FACTORS ASSOCIATED WITH HOME DELIVERIES IN THEKERANI AREA IN THYOLO DISTRICT

MSc (MIDWIFERY) THESIS

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MARCH, 2011

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By

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A Thesis submitted to the faculty of Nursing and Midwifery in partial fulfillment of the requirements of the degree of Master of Science (Midwifery)

University of Malawi

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MARCH, 2011

DECLARATION

I, Dorothy Kamoto Chanza, hereby declare that this dissertation is my own work and that, to the best of my knowledge has never been presented for the award of any other degree or diploma of the university or other institution of higher learning, except where due acknowledgement has been made in the text.

Dorothy Kamoto Chanza

_____

Signature

_____

Date

CERTIFICATE OF APPROVAL / CERTIFICATION

The undersigned certify that this thesis represents the student's own work and effort and has been submitted with our approval.

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DEDICATION

I dedicate this work to my dear husband, Alfred Chanza, for his moral and financial support throughout the entire period of the study. I appreciate his motivation and desire for my advancement in my studies.

ACKNOWLEDGEMENTS

I would like to thank the Almighty God for His inspiration to study this topic which is useful to increase the uptake of women for health service delivery with skilled attendance and improve maternal and neonatal wellbeing. I would also like to extend my sincere gratitude and deep appreciation to the following people for their contribution towards the realization of this thesis:

- Dr E. Chirwa, my supervisor, for her patient, professional, and constructive guidance throughout the study period. She has provided me with priceless development opportunities that have enriched my social and academic life beyond the framework of this study.
- United States Agency for International Development (USAID), for the scholarship which enabled me to undertake the study.
- Kamuzu College of Nursing for identifying the donor agency for me to undertake the study.
- Mr Alfred Chanza, my husband, for his moral, material and financial support.
- Kamuzu College of Nursing Library Staff, for providing relevant literature and printing services.
- Staff of Thyolo District Hospital, for providing me with preliminary data on the topic studied.
- Staff at Thekerani Health Centre, for their professional support during the collection of empirical data.
- The mothers that enthusiastically responded to the interview questions during data collection.
- Fellow students at Kamuzu College of Nursing (KCN), for their social support and exchange of academic ideas throughout the whole postgraduate degree programme.
- My parents, Nedson and Elizabeth Kamoto, for their love and support throughout my life and academic career.

Opinions expressed and conclusions arrived at are those of the researcher and are not necessarily to be attributed to the research supervisor.

ABSTRACT

The study aimed at exploring factors associated with home delivery in Thekerani Area in Thyolo District. In order to achieve the objective, a quantitative descriptive design was utilized for the study. The target population consisted of women attending under-five, postnatal, and family planning clinics at Thekerani Health Centre in Thyolo district, located in the southern region of Malawi. A convenient sampling technique was used to select a sample of 253 mothers. Data was collected through face-to-face interviews using a structured questionnaire. Statistical Package for Social Sciences (SPSS) version 16 was used to analyze the data. Descriptive statistics such as range, means, frequencies, and percentages were utilized to analyze the data.

The results indicated that 80% of the mothers were in the age group of 20-35 years with an age range of 13-44 and mean age of 29 years. Sixty-two percent of the mothers had some primary education while 32% had no education. The study revealed four main factors influencing women to have a home delivery. Seventy-eight percent of the mothers indicated long-walking distance to a health facility compounded by lack of transport; 31% of the mothers mentioned traditional beliefs such as trusting in the experience of elderly women, and 31% reported deep rooted beliefs in herbs; 52% indicated lack of financial support while in hospital and poor attitudes of health workers whereby 40% of the women indicated hostile behavior of health personnel towards patients in labor and 38% of the women indicated that women are left to deliver on their own without supervision.

Based on the findings, it is recommended that the government and non-government organizations should provide bicycle ambulances to each group village

headman for easy transportation to health facilities; Awareness campaigns on birth preparedness and complication readiness should be conducted. Efforts should be made to reduce the distance to EMOnC services by providing infrastructure for delivery services with skilled attendance. Government through Thyolo District Hospital should consider upgrading existing primary health care centres such as Nkhata-ombere and Nsabwe Health Centres to provide EMOnC services. Improving financial status of women in the rural areas is also recommended. Thyolo District Assembly should influence local Non Government Organizations (NGOs) to provide capital funds (in form of loans) to the women in the area to engage in Income Generating Activities (IGAs) in order to strengthen their economic/bargaining power to influence place and timing of delivery. The community should be educated on combating harmful practices. Supportive supervision is also recommended in order to improve health workers poor attitudes towards laboring women.

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ABBREVIATIONS

ANC:	Antenatal Clinic
COMREC:	College of Medicine Research and Ethics Committee
CPD:	Continuing Professional Development
CHAM:	Christian Health Association in Malawi
DHO:	District Health Officer
EmOC:	Emergency Obstetric Care
HBM:	Health Belief Model
IEC:	Information, Education and Communication
IGAs:	Income Generating Activities
KCN:	Kamuzu College of Nursing
LDF:	Local Development Fund
MDHS:	Malawi Demographic and Health Survey
MGD:	Millennium Development Goal
MDGs:	Millennium Development Goals
MMR:	Maternal Mortality Ratio
MMRs:	Maternity Mortality Ratios
MOH:	Ministry of Health
NGOs:	Non Governmental Organizations
NMCM:	Nurses and Midwives Council of Malawi
NSO:	National Statistical Office
RPC:	Research and Publications Committee
SDA:	Seventh Day Adventist
SMP:	Safe Motherhood Project
SWAp:	Sector Wide Approach
TBA:	Traditional Birth Attendant
TBAs:	Traditional Birth Attendants

