the context where the study was undertaken.</p>
Rattray <i>et al.</i> , 2011	To examine midwives' decision-making processes related to the use of continuous electronic fetal monitoring on low-risk labouring women.	6 midwives	<p>Grounded theory approach.</p> <p>Semi-structured interviews.</p>	Midwives made decisions to implement continuous electronic foetal monitoring at two key decision points during labour care; during the midwives' initial assessment of the woman and foetus, and when the midwives categorised the women as high or low risk. There were various factors identified which impacted on decision making, including trust and staff workloads within a context of risk management and medical dominance. A decision making model	<p>This is a very small study which may not be generalised to other settings.</p> <p>Use of interviews to capture midwives care practices may limit richness of the data.</p>

				was developed to guide practice.	
Danerek and Dykes, 2001	To explore the meaning of problem solving in midwifery when the midwife is faced with a critical situation with no obstetrician or physician in Sweden.	7 Midwives	Qualitative – phenomenological approach. In-depth interviews.	Midwives used theoretical, clinical knowledge and experiences. Professional knowledge promoted midwives confidence, safety and control of unfolding critical situations.	Lack of transferability of the results due to small sample.
Cheyne <i>et al.</i> , 2006	To examine midwives' perceptions of diagnosing onset of labour.	13 midwives	Focus group discussions.	Midwives used information cues arising from the woman and from the institution. Diagnostic judgement was based on the physical signs of labour: the management decision was made by considering the diagnostic judgement as well as other cues such as how the woman was coping, her expectations and those of her family and the requirements of the institution.	The use of focus group discussions with midwives to identify midwifery decision making may lead to a constructed approach rather than a reflection of the actual midwifery practice in a clinical context. Lack of generalization due to small sample size from single maternity unit.
Jefford and Fahy, 2015	The study investigated the extent to which midwives engage in clinical reasoning processes when making decisions in the second	26 Australian practice midwives	Retrospective interviews.	Results revealed that some midwives demonstrated analytical clinical reasoning abilities while some midwives used non-analytical decision making without adequately checking against assessment data. The authors	Data was derived from midwives' recollections of their decision making during second stage of labour, the midwives

	stage labour.			developed a new model of decision making which includes 'intuition' as a valued way of knowing.	could not be completely honest and possibly could not remember everything.
Patterson <i>et al.</i> , 2015	The study aimed at examining midwives' decision-making processes when making transfer of women with slow labour progress from rural areas to specialist care.	15 midwives who provide lead midwifery care	Interviews.	Major findings showed that midwives engaged in a more objective and probabilistic process by analysing patterns and cues as a form of confirmatory or contradictory evidence. Midwives did not rely on heuristic strategies when they experienced discomfort or poor fit in a situation which required them to transfer a woman with slow labour. They seemed to be knowledgeable of the error associated with heuristics signifying that heuristics were not enough in their own for decision making.	The study design was based on recall interviews to explore the decision-making process which may cause problems in retrieving information.
Page and Mander, 2014	The aim of this study was to explore midwifery perceptions of intrapartum uncertainty when caring for women in low-risk labour. The researchers' main interest was to examine uncertainty present in low-risk labours and how midwives	19 practicing Scottish midwives interviews and focus group discussions.	qualitative grounded theory in-depth interviews	The findings showed the impact of uncertainty on midwifery decision making. The midwives recognised the point at which labour deviated away from the normal and this constituted 'intrapartum uncertainty'. There was a normality boundary which was regarded as the border of what they would accept as normal in labour which shaped their clinical judgement and decision making. They also identified threshold pressures such as ethos of practice setting and perceived	Generalisability of study due to small homogeneous sample. Use of interviews to recall decision making may lead to recall bias.

	understood and tolerated these uncertainties when making decisions about the risk status.			level of support.	
Davis-Floyd and Davis, 1996	This study brought to attention midwives' utilization of and reliance on intuition as a guide to action and decision making during homebirths.	22 American midwives	Interviews.	The findings revealed that the midwives, in the context of their holistic model of birth and health care, listened to and followed their 'inner voice' during birth, rather than operating only according to protocols and standard parameters for 'normal birth'.	The rigour of this study was weak since the data consisted of midwives self-selecting events from the past. Passage of time could affect the accuracy of the accounts. The representative nature of the interview sample is questionable since some participants voluntarily joined in to form part of the original sample.

Cioffi <i>et al.</i> , 2010	Utilising a naturalistic decision making approach to study critical cues, related factors, knowledge and experience used by experienced Australian midwives when deciding whether or not to repair the perineum following childbirth trauma.	18 experienced midwives	Qualitative study recall interviews.	Findings revealed cues such as bleeding and trauma with their associated specific features. They also identified that woman and midwife-centred factors were considered when deciding whether or not to suture perineum following trauma. The study also identified knowledge and experience supported the midwives decision making.	This study was not undertaken in a real setting. In addition, using recalled case studies may limit the accuracy of the account and may not be similar to a concurrent account of the actual case.
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Olsson and Adolfsson, 2011	To describe how midwives experience their work of creating a sense of security and providing good nursing care when meeting with the expectant parents	11 Midwives	Qualitative phenomenological approach In-depth interviews	The results indicated that good clinical reasoning and good midwifery practice produce optimal midwifery decision making during second stage labour	Researching this phenomena using interviews only limited the detection and analysis of the process in terms of the issue and the essence of the participants. Therefore, studying this phenomena in the context of living situations in the real world would help to provide a robust methodology
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Jefford, 2012	To examine the necessary and sufficient conditions for optimal midwifery decision making during second stage labour	26 midwives	a post-structural feminism approach	Second stage labour is a unique and rapidly changing situation and this research The study found that the woman being the final decision-maker was not essential to optimal decision-making during this time. Further, some midwives abdicated responsibility for decision-making to the women and/or their support people.	The researcher collected the data from the midwives' recalls of their decision making during second stage labour. Midwives may not remember everything and may not be completely honest. Therefore, it was difficult to check the truthfulness of the midwives' decision making during the second stage of labour
Walker, 1976	to examine the role of the midwife in a maternity unit in England	49 midwives and 11 medical professionals	ethnographic study using observations and interviews	The findings revealed the assumption of responsibility by the medical professionals for the care of women being attended by midwives and without any complications.	Lack of generalization due to small sample size from single maternity unit
Kitzinger <i>et al.</i> , 1990	To evaluate the implications of different staffing structures for relations between midwives and doctors	137 labour ward staff	Observations and interviews	The consultant appeared to be negatively powerful and influential both in policy making and in clinical settings	The study utilised a robust methodology but the observational data is not presented. Further exploration is required.