TDC:	Thyolo District Council
TDH:	Thyolo District Hospital
UNFPA:	United Nations Population Fund
UNICEF:	United Nations International Children's Emergency Fund
USAID:	United States Agency for International Development
WHO:	World Health Organization

CHAPTER ONE

Introduction

The choice of place of delivery has consistently been found to be associated with maternal and neonatal outcomes. In developing countries increased maternal and neonatal deaths are associated with home births (Nigussie, Mariam, & Mituke, 2004). In a study conducted by Iyengar, Iyengar, Sulhalka, and Dashora (2009) on pregnancy-related deaths in Rajasthan, India, lack of skilled attendance and immediate postpartum care were major factors contributing to maternal deaths. Lack of skilled birth care costs two million lives each year (Partnership for Maternal, Newborn, and Child Health, 2010). The reason behind this is that home deliveries are often unhygienic, unsupervised, and when intervention is required, it is usually not at hand (Amooti-Kaguna & Nuwaha, 2000). In addition, home deliveries may prolong labour and are a recipe for obstetric fistula (Nkentiah-Amposah & Sagoe-Moses, 2009). Home delivery is a risk factor for increased maternal and neonatal morbidity and mortality rates.

Furthermore, most complications occur during delivery and in the immediate postnatal period. These complications are sudden and unpredictable and require immediate attention. If such complications occur in a health facility well equipped to handle such emergencies or in the presence of a trained medical attendant then maternal and prenatal outcomes can greatly improve (Buttiens, Marchal, and De Brouwere, 2004). Demographic and Health Survey (DHS) data from 40 countries collected between 1995 and 2003 document that more than 50% of neonatal deaths occur after home birth without skilled attendance (Mrisho et al., 2007). A high rate of obstetric complications among apparently normal pregnancies delivering at home was reported in Papua New Guinea.

Professional care at birth can help reduce maternal mortality and morbidity (Fraser, Cooper, & Nolte, 2006). Yet there is low utilization of delivery services in Malawi and specifically, in Thyolo with skilled attendance at birth of 54% (National Statistical Office and UNICEF, 2008).

Child birth in a medical institution attended to by trained medical staff has been shown to be associated with lower rates of maternal and neonatal mortality and morbidity than home births (Stephen, Baschieri, Clements, Monique, & Nyovani, 2006). Evidence has shown that availability and utilization of Emergency Obstetric Care (EmOC) and skilled attendance during pregnancy, child birth, and postnatal period are important to reducing maternal mortality (Costello, Osrin, & Mandhar, 2004). The rationale for this is that early identification and timely and appropriate management of obstetric complications is crucial to save women's lives because the majority of deaths occur during delivery and in the postpartum period. In addition, antenatal screening has a low predictive value for the identification of obstetric complications. Furthermore, the common factor among countries managing to reduce pregnancy-related deaths has been the presence of skilled providers attending most of the deliveries.

Historical evidence shows that wherever maternal mortality was significantly reduced, both in developed and developing countries, the majority of deliveries are attended by skilled personnel with access to emergency obstetric care (Buttiens, Marchal, & De Broure, 2004). In most countries where health professionals attend more than 80% of deliveries maternal mortality ratios are below 200 per 100, 000 live births (UNFPA, 2004). Finally, a shift to skilled attendance has further been strengthened when programmes that focused on training of Traditional Birth Attendants (TBAs) failed to

show reduction in maternal mortality (Pathmanath; Sibley, & Sipe, 2003). Therefore, it is important that all pregnant women have access to a skilled attendance. Skilled attendance at delivery is advocated as the single most important factor in preventing maternal deaths. The proportion of births attended by skilled health personnel is one of the indicators for Millennium Development Goal 5. Access to skilled delivery care is also crucial to prevent stillbirths and to improve newborn survival. In practice, skilled attendance in most countries is synonymous with facility delivery (Gabrysch & Campbell, 2009).

Given the demonstrated health benefits of institutional deliveries, it is necessary to understand factors associated with home deliveries. Identification and analysis of these factors is very important for resource starved countries like Malawi. Analysis of these factors will help practitioners and policy makers to design strategies that will improve the uptake of women for health facility delivery with skilled attendance and improve maternal and neonatal outcomes. A large number of studies on factors influencing the choice of delivery place identified a plethora of potential influential factors. A study conducted in Mangochi- Lungwena area in 2006 on factors influencing women's choice of place of delivery revealed three major issues related to sub optimal quality of care in terms of communication, attitudes, and cooperation within the health care system. Other issues include: cultural factors in terms of influence from decision makers, perceptions of danger signs, and traditional views on pregnancy and delivery, and unsatisfactory availability to skilled delivery care in terms of distance, transport, and costs (Seljecskog, Sundby, & Chimango, 2006).

Factors related to place of residence and socioeconomic status may also account for variations in use of maternal health care services. These factors include women's age,

ethnicity, education, religion, culture, clinical need of care, and decision making power. The costs, location, and quality of health care services are also important. These factors interact in different ways to determine use of health care. Understanding of these factors affecting maternal health care interventions is essential to design strategies to redress such problems or inequalities hence ensure accessibility to health facilities which will later improve maternal and neonatal outcomes (Say & Raine, 2007).

A study was conducted in western Nepal in 2006 on home delivery and newborn care practices among urban women. A total of 240 mothers were interviewed. The findings indicated that planned home deliveries were 140 (58.3%) and 100 (41.7%) were unplanned. Only 6.2% of the deliveries had a skilled birth attendant present and 38 (15.8%) mothers gave birth alone. Main reasons cited for delivering at home were preference (25.7%), ease, and convenience (21.4%), for planned deliveries while precipitate labour (51%), lack of transportation (18%), and lack of escort during labour (11%) were cited for unplanned ones (Sreeramareddy, Joshi, Sreekumaran, Giri, and Chuni, 2006). In another study conducted in Tanzania, the identified barriers to skilled care were distance from health units, lack of reliable and affordable transport, lack of advanced planning for accessing delivery care units, widely held beliefs that pregnancies labelled as 'normal' during ANC visits will result in successful deliveries at home, failure of providers to convey information about the importance of skilled delivery care for all women, and women's low social status and inability to independently make labour and delivery decisions (Magoma, Requejo**,** Campbell**,** Cousens, & Filippi**,** 2010).

The study was undertaken to establish the factors associated with women who opt for a home delivery in Thekerani area. The findings from this study are to be compared

with findings outlined in the above studies. The study conducted by Seljecskog, Sundby, and Chimango (2006) utilized a small sample of six women and it was specifically derived from Mangochi area. As such, the findings could not be generalized country-wide, hence this study. In addition, there is very little literature on factors associated with home deliveries in Malawi and yet nearly half of pregnant women deliver at home without skilled attendance. Skilled attendace at birth is the most important strategy to reduce the high maternal and neonatal morbidity and mortality rates in Malawi and specifically in Thyolo District.

Background to the Study

Every year, 200 million women become pregnant worldwide. Thirty million women become pregnant in Africa (Lawn & Kerber, 2006). Although most pregnancies of healthy mothers end up with the birth of a live baby, on many occasions child birth is a time of pain, fear, suffering, and even death (World Health Organization, 2008). It is estimated that annually 529,000 women die globally from complications of pregnancy and childbirth. This represents an estimated 1,600 maternal deaths daily, which is about one woman every minute. At the same time 5,000 newborns die every day due to complications related to pregnancy, labour, and childbirth. Another 3 million babies are still born (Stanton, Lawn, Rahman, Wilczyniska-Katende, & Hill, 2006). One third of nearly one million stillbirths occur during labour, and approximately 280,000 babies die of asphyxia soon after birth (Lawn & Kerber, 2006). About 250, 000 of the 30 million women who become pregnant in Africa die from pregnancy-related causes (Lawn & Kerber, 2006). More than 60% of maternal deaths take place immediately after delivery, with more than half occurring within a day of delivery (Wani, Chikai, & Soniwalkar,

2009). Over 99 percent of those deaths occur in developing countries such as Malawi (World Health Organization, 2009).

Forty percent or more of women who deliver at home will develop short and long term disabilities such as obstetric fistula, ruptured uterus, or pelvic inflammatory disease during and after delivery (Abouzar & Wardlaw, 2003). The risk of dying from pregnancy-related complications is highest in Sub-Saharan Africa, of which Malawi is one of the countries. World Health Organization (2004) noted that most of these deaths are preventable even in limited-resource settings. Information is needed upon which to base actions to reduce these tragic deaths. Knowing the overall rate is not enough. It is necessary to understand the underlying factors that led to the deaths.

Malawi, like many developing countries, experiences complications of pregnancy and child birth as a leading cause of death and disability among women of reproductive age. Maternal mortality rate increased alarmingly to 1,120 deaths per 100,000 live births in 2000 from the rate of 620 deaths per 100,000 live births captured in 1992. From the year 2004, there was a marginal decline to 984 deaths per 100,000 live births. This improvement was maintained through the year 2006 with a recorded decrease to 807 deaths per 100,000 live births. This shows that Malawi is not on track to achieving the desired target of 155 deaths per 100,000 births by 2015 (Carlson, et al., 2008). Specifically an estimated 654 maternal related deaths were reported in Thyolo between 2008 and 2009 and this was an upward surge from 500 reported between 2007 and 2008 (Chinoko, 2009).

Direct causes of maternal deaths include complications of abortion, obstetric complications such as hemorrhage, dystocia, hypertensive disorders of pregnancy

especially eclampsia, sepsis, prolonged or obstructed labour, and infections such as tuberculosis and HIV and AIDS. These complications can occur anytime during delivery and in the immediate postnatal period. However, key health-care interventions can largely prevent women from dying of these pregnancy-related complications which can occur at any time without forewarning. Attendance at antenatal care, delivery in a medical setting, and having a skilled health worker at delivery improve maternal health outcomes. Scaling up skilled attendance and emergency obstetric care is fundamental to reaching Millennium Development Goal (MDG) 5 for maternal health, and scaling up care during child birth will also contribute to MDG 4 for child survival (Lawn & Kerber, 2006).

Unfortunately use of these interventions is limited in developing countries such as Malawi (Ministry of Health, 2008). Approximately half of the deliveries in developing countries take place without skilled attendance (Nasreen, Imam, Akter, and Ahmed, 2006). Sixty percent of African women give birth without a skilled attendant (Lawn & Kerber, 2006). Around 54% of deliveries in Malawi occur in health facilities and were conducted by skilled attendants (National Statistical Office and UNICEF, 2008) while 29% were assisted by TBA's and 13% were assisted by relatives or friends. Recent estimates indicate that Malawi made no progress from 2000 to 2008 in ensuring skilled attendance at birth (Partnership for Maternal, Newborn, and Child Health, 2010). Home deliveries in the absence of skilled professional attendants have been associated with adverse infant and maternal outcome (Koblinsky, Campbell, & Heichelheim, 1999). However, home deliveries without a skilled attendant are chosen or occur for a variety of reasons, including long distances or lack of transport, costs of services, perceived lack of

quality of care in a health facility, hidden costs (transport, drugs, medical supplies, food, and lodging), interaction with providers, and socio-cultural factors (lacking decision-making power, tradition, and family role) often limit women's access to receive care for safe motherhood (Parkhurst, Rahman, & Ssengooba, 2006).