Crabtree, 2004	To examine the meaning of normal birth in a lead maternity-care midwifery practice and on understanding the influences surrounding midwives' construction of normal birth	9 midwives	descriptive qualitative approach with feminist underpinnings utilising semi-structured interviews	<p>The midwives were aware of the ways in which the medical ideology influenced their practice and decision making, and they sought ways to challenge, resist and frame their practice with a strong commitment to supporting women.</p> <p>The midwives strived to support women's choices, protected the women by being a buffer, 'shutting the door', keeping women away from medicalisation, etc.</p>	The study utilised individual interviews which may limit the strength of the evidence collected. Triangulating methods by using focus-group discussions and observations could enrich the data and promote the validity of the findings
O'Connell and Downe, 2009	to examine midwives' views of hospital midwifery, with an emphasis on labour-ward practices, to explore professional discourses around midwifery work in the contemporary childbirth context	fourteen studies	Meta-synthesis	Power and control refer to how the medical model of care, obstetric control, and the hegemony of the medicalised system were referred to in all of the included studies	The reviewers utilised studies that focussed on midwifery practice in other settings such as community and independent midwives other than those practicing in labour-ward settings. This placed limitations on the reviewers by addressing existing differences related to the focus of the meta-synthesis that was labour-ward practice.

Dykes, 2009	To explore organisational culture and working conditions for midwives in postnatal ward and the ways in which the conditions impacted the midwives interactions and support for the women	39 midwives and 61 postnatal women	critical ethnography of postnatal care in north England, using focus-group discussions, observations and follow-up interviews	The midwives strongly expressed their dissatisfaction with their workplace culture where they experienced pressures of time, staff shortages and rapid client turnover. The midwives commented on the extreme business of the wards and the emphasis was on “efficient processing of and rationing of care rather than engaging in meaningful relationships”	Triangulation of methods provided a robust approach. The inclusion of different participants, including women and midwives. However, study involved hospital midwives and women within postpartum care and not midwives from a labour ward.
Jefford <i>et al.</i> , 2010	To examine factors that influence midwifery decision-making processes during birth	Four small studies were included in the systematic review	Systematic review	midwifery decision making is socially negotiated involving hierarchies of surveillance and control despite a midwife being widely acknowledged as being an autonomous practitioner	The review reveal a lack of documentation about how the midwives’ clinical decision making was affected by the clinical environment. These deficiencies support the need for organised research to demonstrate the impact of elements of the decision-making context on midwives and how this is practically enacted in the real-world decision-making environment.

Mselle <i>et al.</i> , 2013	The aim of this study was to describe the weaknesses in the provision of acceptable and adequate quality care through the accounts of women with obstetric fistula, nurse-midwives and community members.	16 women affected by obstetric fistula and five nurse-midwives	Qualitative research utilising focus group discussions with husbands and community members Interviews with nurse-midwives	Health care users and health providers experienced poor quality caring and working environments. Women in labour lacked support and experienced neglect. Nurse-midwives lacked supportive supervision, supplies and also seemed to lack motivation.	The study may have limitations as different methods were applied to both groups. Combining methods for both groups would help in gaining deeper insight into the participant's views
Zhang <i>et al.</i> , 2014	To identify Chinese midwives' strategies to work on their professional identity in a hospital setting	Constructivist Grounded Theory	15 Chinese midwives	Midwives were working on their professional identity in relation to two definitions of the midwife. One being the external definition of 'obstetric nurse' and the other being the internal definition of 'professional midwife' The findings also revealed the use of compromising and engaging strategies among the midwives to work on their professional identity in a hospital setting. A 'hybrid' identity was identified.	The study utilised individual interviews which may limit the strength of the evidence collected. Using focus group discussions and observations would enrich the findings of the study
O'Donnell <i>et al.</i> , 2014	To explore what the meaning of quality of care means from the perspective of both the women and the maternity health care	Qualitative study using In-depth interviews with	Ten healthcare providers thirty-three postnatal mothers	Both women and other healthcare providers were unable to influence decisions made by more senior staff or management. Midwives working in labour wards perceived the dominance of health	Employing interviews and focus group discussions provided insight into the midwives' and women's views

	provider's perspectives in Malawi	health care workers focus group discussions with thirty-three postnatal mothers		professionals over care of women in labour and the midwives "lack of authority as demoralising" The medical professionals had the ultimate decision-making power during the care of women in labour despite the education status of the midwives	respectively, however, triangulating the methods for both groups could have strengthened the study further.
Kirkup, 2015	To examine the concerns raised following the occurrence of a number of serious incidents in maternity services provided by the Trust, including the deaths of mothers and babies.	Document reviews and interviews	15,280 documents 118 interviews	The findings revealed evidence of several organisational structure affecting the quality of care that was delivered to women. Inadequate workforce and it was a challenge to achieve safe staffing levels; consequently low staffing numbers rendered it difficult to cope with simultaneous tasks. Such problems may be associated with national government policies, however, this led to poor morale among maternity unit staff and the resulting provision of suboptimal care	

Ten Ham <i>et al.</i> , 2015	To explore the factors that contribute to the clinical decision making of nurses and midwives	Integrative review of the literature	38 articles	<p>Factors such as nurses' and midwives' personal characteristics: clinical experience, and organisational and environmental factors such as severe workloads that result in insufficient time to make effective care decisions were identified.</p> <p>Only three out of the thirty-eight articles included decision making in the context of midwifery</p>	There were no adequate studies identified to represent specific factors that influence midwifery decision making.
Lavender and Malcolmson, 1999	To explore the views of midwives on partograph use in labour management in England	Survey	Seventy-one	<p>83 percent of the midwives surveyed expressed the view that the partogram was a necessary tool and felt that action lines help to manage labour and diagnose prolonged labour.</p> <p>The partograph showed practical benefits such as teaching, ease of handover and preventing duplication of notes. Other midwives felt that it takes away autonomy and individual clinical decision making</p>	The findings from this study are valuable but they were based on a small descriptive survey from one particular unit which gives a baseline of information but does not allow for any further depth of understanding.