Problem Statement

Skilled attendance at childbirth is crucial for decreasing maternal and neonatal mortality.The Ministry of Health has implemented programmes and strategies to assist pregnant women to deliver in health facilities thereby improving maternal and neonatal outcomes. Strategies in place to ensure women deliver in health facilities include implementation of the emergency human resource plan, upgrading and constructing of Basic Emergency Obstetric and Neonatal Care facilities, capacity building through integrated Maternal and Neonatal Health (MNH) care, support to health education institutions, doubling of intake in health training institutions, tutor incentives, provision of communication materials including installation of radio communications, bicycle, and motorized ambulances, and service level agreements to ensure free maternity services even in CHAM institutions among others (Carlson, et al., 2008).

Despite these efforts by the Government women continue to deliver in their homes without skilled attendance inspite the high antenatal coverage of 93% (National Statistical Office and UNICEF, 2008). This is contributing to the high maternal mortality rate which is now at 807 per 100,000 live births and Neonatal mortality rate now at 33 per 1,000 live births in Malawi since home delivery is a risk factor (National Statistical Office and UNICEF, 2008). Only 54% of the births take place in a health facility. A considerable proportion of births take place at home, either in the respondent's home

(29%) or the traditional birth attendant's home (12%) (National Statistical Office and UNICEF, 2008).

Recent estimates indicate that Malawi made no progress from 2000 to 2008 in ensuring skilled attendance at birth (Partnership for Maternal, Newborn and Child Health, 2010). According to World Health Organization (2009), a lack of skilled attendants at birth accounts for two million preventable maternal deaths, stillbirths, and neonatal deaths each year. Eighty percent of these deaths could be prevented if women had access to skilled attendance at birth (World Health Organization, 2009). This means that 553 deaths out of 654 deaths which were reported in Thyolo District between 2008 and 2009 could be prevented if women had access to skilled attendance. Therefore, there is need to understand factors associated with women who opt for a home delivery. This in turn, will provide a useful background for developing strategies to increase the uptake of women for health facility delivery with skilled attendance, and, hence improve maternal and neonatal health.

Conceptual Framework

The study was guided by the Health Belief Model (HBM) which focuses on client compliance and health care practices. The HBM assisted in examining why some women select a home delivery and avoid recommended health preventive action of delivering in health facilities with skilled attendants. The major components of the HBM which were utilized in the study include individual perceptions, perceived barriers, and modifying factors. These constructs from the HBM were utilized to formulate the objectives.

Individual Perceptions

Individual perceptions involve individuals' belief about their susceptibility to disease as well as the seriousness with which they view the perceived threat of illness. In this study, individual perceptions concern the women's beliefs about their susceptibility to complications associated with home delivery and the seriousness with which they view the perceived threat of complications associated with home delivery.

Modifying Factors

Demographic variables which were selected for this study included such variables as age, marital status, level of education of husband and wife, religion, tribe, occupation of husband and wife. These also included parity and number of living children. The obstetric and delivery characteristics of the women were also incorporated under modifying factors. The sociopsychological variables selected for the study include cultural factors in terms of decision-making processes in the family and traditional beliefs associated with pregnancy, labour, and delivery

Perceived Benefits

The perceived benefits focus on her believed effectiveness of strategies designed to reduce their threat of illness. These are the perceived benefits of health facility delivery with skilled attendants to prevent or treat complications associated with the child birth process and the perceived benefits of home delivery.

Perceived Barriers

These barriers refer to the individual's perception of physical, psychological, and financial barriers involved in carrying out the action in this case deliverying in health facilities with skilled attendance.

Cues to Action

Cues to action consists of events, either bodily that motivate people to take action. Cues to action in this study include advice from health care workers, friends, and family members regarding hospital delivery.