Lavender <i>et al.</i> , 2007	To seek the views about the partograph from the midwives working in settings with limited human and financial resources	Survey	Fifty seven African midwives	<p>The study revealed African midwives' views about the partograph that are largely consistent with those of UK midwives. Most midwives described the partograph as a practical management tool that helps ensure standardised quality care for women in labour.</p> <p>Midwives also expressed concern regarding women's emotional needs and they suggested adapting the chart to record women's appearance, anxiety level, opinion and cultural needs.</p>	Small survey that gives baseline information and does not give in-depth information regarding the midwives' views.
Lavender <i>et al.</i> , 2011	To explore students' perceptions and experiences of partograph use in labour wards	Focus group discussions	fifty-one student nurses allocated to maternity unit	Findings of the study suggested that the partograph had little status among midwives and obstetricians that created a barrier to its use.	Using focus group discussions only may be a disadvantage because group dynamics may effect comfort and level of disclosure in discussion
Winter, 2002	to examine independent midwives' practices with a focus on some of the ways they assess the progress of labour	qualitative grounded theory research utilising	Six independent midwives	The findings revealed a variety of skills that independent midwives use to assess the progress of labour. The midwives were not using medical protocols, preferring instead to use their midwifery skills to assess the progress of labour. These midwives	Limitations to the data collection as it was based on interviews only. Conducting observations would have added to the richness of the data

		interviews		<p>rarely used vaginal examinations since this would only inform them that the cervix was dilating.</p> <p>The midwives used their skills to understand how the woman as a whole was progressing through labour physically, mentally and spiritually</p>	
Duff, 2005	To examine midwifery assessment of cues to the progress of labour in hospitals where midwives were required to work within protocols and policies around the medical assessment of labour	Use of a labour assessment tool that provided behavioural cues as a means of assessing labour progress.	179 participants (94 nulliparous and 85 multiparous women)	Results showed specific behaviours associated with progress were observed before cervical dilatation increased. The descriptors indicated that cervical dilatation was occurring and also descriptors indicating second stage was approaching. The researcher also identified differences between multiparous and nulliparous women.	These findings of this study are worthy of further exploration in order to locate what midwives do during labour, details of assessments of labour behaviour that are made, the support that is given, and the decision making that occurs
Mead, 2004	To survey midwives for the care they and their colleagues would adopt on admission and for the first stage of labour	survey	249 midwives	Results showed that when identifying the type of nutrition that midwives would offer to a woman in labour, none of the midwives selected a nothing by mouth option and midwives were less likely to restrict solid food and fluids to women in labour. On pain relief, the majority of the midwives and their colleagues	Midwives' responses were based on assumptions of what they thought their colleagues would do which may not be a true representation of their colleagues' practice. Also, the

				<p>opted for non-pharmacological pain-relief measures. Midwives considered artificially rupturing the membranes as a form of augmentation of labour, and they perceived themselves as more likely to monitor the foetal heart rate with a Pinard's stethoscope.</p>	<p>question of whether evaluations of hypothetical situations apply to judgements in real life remains an issue (Klein <i>et al.</i>, 1993). Difficulties include problems establishing reliability and external validity.</p>
Freeman <i>et al.</i> , 2006	looked at how hospital settings in which midwives practice and models of care affect midwives decision making during labour	Survey	104 midwives	<p>The findings of this study showed that majority of the midwives provided labour care in large obstetric hospitals, and it identified practices dominated by the medical model of care. These practices were influenced by intervention and the need for technology. However, the majority of the women perceived that they were actively involved in the decision-making process and that they worked in partnership with their midwives. Further analysis revealed that midwives embraced a humanistic approach to care whereby technology was used alongside relationship-centred care</p>	<p>The study was based on a small survey. However, conducting observations and follow-up interviews with the midwives would offer a deeper exploration of the phenomena under investigation.</p>

Appendix D: Comparative characteristics of labour and delivery settings of hospitals A and B

Characteristics	Hospital A	Hospital B
Type of hospital	tertiary central hospital	secondary district hospital
Bed capacity (labour beds)	35	9
Average no. of maternal deaths per year	20	1 2
Average no. of admissions per year	12,000	4,000
Average no. of deliveries per year	10,000	1,200
Average no. of deliveries in 24 hours	30	9
Total no. of midwives in labour ward	16 9 RNM, 8 NMT, 1 ENM	8 2 RNM, 5 NMT, 1 ENM
Average. no. of midwives per day shift	7	3
Cadre of medical professionals	Doctors	Clinical officers

Key: RNM Registered Nurse-Midwife, NMT Nurse-Midwifery Technician, ENM Enrolled Nurse-Midwife

Appendix E: Confirmation of ethics approval from the University of Edinburgh



SCHOOL of HEALTH in SOCIAL SCIENCE

The University of Edinburgh
Medical Quad, Doorway 6
Teviot Place
Edinburgh EH8 9AG

Telephone 0131 65
Fax 0131 650 3891
www.health.ed.ac.uk

Elizabeth Chodzaza
1/12 Wheatfield Road
Edinburgh
EH11 2PS

27th June 2013

Dear Elizabeth

Application for Level 2 Ethics Approval

Re: Research Project Proposal submitted to the Section of Nursing Studies Ethics Committee by Elizabeth Chodzaza (s1164532)
Understanding Midwifery Decision Making During the First Stage of Labour in a Malawian Context

Thank you for submitting the above research project for review by the Section of Nursing Studies Ethics Committee. I can confirm that the submission has been reviewed and was approved on the 23rd June 2013.

Should there be any change to the research protocol it is important that you alert us to this as this may necessitate further review.

Yours sincerely

PP Professor Kath Melia
Subject Ethics Co-ordinator for Nursing Studies

Appendix F: Letter from hospital A granting permission to conduct the study

Telephone: (265) 01 874 333 / 677 333
Facsimile: (265) 01 876928
Email: queenshosp@globemw.net

All communications should be addressed to:
The Hospital Director



In reply please quote **No.**

QUEEN ELIZABETH CENTRAL HOSPITAL
P.O. BOX 95
BLANTYRE
MALAWI

Ref No. QE/10

28th June 2013

Mrs Elizabeth Chodzadza
The University of Edinburgh
School of Health in Social Science
Doorway 6
Medical Quad
Teviot Place
Edinburgh EH89 AG

Dear Madam

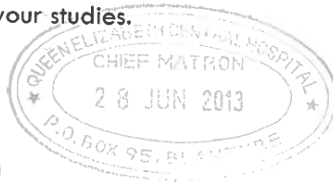
With reference to your letter dated 26th June 2013 requesting to conduct a research study at QECH.

I am pleased to inform you that management has granted you permission to conduct a study entitled "**to explore the nature of Malawian Midwifery decision making processes during the first stage of labour**".

Best wishes in your studies.

A handwritten signature in black ink, appearing to be 'T.N. Soko'.

T.N. Soko (Mrs)
DEPUTY HOSPITAL DIRECTOR-NURSING
For: **HOSPITAL DIRECTOR**



Appendix G: Letter from hospital B granting permission to conduct the study

01 JUL 13 17:48 Mulanje DHO 2651466295 F.2

Telephone: + 265 01 466 211
Facsimile: - 265 01 466 295
E-
mail:mulanjedistricthospital@gmail.com

All Communications should
be addressed to:



In reply please quote No.
.....
MULANJE DISTRICT HOSPITAL
P.O. Box 227
Mulanje
MALAWI

1st July 2013

Elizabeth Chodzadza
The University Of Edinburgh
School of Health in Social
Science Dear way 6
Medical Quad
Teviot Place
Edinburgh EH8 9AG

Dear Sir/Madam

Mulanje District Health Office is pleased to accept your request to
conduct a research on the **Understanding Midwifery Decision
making in the first stage of Labour in Malawian Context** in Mulanje
District Health Facilities.

We look forward to working with you on this project and hope the
results will be useful in improving midwifery Decision Making.


Dr K Kabwere
FOR: DISTRICT HEALTH OFFICER

Appendix H: Confirmation of ethics approval from the College of Medicine Research and Ethics Committee



Appendix I: Participant information leaflet for midwives



ELIZABETH C CHODZAZA
THE UNIVERSITY OF EDINBURGH
SCHOOL of HEALTH in SOCIAL SCIENCE
DOOR WAY 6
MEDICAL QUAD
TEVIOT PLACE
EDINBURGH EH8 9AG

Telephone: +265 (0)8888333891

Email: echodzaza@sms.ed.ac.uk

Research Topic: Understanding Midwifery Decision Making During the First Stage of Labour in a Malawian Context

Name of Researcher: Elizabeth Chodzaza (Mrs)

PARTICIPANT INFORMATION LEAFLET FOR MIDWIVES

Introduction

I am inviting you to take part in a research project. However, before you make a decision to participate I would like you to understand what it involves and why I am undertaking it. Please read the information leaflet thoroughly. Part one of the leaflet details the purpose of the project and what happens if you take part.

My name is Mrs. Elizabeth Chodzaza, a Malawian Nurse/Midwife. I am conducting a research funded by the Commonwealth Scholarship Commission. I will conduct this study to gather information that will help us to improve midwifery care provision in Malawi. In addition, I will use the information to write my dissertation as a requirement to get my degree at the University of Edinburgh. My supervisors are: Dr Elaine Haycock-Stuart and Dr Aisha Holloway. The title of the study is:

Understanding Midwifery Decision Making During the First Stage of Labour in a Malawian Context

Midwives form the bulk of health care professionals during labour and childbirth. They spend most of their time at the labouring women's bed side and care for women around the clock. In the course of caring for women during the first stage of labour, midwives make a variety of critical decisions. Midwives decisions during the first stage of labour are extremely important as women's labour outcomes depend on their decisions. Nevertheless, little is known about how midwives make decisions as they care for women in the first stage of labour. The purpose of this research is to explore midwives decision making during the first stage of labour in a Malawian context. It is considered that a better understanding of how midwives make decisions during the first stage of labour will help to improve care of women during the first stage of labour.

The study is an ethnographic qualitative study to be conducted in two hospital settings; a tertiary and secondary hospital settings. The study will involve midwives currently practicing in the labour and delivery units. You have been identified as one of the potential participants because you are currently working in the labour and delivery suite and you are involved in the care of women during the first stage of labour.

The study

If you decide to participate in the study, you will be observed as you care for women during the first stage of labour. During the observation period, I will occasionally be speaking into a digital recorder at a low voice. At your convenient time following the observations, I will ask you to reflect on the care you provided to the woman during the first stage of labour. I will interview you to discuss the labour. With your permission, a recording will be taken of the observations and the conversation, but this is only because I need an accurate record of the issues I observe and what we discuss.

Confidentiality

Please be assured of your privacy and confidentiality, all data obtained from you will be securely maintained in locked cupboard, and no name will be attached to the folders containing your data. Your information will be identified numerically and not by name. The

results of the study may be published in midwifery journals, but participants or hospitals will not be identified in the publication. In addition, once I have analyzed the transcripts, I will destroy the recording. Anything you tell me will be treated confidentially.

Possible Risks and Benefits of the Study

There are no perceived risks to you and the women under your care. However, the interviews involve in-depth probing of your thoughts and behaviors. In case you are not happy with the interview process, you may choose to withdraw from participating. In addition, an independent midwife will be available to provide counseling and guidance and this process may help you reflect on your practice.

There are no direct benefits to you from participating in the study. The findings from the research may help to improve midwives future decision making during the first stage of labour.

Participation in the study

Participation in the study and consent to have your interview digitally recorded is entirely voluntary you may decide not to participate or not without stating the reasons. If you believe my presence affects your care provision, feel free to stop the process of data collection.

Name	Telephone	Physical and Email Address
Dr Elaine Haycock-Stuart	+447 (0131 6)50 8442	University of Edinburgh. School of Health in Social Sciences, The Medical School, Teviot Place, Edinburgh. EH8 9AG e.a.haycock-stuart@ed.ac.uk
Dr Aisha Holloway	+447(0131 6)51 1525	University of Edinburgh. School of Health in Social Sciences, The Medical School, Teviot Place, Edinburgh. EH8 9AG

		<u>Aisha.Holloway@ed.ac.uk</u>
Mrs. Elizabeth Chodzaza	+265 (0) 888 333 891	Kamuzu College of Nursing P.O Box 415, Blantyre <u>E. C.Chodzaza@sms.ed.ac.uk</u>

If you want to contact me or my supervisors for further information regarding any aspects of this study on the following numbers and addresses:

Finally, thank you for your interest and for taking time to read through this invitation. If you are willing to participate I would like to ask you to read through and sign the 2 consent forms, one for you and one for my records. Please keep this information for future use.

Appendix J: Midwives consent form for observation and interview



ELIZABETH C CHODZAZA
THE UNIVERSITY OF EDINBURGH
SCHOOL of HEALTH in SOCIAL SCIENCE
DOOR WAY 6
MEDICAL QUAD
TEVIOT PLACE
EDINBURGH EH8 9AG

Telephone: +265 (0)8888333891

Email: echodzaza@sms.ed.ac.uk

Research Topic: Understanding Midwifery Decision Making During the First Stage of Labour in a Malawian Context

Name of Researcher: Elizabeth Chodzaza (MRS)

I AGREE WITH THE FOLLOWING STATEMENTS:

1. I know that it is up to me whether or not I want to take part in this study project.
2. I would like to confirm that I have read and understood the participant information leaflet. I have been given chance to consider the information and ask questions about the project and have them answered to my satisfaction.
3. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reasons.
4. I understand that the interviews will be recorded unless I object.

5. I understand that the observations and interviews will be utilized for academic purposes and findings may be published in journals but anonymity will be maintained.
6. I also understand that there are no direct benefits from participating in the study. I am not being rewarded financially or otherwise for my participation.
7. All the procedures have been explained, I had a chance to discuss the study and ask questions.
8. I have received a copy of this consent form to keep for future reference.