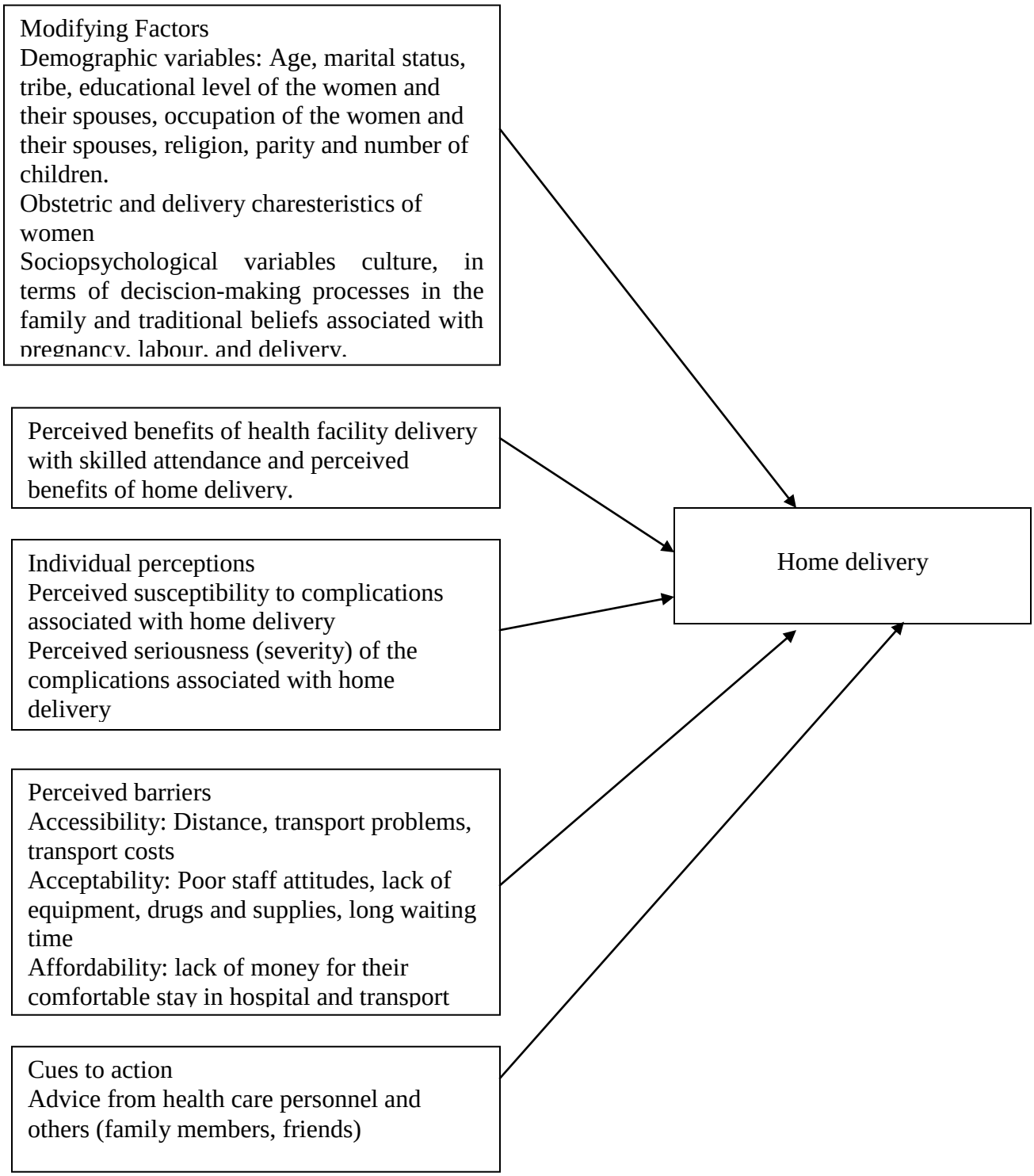

Figure 1: The adapted Health Belief Model showing factors associated with home delivery

Aim of the Study

The aim of the study was to explore the factors associated with home delivery in Thekerani area in Thyolo District.

Specific Objectives

The following were the specific objectives of the study:

- To identify modifying factors in terms of demographic and sociopsychological variables associated with home deliveries
- To determine women's perceived benefits of health facility and home delivery
- To explore individual perceptions associated with a home delivery
- To assess women's perceived barriers to health facility delivery associated with home delivery
- To identify the existence of cues to action that motivate the women to deliver in health facilities with skilled attendance

Significance of the Study

The study identified the factors associated with home delivery. The findings of the study will enable the midwife and other health professionals to address the gaps preventing women from utilizing skilled attendance in health facilities; help policy-makers effectively plan and develop the best strategy (ies) for empowering women to value a health facility as a place of delivery; and enable health care planners to design and deliver appropriate/relevant maternity services.

Furthermore, this study provides a strong base of evidence for promoting and refining strategies to improve delivery care. In addition, it adds to the body of knowledge in midwifery practice.The findings will assist nurse educators to develop relevant

information, education, and communication materials on importance of health facility deliveries with skilled attendance and the risks associated with home deliveries. The findings should lead to the review of midwifery curricula to be sensitive to the needs of the society; and assist nurse educators to plan for effective training of health workers to become sensitive to the needs of the women.

Conclusion

This chapter has placed the study into perspective by describing the background to the study, presenting a problem statement, objectives of the study, and significance of the study. The next chapter is the review of the literature that relates to this study. The theoretical framework, the Health Belief Model, which guided the study, is also discussed.

DEFINITION OF TERMS

Antenatal Care:	A service provided to pregnant women before delivery.
Delivery service:	A service provided to pregnant women when true labour pains begin all the way until the baby and placenta are born.
Home delivery:	Delivery elsewhere other than a health facility. It can be in the woman's home or at a Traditional Birth Attendant.
Maternal mortality:	The death of a woman, while pregnant or within 42 days of termination of pregnancy, due to complications from pregnancy, delivery or management of either, or due to existing medical conditions that were aggravated by the pregnancy or delivery, but from accidental or incidental causes (World Health Organization, 2007).
Maternal mortality rate:	The number of maternal deaths per 1000 women in a defined age group per year (World Health Organization, 2007).
Maternal mortality ratio:	The number of maternal deaths per 100,000 live births (World Health Organization, 2007).
Perception:	Refers to an organized process in which an individual interprets situations from an environment and draws subjective or personal inferences and conclusions from these in order to take a certain action or behaviour (George, 2002).
Skilled attendant:	Refers to people with midwifery skills (for example doctors, midwives and nurses) who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose, manage or refer obstetric complications (Gabrysch & Campbell, 2009).
Skilled attendance:	The process by which a pregnant woman and her infant are provided with adequate care during pregnancy, labour, birth and post-partum and immediate newborn periods (World Health Organization, 2008).
Traditional Birth Attendant:	A community-based provider of care during pregnancy and childbirth.

CHAPTER TWO

Literature Review

Introduction

This chapter reviews the literature related to hospital and home deliveries. The conceptual framework which has been utilized for this study will also be reviewed. The purpose of literature review is to orient the researcher about what is known in relation to the topic as well as uncertainties in order to select appropriate research methods previously used by others and avoiding flaws which may compromise the validity and reliability of the study and avoid unnecessary replication (Polit & Hungler, 1999). The review of literature contained in this chapter is centered on benefits of hospital delivery, the extent of underutilization of skilled attendance, factors associated with home delivery such as socio-psychological, economic, and health facility barriers, and the Health Belief Model that guided the researcher in this study. A search involved books, published and unpublished journals relevant to the causes of home deliveries.

Conceptual Framework

Theoretical and conceptual frameworks play several interrelated roles in the progress of a science. Their overall purpose is to make research findings meaningful and generalizable. Theories allow researchers to knit together facts into an orderly scheme. Frameworks are efficient mechanisms for drawing together and summarizing accumulated facts. The linkage of findings into a coherent structure makes the body of accumulated knowledge more accessible and, thus, more useful both to practitioners who seek to implement findings and to researchers who seek to extend the knowledge (Polit & Hungler, 1999).