I GIVE MY FULL CONSENT BY SIGNING THIS FORM TO PARTICIPATE IN THE RESEARCH

Print your name in BLOCK CAPITALS:

I -----, agree to be interviewed about my
Participation-----Signature -----
Date-----Investigator name-----
Signature----- Date-----

Appendix K: First response from the College of Medicine Research and Ethics Committee to the proposals for the study



COLLEGE OF MEDICINE

Principal
K.M Maleta, MBBS PhD

Our Ref.:
Your Ref.: P.07/13/1418

College of Medicine
Private Bag 360
Chichiri
Blantyre 3
Malawi
Telephone: 01 877 245
01 877 291
Fax: 01 874 700

Email: comrec@medcol.mw

5 August 2013

Mrs. E. Chodzaza
Kamuzu College of Nursing
P.O box 415
BLANTYRE

Dear Mrs. Chodzaza

P.07/13/1418– Understanding Midwifery decision making in the first stage of labor in a Malawian context

I write to inform you that COMREC reviewed the proposals mentioned above, which you submitted at its meeting on the 31 July 2013. COMREC **did not approve** your proposal for the following reason[s]:

1. The researcher should clearly outline when she will intervene in the research.
2. Can the researcher state whether she is a participant observer or a mystery client.
3. There is no ethical need to obtain consent from the patient, but consent is required from the nurse midwife for the researcher to observe the practice of the nurse during labor.
4. The PI should state the objective (s) of the study because currently only research questions have been stated.
5. In determining the sample size for the study, the PI has stated that the sample sizes she has chosen are sufficient because qualitative studies require few numbers of participants. The PI should include a statement that the sample size may be lower or higher depending upon data saturation.
6. Please, include COMREC contact details in the consent form.

A study to Explore Midwifery Decision Making in the First Stage of Labour will be conducted in the labour and delivery suite.

The focus of the study is the midwife who will be caring for you during childbirth.

If you are interested to be part of this study, the researcher will approach you!

Your permission will be sought to be observed as the midwife provides care to you!

Thank you!

Mungakhale ndi chidwi kutenga nawo mbali mukafukufuku?

Kafukufuku wofuna kuwona momwe azamba amasamalirila amayi nthawi yomwe matenda ayamba adzachitika muchilowero.

Amayi omwe ayamba matenda adzapezeke akutenga mbali chifukwa choti azamba omwe a kuwasamalira alowa nawo mukafukufukuyi. Komabe amayiwo adzapemphedwa chilolezo ngati ali omasuka kutenge nawo mbali mukafukufuku ameneyu.

Zikomo!

Appendix N: Information leaflet for women (English version)



ELIZABETH C CHODZAZA
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EDINBURGH EH8 9AG

TELEPHONE: +265 (0)8888333891

Research Topic: Understanding Midwifery Decision Making During the First Stage of Labour in a Malawian Context

Name of Researcher: Elizabeth Chodzaza (Mrs.)

Introduction

You are being asked to participate in a research to understand midwifery decision making during the first stage of labour in Malawi. This research is funded by the Commonwealth Scholarship Commission. I am Mrs. Elizabeth Chodzaza of the University of Edinburgh and I am a midwife by profession. The focus of the study is the midwife who will be caring for you throughout the labour process. I am conducting this study to understand how midwives care for women during the first stage of labour. The findings of the study will help me to formulate some frameworks to help midwives provide proper care to women. The research will also help me get a degree at the University of Edinburgh. My supervisors are Dr Elaine Haycock-Stuart and Dr Aisha Holloway. The title of the study is:

Understanding Midwifery Decision Making During the First Stage of Labour in a Malawian Context

Risks and benefits

There are no apparent risks involved for participating in this study. There are no direct benefits that you will receive from participating in the study. However, the study will help me to understand better how midwives care for women during the first stage of labour, the challenges they face and factors that influence care provision. The findings from the research may help to improve midwives future decision making during the first stage of labour.

Data Confidentiality and Anonymity

Your name or any information that would identify you will not appear on all the records. Your name and identity will not become known or linked with any information from your observations or records. I will keep all the observations made on you and your records private and confidential. These will be placed in a lockable cabinet which can only be accessed by the researcher. The researcher will destroy all the records at the end of the research following the University of Edinburgh guidelines.

Participation

Your participation in this study is voluntary. You may refuse to be observed as I am observing midwives providing care to you without giving reasons. Your participation may end at any time without any implications. You will receive your care as you are entitled. I want to assure you that your rights and dignity will be respected during the entire labour period. You are free to ask questions or make objections.

This research project has been reviewed and approved by the University of Edinburgh Research Ethics Committee and the College of Medicine Research Ethics Committee. If there is anything about this study or your participation that is not clear, or if you want to report a problem related to this study, you may contact me or my supervisors for further information regarding any aspects of this study on the following numbers and addresses:

Name	Telephone	Physical and Email Address
Dr Elaine Haycock-Stuart	+447 (0131 6)50 8442	University of Edinburgh. School of Health in Social Sciences, The Medical School, Teviot Place, Edinburgh. EH8 9AG e.a.haycock-stuart@ed.ac.uk
Dr Aisha Holloway	+447(0131 6)51 1525	University of Edinburgh. School of Health in Social Sciences, The Medical School, Teviot Place, Edinburgh. EH8 9AG Aisha.Holloway@ed.ac.uk
Mrs. Elizabeth Chodzaza	+265 (0) 888 333 891	Kamuzu College of Nursing P.O Box 415, Blantyre E. C.Chodzaza@sms.ed.ac.uk

If you have any further questions about your rights of being in this study, you may write to or phone COMREC Secretariat, University of Malawi College of Medicine Research and Ethics Committee, Private Bag 360, Chichiri Blantyre3, Malawi at 01871911, or the University of Edinburgh Research Ethics Committee, School of Health in Social Science, Doorway 6, Medical Quad, Teviot Place, Edinburgh, EH8 9AG, or ask at www.health.ed.ac.uk

Finally, thank you for your interest and for taking the time to read through or listen to this invitation as I read through to you. If you are willing to participate you can read through or I can read through to you the information contained in the consent form.

Appendix O: Information leaflet for women (Chichewa version)



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Mutu wa kafukufuku: Kafukufuku ofuna kudziwa momwe azamba amasamalirila amayi nthawi yomwe matenda oti achile.