Health Belief Model

The Health Belief Model (HBM) was utilized for this study which focuses on client compliance and health care practices (Polit & Beck, 2004). The model was modified by Becker to help to identify and explain why people failed to utilize the formal health services. The model also assisted in explaining why there was a high non-compliance rate with preventive health recommendations made by health professionals. This model helped identify factors which inhibited or stopped these recommended preventive health actions from being carried out which resulted in this non-compliant behaviour (Glanz, Rimer, & Lewis, 2002)**).**

The reason for selecting this model is because it attempts to explain why individuals take or avoid preventive health action for example going for health facility delivery. It also tries to analyze factors which contribute to client's perceived state of health or disease and to the client's probability of taking appropriate plans of action. In other words, the HBM is a conceptual framework for understanding health behavior. In addition, the HBM is important and related to this study because this theory attempts to explain the people's use of health services, attitude of individuals, and barriers to use of health care services(Glanz, Rimer, & Lewis, 2002)**).** Finally, the model constructs have been found to have a high correlation with health-related behaviours (Janz & Becker, 2004).

The HBM is based on the understanding that a person will take a health-related action (i.e. deliver in a health facility) if that person feels that a negative health condition (i.e., complications of childbirth) can be avoided; has a positive expectation that by taking a recommended action, she will avoid a negative health condition (i.e., delivering

in a health facility will be effective in preventing or treating complications of labour and delivery such as obstructed labour), and believes that she can successfully take a recommended health action (i.e., she can opt for health facility delivery with confidence). This suggests that whether or not people change behaviour engage in cost-benefit analysis or utility analysis. This may include their beliefs concerning the likelihood of the illness or injury happening to them (their susceptibility); the severity of the illness or injury happening to them (that is perceived severity); and whether it will have some personal benefits or how likely it is to protect the person from the illness or injury. In other words, the model suggests that a person bases their health related behaviour change on four major beliefs as stated above (Glanz, Rimer, & Lewis, 2002)**).**

The major components of the HBM include perceived susceptibility, perceived severity and costs, perceived barriers, motivation and enabling or modifying factors, and self efficacy. According to Dennill, King, and Swanapoel (1999) the HBM is organized into three major components which attempt to explain human behavior towards health or in this case women's behavior towards utilization of health facility for delivery. The three major components include individual perceptions of women towards utilization of delivery services in health facilities, modifying factors which could influence women to deliver at home, and variables affecting the likelihood of health facility delivery. Motivation and enabling factors or modifying factors as well as cues to action, individual perceptions, and perceived barriers were utilized for this study. Self efficacy was not included for this study.

Application of the Health Belief Model

In order to assist in explaining the reasons pregnant women opt for home delivery thereby not complying with the policy of delivering in health facilities with skilled attendants the HBM described above was adapted by the researcher. The literature reviewed in this chapter assisted with the adaptation.The components of the HBM as discussed above have been adapted and summarized into three major components of the HBM as follows.

Indiviual Perceptions

Individual perceptions involve the individual's beliefs about their susceptibility to disease, plus the seriousness with which they view the perceived threat of an illness (Onega, 2000). Perceived susceptibility refers to her risk perception of contracting a health condition. Perceived seriousness refers to the beliefs a person holds concerning the effects a given disease or condition would have on one's state of affairs. These effects can be considered from the point of view of the difficulties that a disease would create. Each individual has her own perceptions of the likelihood of experiencing a condition that would adversely affect their health. Individuals vary in their perceptions of susceptibility to a condition, and the nature and intensity of these perceptions may significantly affect their willingness to take preventive actions (Bellon, Delgado, De Dios, Luna, & Lardelli, 1999).

Relating this to the study these refer to the risks which the woman and her newborn thinks is prone to have as a result of home delivery such as hemorrhage as there will be no drugs to manage the third stage of labour actively; sepsis as a result of unhygienic delivery place, and neonatal deaths as result of lack of equipment to

resuscitate babies in case of asphyxia among others. If she does not perceive any problem she might not take action to deliver in health facilities with skilled attendants. Therefore, using the HBM, this study will explore individual perceptions of women that could influence a home delivery. But this can be modified by several factors (See figure 1 below).

Modifying Factors

The factors which may modify the individual's perceived threat include demographic, sociopsychological, and structural variables as well as cues to action from various sources may influence a person's health-related actions or lack of actions (Mathenjwa, 2005).

Demographic variables

Demographic variables which were selected for this study included such variables as age, marital status, level of education, religion, tribe, and occupation of husband and wife. These were also adapted to include number of living children and parity. These demographic variables may influence the women to have home deliveries or not. For example, well educated women are more likely to deliver in health facilities than women with no or less education (UNFPA, 2004). Other demographic factors that have been shown to increase the likelihood of health care use are low parities, younger maternal age, women's employment in skilled work outside the home, and high levels of husband's education (Stephenson, Baschieri, Clements, Hennick, & Madise, 2006). In this study, the researcher tried to determine if these demographic variables were associated with home delivery.

Socio-psychological variables

This refers to such variables as personality, social class, peer group pressure, family pressure, culture, attitudes, and beliefs. A mother with a weak personality can easily be influenced not to deliver in a health facility by peers or kinsmen especially if they did not deliver in a health facility or delivered in a health facility and did not derive benefits. Beliefs about pregnancy and delivery may hinder women from utilizing delivery services. For example, if a client believes that pregnancy and delivery is a natural event so no need for biomedical interventions she will not utilize the delivery services.