Dzina la mwini wa kafukufuku: Mai Elizabeth Chodzaza

Mawu oyambilila

Mukupemphedwa kuti mutenge mbala mu kafukufuku ofuna kudziwa momwe anamwino amasankhila zoti achite pothandiza amayi oyembekezela amene angayaomba kumva zizindikilo zoti abeleka posachedwa. Ndalama za kafukufukuyu zapelekedwa ndi bungwe lina la ku Ulaya lotchedwa Commonwealth Scholarship Commission. Ndine Elizabeth Chodzaza wa ku sukulu ya ukachenjede ku Ulaya ya University of Edinburgh ndipo ndinaphunzira za uzamba. Chilikati cha kafukufukuyu ndi azamba amene akhale akukuthandizani kufikila nthawi yobeleva. ndikuchita kafukufukuyu kuti ndidziwe zimene azamba amachita pothandiza amayi nthawi imene matenda ayamba. Zotsatila za kafukufukuyu zidzathandiza popanga ndondomeko zoti amayi oyembekezela adzithandizidwa moyenela. Kafukufukuyu andithandizanso kuti ndimalize maphunzilo anga a ukachenjede pa sukulu ya University of Edinburgh. Amene akundithangatila pa kafukufukuyu ndi a Dr Elaine Haycock-Stuart ndi a Dr Aisha Holloway. Mutu wa kafukufukuyu ndi:

Kafukufuku ofuna kudziwa momwe azamba amathandizila amayi pa nthawi yomwe matenda ayamba.

Ubwino ndi kuopsa kopanga nawo kafukufukuyu

Palibe zotsatila zoopsa chifukwa chotenga nawo mbali. Palibe zolandila ngati ndalama ndi zina chifukwa chotenga nawo mbali. Komabe kafukufukuyu andithandiza kuti ndidziwe momwe azamba amathandizila amayi oyembekezela amene matenda oti achile ayamba, zokhoma zimene amakomana nazo pothandiza azimayiwa komanso zimene zimapangitsa kuti chithandizo chipelekedwe mwa njira imene chabwererayo. Zotsatila za kafukufukuyu zingathandize azamba mtsogolo muno pa momwe amasankhila njira zoti amthandizile mzimayi oyembekezela.

Zokhudza chinsisi komanso kusatchula maina

Dzina lanu kapena zilizonse zokhudza kudziwika kwanu sizidzalembedwa. Dzina lanu kapena zokhudza kudziwika kwanu zizidzadzidwidwa komanso sizidzakhala ku zolembela za kafukufukuyu. Ndidzasunga zonse zimene ndidzatenge zokhudza inu mwa chinsisi komanso mokusungilani ulemu wanu. Zolembela zidasungidwa mu kabathi imene idzidzakhomedwa ndipo otsekulamo ndi ine ndekha mwini wa kafukufukuyu. Ndidzaotcha zolembela zonse kumapeto a kafukufukuyu ndipo zimenezo ndi zimene eni ake a sukulu ya ukachenjede ya University of Edinburgh amati zidzichitika.

Kutenga nawo mbali

Mukutenga mbali mu kafukufukuyu mosaumilizidwa. Mungathe kukana kutenga nawo mbali pamene ndidziona azamba akukuthangatilani popanda kupeleka zifukwa zokanila. Mutha kusiya kutenga nawo mbali nthawi iliyonse ndipo sipakhala bvuto lililonse ndipo mulandila chithandizo bwinobwino. Ndikutsimikizileni kuti ufulu ndi ulemu wanu ndizotetezedwa panthawi imene mukuthandizidwa mpakana kubeleka. Muli ndi ufulu kufunsa kapena kutsutsa zina zokhudza kafukufukuyu.

Kafukufukuyu ndi wovomerezedwa ndi mabungwe owonetsetsa kuti kafukufuku akuchitika mwandondomeko yake komanso ufulu wa iwo otenga mbali mu kafukufuku

ukulemekezedwa. Ngati pali zina zimene simukuzimvetsa zokhudza kafukufukuyu kapena kutenga mbali kwanu kapena ngati mukufuna kunena zina zilizonse, mutha kutipeza pa ma adilesi kapena manambala a mafoni ali m'musiwa:

Dzina	Nambala	Kumene timapezeka
Dr Elaine Haycock-Stuart	+447 (0131 6)50 8442	University of Edinburgh. School of Health in Social Sciences, The Medical School, Teviot Place, Edinburgh. EH8 9AG e.a.haycock-stuart@ed.ac.uk
Dr Aisha Holloway	+447(0131 6)51 1525	University of Edinburgh. School of Health in Social Sciences, The Medical School, Teviot Place, Edinburgh. EH8 9AG Aisha.Holloway@ed.ac.uk
Mrs. Elizabeth Chodzaza	+265 (0) 888 333 891	Kamuzu College of Nursing P.O Box 415, Blantyre E. C.Chodzaza@sms.ed.ac.uk
COMREC Secretariat	01871911	P/Bag 360 Chichiri Blantyre 3

Pomaliza, ndikukuthokozani chifukwa cha chidwi chanu komanso chifukwa cha nthawi yanu powerenga kapena kumvetsela pamene ndinali kukuwerengelani kuyitanilaku.

Ngati mukubvomeleza kutenga nawo mbali, mungathe kuwerenga kapena ndingathe kukuwerengelani zimene zalembedwa Muchikalata cha Chibvomelezo.

Appendix P: Consent form for women (English version)



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Research Topic: Understanding Midwifery Decision Making During the First Stage of Labour in a Malawian Context

Name of Researcher: Elizabeth Chodzaza (Mrs.)

I AGREE WITH THE FOLLOWING STATEMENTS

1. The information about this study has been read to me and I have understood it. I have been given chance to ask questions and have them answered satisfactorily.
2. I understand that the focus of the study is the midwife who will be caring for me during the labour process. However, as the midwife provides care to me, I will be part of the study and records pertaining to labour care process will be used in the study.
3. I know that it is up to me whether or not I want to take part in this study project.
4. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reasons.
5. I understand that the observations made on midwives as they render care to me will be utilized for academic purposes and findings may be published in journals but anonymity will be maintained. All the data will be kept under lockable cabinet and will only be accessed by the researcher.

6. I also understand that there are no direct benefits from participating in the study. I am not being rewarded financially or otherwise for my participation.
7. All the procedures have been explained, I had a chance to discuss the study and ask questions.
8. I have received a copy of this consent form to keep for future reference.

This research project has been reviewed by the College of Medicine Research Ethics Committee, and if you have further issues regarding the study you may contact COMREC Secretariat through the following address: COMREC Secretariat, P/Bag 360, Chichiri, Blantyre 3. Telephone: 01871911

Agreement to participate

I CONSENT TO PARTICIPATE IN STUDY AS THE MIDWIVES ARE OBSERVED WHILE THEY PROVIDE CARE TO ME.

----- Name of Participant	----- Signature or thumb-print of Participant	----- Date
----- Name of witness for expectant mother	----- Signature of witness	----- Date
----- Name of Researcher	----- Signature of Researcher	----- Date

Appendix Q: Consent form for women (Chichewa version)



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Research Topic: Kafukufuku ofuna kudziwa momwe opeleka chithandizo amasankhila zoti achite pothandiza amayi oyembekezela amene angoyamba zizindikilo zoti abeleka posachedwapa.

Dzina la mwini wa kafukufuku: Elizabeth Chodzaza (Mrs.)

NDIKUGWIRIZANA NDI ZONENA IZI:

1. Nkhani za m'kafukufukuyu andiwerengela ndipo ndazimvetsa. Ndinapatsidwa mwayi ofunsa ndipo ndakhutira ndi momwe andiyankhila.
2. Ndikuzindikila kuti chilikati cha kafukufukuyu ndi anamwino amene akhale akundithandiza panthawi yokonzekela kubeleka. Komano panthawi imene adzindithandizayi, ndikhala ndikutenga nawo gawo mu kafukufukuyu ndipo zolembela zina zokhudza ine azigwiritsa ntchito mukafukufuku ameneyu.
3. Ndikuzindikila kuti zili kwa ine kutenga nawo mbali mukafukufukuyu kapena ayi.
4. Ndikuzindikila kuti ketenga nawo mbali kwanga ndikongodzipeleka ndipo nditha kusiya kutero nthawi ina iliyonse poponda kupeleka zifukwa zake.

5. Ndikuzindikila kuti ochita kafukufuku adziona anamwino akundithandiza ndipo adzilembela zimene akuona kuti akazigwilitse ntchito mukafukufuku wao amene ndi okhudza za maphunzilo awo. Ndikuzindikilanso kuti zotsatila zake atha kuzisindikiza m'mabuku ena koma sadzalembamo dzina langa. Zolembela zonse zidzitsekeledwa mu kabathi imene izikhomedwa ndipo ozitengamo ndi mwini wa kafukufuku yekha basi.
6. Ndikuzindikilanso kuti palibe cholowa potenga nawo gawo mu kafukufukuyu chotero ndisayembekezele ndalama kapena zolandila zina.
7. Zonse zofunikila zafotokozedwa ndipo ndinali ndi mwayi ofunsa komanso kukambilana za kafukufukuyu.
8. Ndalandila mbali ya chikalata cha chilolezochi kuti ndichisunge.

Ngati mungakhale ndifunso kapena ndemanga zilizonse pakafukufukuyu, ndinu omasuka kufikila bungwe la COMREC lomwe linavomereza kuti kafukufuku ngati ameneyu akhoza kuchitika. Keyala yawo ndi: COMREC Secretariat, P/Bag 360, Chichiri, Blantyre 3. Telephone: 01871911.

Kuvomeleza kutenga mbali mu kafukufuku

**NDABVOMELEZA KUTENGA NAWO GAWO NDI KUTI ANAMWINO
AONEDWE NDI OCHITA KAFUKUFUKU PAMENE AKUNDITHANDIZA INE.**

----- Dzina la otenga mbali	----- Kusayinila kapena chikhatho cha otenga mbali	----- Tsiku
----- Dzina la mwini wa kafukufuku	----- Kusayinila kwa mwini kafukufuku	----- Tsiku
----- Mboni ya a mayi otenga nawo mbali		----- Tsiku

Tsiku lopelekela chikalata cha chilolezo:

Appendix R: In-depth interview guide for midwives (English version)

Thank you for giving the time to me today to have the opportunity to discuss with you the care you gave to the woman. The interview should take about 1-1.30hours. My study's main aim is to understand midwifery decision making during the first stage of labour, so my questions will be related to this.

- ✓ Review information leaflet
- ✓ Written consent (provide a signed copy to participant)
- ✓ Phones off

General information

- Can you tell me a bit about yourself? further probes on demographics if not mentioned
- People are drawn to different kinds of jobs/professions with different reasons and I want you to share with me what specifically drew you to join midwifery
- What do you enjoy about midwifery?
- What is hard about providing midwifery care?
- Is midwifery what you expected it to be? Has it met your expectations?

The observation (Think about the care you provided to that woman during labour)

- Please describe your feelings and thinking during the care of that woman in labour?
- Try and recapitulate the care you provided to that woman in labour. What was actually happening during that period? Can you take me through the care and what was going through your mind? (The interviewer picks up on what the midwife describes regarding any assessments and actions observed)

Lead on questions

- Did you consider any alternative courses of action
- In what way did your assessment influence your care?
- What rule was being followed? What specific training or experience was necessary or helpful in making this decision?

- Are there some things you might do differently with that woman looking back today on the labour and delivery? If yes what things and why?
- In what way has your experience developed and how has it helped??

Probe Partograph issues

- How did you use the partograph?
- What value did the partograph hold for you?
- Probe: critical decisions and their implications
- What were your practices based on the partographic presentation? Specific actions and priorities.

Probe: critical decisions and their implications

1. Could you have reasonably taken any other action? (Listen for other sources of action, other possible interpretation, experienced and novice differences)
2. What were you trying to accomplish?
3. What rule was being followed? What specific training or experience was necessary or helpful in making this decision?
4. Do you think you should have done things different when caring for women during first stage of labour?

If the decisions you made were not the best, what training, knowledge, skills and information do you think could have helped?

C. Social contextual factors influencing decision making

1. What problems did you experience when caring for woman during the first stage of labour? **Probe:** The tasks that make the actions difficult, what is easy about caring for women during first stage of labour.
2. How much time pressure was involved in making this decision? Situation Assessment
3. What do you do when you are not sure about how to care for or manage a woman during the first stage of labour?
4. What support did you receive when caring for the woman in the first stage of labour?
Probe: support from fellow midwives, from other professionals
5. Does the multi-professional team in this department influence decisions during the first stage of labour? In what way?

6. What is your opinion about the relations between midwives and other health professionals regarding care of women during the first stage of labour?
7. How did your knowledge, skills and experience influence your decisions during the first stage of labour?
8. How did my presence affect the way you cared for the woman during the first stage of labour?

Any questions or comments?