Cues to Action

In addition to individual perception and modifying factors, cues to action either emanate from the individual or externally. Cues to action include advice from the midwife during antenatal visits regarding hospital delivery. The study will also try to find out the existence of cues to action in relation to Thekerani situation. These cues to action include acquisition of knowledge on importance and the need for hospital delivery during antenatal visits or from significant others such as family members and on risks associated with home births. The cues to action will help motivate these women to opt for hospital delivery (Glanz, Rimer, & Lewis, 2002).

Perceived Benefits

These include knowledge on importance of health facility delivery with skilled attendance and knowledge concerning risk factors associated with home births. Women are likely to deliver in health facilities where there is skilled care and emergency obstetric care services if they know the benefits of health facility delivery. Clients are likely to

comply with a treatment plan if they perceive it will benefit them. In summary, knowledge influences beliefs (Glanz, Rimer, & Lewis, 2002). In addition, knowledge of risks associated with child birth will act as a force to action.

Perceived Barriers

Other variables that can affect the likelihood of action are the perceived barriers such as distance, transport costs, and provider's bad attitudes among others. In this study the researcher will assess such variables as perceived quality and accessibility of health facility in terms attitudes of health workers, distance to the clinic and economic barriers (Glanz, Rimer, & Lewis, 2002).

Likelihood of Action

An individual's evaluation of the recommended health behaviour in terms of its perceived benefits in reducing susceptibility to and the severity of the disease are weighed against the perceived costs or barriers which may inhibit the preventive action advocated for by health workers. These barriers refer to the individual's perceptions of physical, psychological, financial barriers involved in carrying out the the proposed action (Mathenjwa, 2005). The HBM was utilized as foundation for literature review which follows:

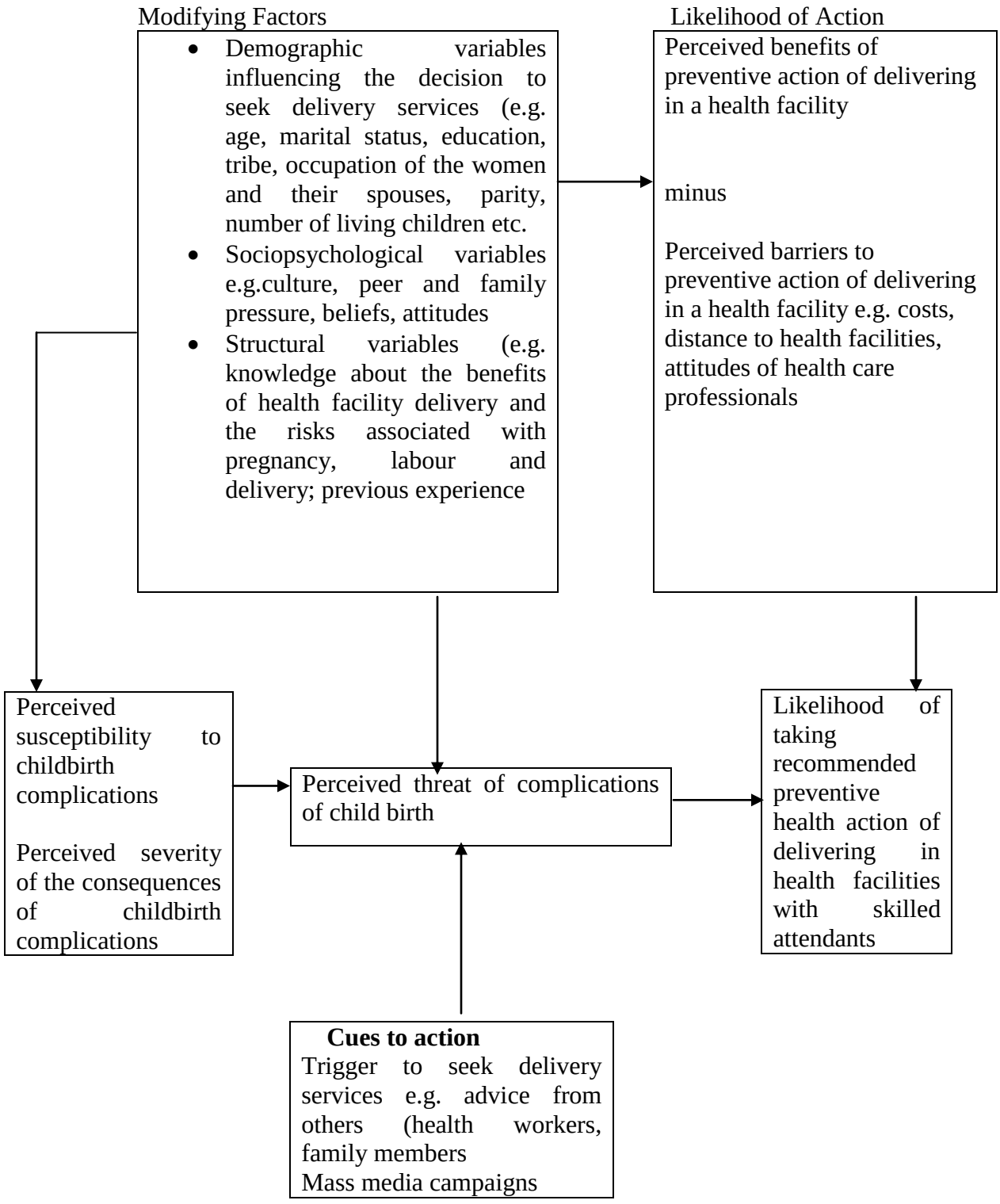

Figure 2: Showing individual perceptions using the components of the Health Belief Model

General Information

Benefits of Hospital Delivery

Each year, over 500,000 women die from complications of pregnancy and child birth. Maternal mortality for Malawi is at 807 per 100,000 live births (National Statistical Office and UNICEF, 2008). Almost all of them would live if they had access to a skilled midwife or doctor during child birth and effective emergency obstetric care when complications arise since most maternal deaths occur during delivery and during the postnatal period. Countries that have successfully reduced maternal mortality have had a high level of access to a skilled attendant at birth (a nurse or a doctor with midwifery skills) and basic emergency obstetric care (Buttiens, Marchal & De Broure, 2004).