Thank you very much

Appendix S: In-depth interview guide for midwives (Chichewa version)

A. Kulandila Mzamba komanso kupeleka malonje

1. Alandileni azamba ndikuwapatsa malo okhala
2. Dzifotokozeni nokha kwa mzamba
3. Fotokozani kwa mzamba cholinga cha macheza anu. Wunikilaninso zoyenela kuti adziwe ngati wotenga mbali ndipo apatseni pepala lolembedwa ndi uthengawu pamene mukufotokoza.
4. Mukatha kuwerenga, unikilaninso pepala la chilolezo chawo choti ndiolola kutenga nawo mbali pa kafukufuku. Yankhani mafunso ena aliwonse amene mzamba angafunse. Ngati agwirizana ndi zonse, apempheni kuti asayine chikalata chosonyeza kuti akugwilizana ndi ndondomeko zonse. Apatseni chawo chikalata chachilolezocho keti asunge okha komanse inu sungani chanu pamalo abwino.
3. Apempheni azamba kuti adzifotokoze okha, auzeni kuti asatchule dzina lawo. Apempheni kuti akupatseni unhenga otsatilawu:
 - Zaka zawo
 - Ukadawulo wawo wantchito
 - Amagwila ntchito ngati ndani
 - Zaka zimene agwila ntchito
 - Zaka zimene agwila ntchito ntchito yauzamba
 - Zaka kapena miyezi imene agwira ntchito muwodiyo
 1. Mundifotokozele chimene chinakupangitsani kuti mulowe ntchito ya mzamba.
 2. Kodi chimene mumasangalala (enjoy) nacho kwambili ndichiyani pa ntchito yauzambayi?
 3. Kodi chimene chili chovuta kwambili panthito yauzambayi ndi chiyani?

B. Kufufuza mozama

1. Kodi mumawayesa chiyani amayi aja komanso ndi chisamaliro chanji chomwe munapereka panthawi imene matenda amapweteka (during first stage of labour)?

2. Kodi zolinga zanu komanso zolinga za chipatala ndi zotani pankhani yosamalira amayi pamene matenda ayamba?
3. Kodi mumawayesa chiyani amayi aja kuti muzindikile mmene matenda amayendela?
4. Kodi ndi zotsatila zamtundu wanji zazomwe munawayesa amayi aja zomwe zinakupangitsani kuti muwapatse chisamaliro chomwe munapereka chija?
5. Kodi mumagwiritsa ntchito malamulo (guidelines) anji pakasamalidwe ka amayi pamene matenda akupweteka kuyembekeza kuti achile?
6. Kodi chi pepala cha Partograph munachigwiritsa ntchito bwanji? Chinali chofunikila bwanji?
7. Kodi ubwino wachi pepala cha partograph ndiwotani kwa inu?
8. Kodi pamene zotsatila za zomwe mumawayesa amayi aja zitafika kumadzanja kwa mzere wa alert (alert line) komanso mzere woti muchitepo kanthu (Action line) chinachitika ndi chiyani? Ndipo ndichifukwa chiyani izi zinachitika?
9. Kodi kwa inuyo zimatanthauza chiyani pamene munapeza kuti zotsatila zowayesa amayi mmene njira yatsegukila zalembedwa kumadzanja kwa mzere wa alert komanso pamzere wa action?
10. Kodi inuyo munapereka chisamaliro chotani pamene zotsatila zowayesa amayi mmene njira yatsegukila zinafika kumadzanja kwa mzere wa alert/wa action?
Funsitsani: Mufotokoze mwachindunji chisamaliro chomwe munapereka komanso chisamaliro chimene munachiona kuti chinali chofunikila kwambili
11. Kodi inuyo nkhwana yanu yaikulu inali yotani pamene zotsatila zowayesa amayi mmene njira yatsegukila zinafika kumadzanja kwa mzere wa alert/wa action?
Funsitsani: ndiye munaona kuti choyenela kuti chichitike komanso zotsatila za chochitikacho chinali chiyani
12. Kodi pali chisamaliro china chomwe mukanatha kupereka? (mvetselani za chisamaliro china chimene chikanatha kuperekedwa, kutanhtauzila kwa mtundu wina, siyanitsani pakati paankhala kale pankhani zauzamba ndi kwa azamba amene sanagwire nthcitoyi nthawi yayitali
13. Kodi inuyo mumafina kukwanilitsa chiyani?
14. Kodi inuyo mumatsatila lamulo lotani panthawi imeneyi? Nanga ndi maphunziro amtundu wanji amene anali ofunikila kuti mupange chiganizo chimenechi?
15. Kodi mukuganiza kuti mkanatha kupanga zinthu mosiyana ndi mmene munapangira posamilira amayi nthawi imene matenda amapweteka?

16. Kodi ngati ziganizo zomwe munapanga sizinali zabwino kwenikweni mukuona kuti pamafunika ukadaulo wamtundu wanji kumbali ya maphunziro, nzeru komanso luso la kachitidwe kazinthu zimene zikanatha kuthandiza?
17. Kodi kupezeka kwa ine panthawi imene mumasamalira amayi aja kunakukhudzani mwamtundu wanji?

C. Zomwe zina pangits kupanga ziganizo kukhala kovuta kapena kosavuta

Kodi ndi zovuta zamtundu wanji zomwe munakumana nazo panthawi imene mumasalira amayi aja pamene matenda anali kupweteka?

Funsitsani: ndinthcito zANJI zimene zinali zovuta kuzipanga naga zinali zophweka kuzipanga?

1. Kodi inuyo mumapeza uphungu kuchokela kwandani kuti muthandizike ndi ziganizo zomwe mumapanga posamalira amayi aja panthawi yomwe matenda amapweteka?
2. Kodi munali pampanipani wamtundu wani pamene mumapanga ziganizo zimenezi?
3. Kodi inu mumapanga bwanji mukakhala kuti simukudziwa bwinobwino mmene mungasamalire mayi panthawi imene matenda akupweteka?
4. Kodi munalandila chithandizo chamtundu wanji pamene mumasamalira amayi aja panthawi imene matenda amapweteka?

Funsani: chithandizo kuchokela kwa azamba anzanu, madokotala komanso kwa okuyanganilani pantchito

5. Kodi ndizochitika zamtundu wanji zimene zinapangitsa kuti mupange ziganizo (decisions) zimene munapanga zija?
6. Kodi ogwira ntchito osiyanasiyana mu chilowero muno amapangitsa ziganizo zokhudza mmene amayi angasamalidwile pamene matenda akupweteka?
7. Kodi inu maganizo anu ndiotani pa ubale womwe ulipo pakati pa azamba, madokotala komanso oyanganila kumbali yosamalira amayi panthawi imene matenda akupweteka ?
8. Kodi nzeru zanu, luso komanso nthawi imene mwakhala pantchito (experience) zinathandiza bwanji kuti mupange ziganizo zimene munapanga zija pamene mumasamalira amayi aja pamene matenda ampweteka?
9. Kodi kupezeka kwanga panthawi imene mumasamalira amayi aja kunakukhudzani bwanji

D. Maganizo anu ammene zinthu zingasinthile

1. Kodi mukuganiza kuti tingathandize bwanji kuti ziganizo zomwe azamba amapanga pothandiza amayi pamene matenda ayamba zikhale zoyenela?
2. Mmaganizo anu, kodi ndi chithandizo chotani choonjezela chimene chingakhale chofunikila kwazamba pamene akusamalira amayi pamene matenda ayamba?

Ngati muli ndi mafunsa ena mutha kundifunsa

Zikomo kwambili.