The provision of delivery assistance by skilled attendants can greatly improve pregnancy outcomes for mothers and infants by the use of technically appropriate procedures, and accurate and speedy diagnosis and treatment of complications (National Statistical Office and UNICEF, 2008). These services are often limited in rural areas, so special steps must be taken to increase the availability of services in those areas such as Thekerani. Furthermore, historical data indicates that countries successful in reducing maternal mortality have emphasized the role of a professional midwife or a doctor working in a health institution. This is true for both developed and undeveloped countries (United Nations Population Fund, 2004). Moreover, there is an inverse relationship between the proportion of deliveries assisted by a skilled attendant and the maternal and mortality ratio. Skilled health personnel can timely detect and provide an appropriate management of complications (World Health Organization, 2004). The World Health Organization (2004) further states that the urgent cause of maternal deaths was the

absence, inadequacy, and underutilization of the health care services. Such being the case, women should not die when giving birth since the majority of these deaths can be prevented or reduced if women decided to access maternal health services with skilled health personnel during pregnancy, delivery, and the postpartum period (World Health Organization, 2004).

In the developing world, complications from HIV/AIDS and malaria are increasingly becoming indirect causes of maternal death and morbidity. Maternal health services represent a strategic entry point for addressing both malaria and HIV/AIDS in women. In essence skilled delivery care and emergency obstetric care can protect millions of newborns, as well as their mothers (United Nations Population Fund, 2004). In addition, HIV/AIDS is another public health issue which has to be considered when there are more home deliveries than health facility deliveries. Malawi has high HIV prevalence rate of 12% (Ministry of Health, 2009). It is not known what precautions the Traditional Birth Attendants and relatives take to reduce the risk of HIV/AIDS transmission between the baby, mother, and the birth attendant.

The Extent of Underutilization of Skilled Attendance

Health facilties are generally accepted as having an important role to play in the delivery of maternal health services in rural areas in developing world (Mathenjwa, 2005). Appropriate delivery care is crucial for both maternal and perinatal health. An important component in the effort to reduce the health risks of mothers and children is to increase the proportion of babies that are delivered in facilities where skilled attendance is available (National Statistical Office and ORC Macro, 2005). Studies have shown that there is underutilization of health facilities with skilled care worldwide. World wide,

34% of deliveries have no skilled attendant. This means 45 million births occurring at home without skilled health personnel each year. Skilled attendants assist in more than 99% of births in developed countries versus 62% in developing countries (World Health Organization, 2008).

In many developing countries, the majority of births occur without the help of a skilled assistant (defined as a midwife, nurse trained as midwife, or a doctor) at home or in other non-hospital settings (Eijk, et al., 2006). It was reported in a study conducted in Kenya that despite the fact that 90% of the women reported attending antenatal care, fewer than 2 in 10 gave birth in a health facility (Eijk et al., 2006). Similar findings were reported in South Africa, Bangladesh, Ethiopia, and Zambia among others (Chakraborty, Islam, Chowdhury, Bari, Akhter, 2003; Nigussie, Marrium & Mitike, 2004; Mathenjwa, 2005; and Onah, Ikeako, & Iloabachie, 2006). Similarly, skilled attendance at birth is very low in Malawi. The results from the Malawi demographic health survey, 2004 indicated that 57% of births took place in a health facility with skilled attendance while 29 births toook place at the respondent's home and 12 births took place at TBA's home (National Statistical Office and ORC Macro, 2005).

Futhermore, the results of the Multiple Indicator Cluster survey indicated a lower percentage where only 54% of births occurred with skilled attendance. The same percentage was recorded for Thyolo District (National Statistical Office and UNICEF, 2008). In addition, only 55 percent of all deliveries were attended by skilled health professionals in 1992 and 2000, and the rate marginally increased to 57 percent in 2004 and declined in 2006. In a study conducted by Makoka (2009) it was reported that the proportion of births attended by skilled health personnel in their sample was 58.8 percent,

which was similar to the WHO 2007 official rate of 56.1 percent for Malawi (World Health Organization, 2007). Although it is slightly lower than the global average of 63.1 percent, it is higher than the African average of 46.5 percent (World Health Organization, 2007).

There is good antenatal care coverage in Malawi which is about 93% (National Statistical Office and ORC Macro, 2005). However, this does not necessarily equate to the delivery at the health facility with only 54% of the deliveries conducted by trained health care professionals in health facilities. In Thyolo District, 51.4% of women deliver in health facilities whilst 46.4% deliver at a TBA or in their homes (National Statistical Office (NSO) Malawi and ORC Macro, 2005). A retrospective review of reported deliveries for 2002 to determine where women deliver was conducted in Thyolo district. Of the total 23,682 expected deliveries for the year period, 2,502 (11%) deliveries occurred in Thyolo district hospital. 7,532 (32%) in peripheral health facilities, and 10,503 at registered TBA sites. Thus, 87% of all deliveries in the district occurred at TBA sites (Kasenga, Hurtig, and Emmelin, 2007).

The proportion of births attended by skilled health personnel is an important indicator for monitoring the progress towards Millennium Development Goal of improving maternal health. This indicator is of particular importance to Malawi because of its high maternal mortality rate. Considering the extent of the underutilization of health facilities for delivery with skilled attendance it is important to understand the factors associated with home delivery. Therefore, the rest of the chapter will be looking at factors associated with home deliveries.

Factors Associated with Home Deliveries

According to the Health Belief Model (HBM), the factors which may assist in modifying womens' perception and influence the likelihood of their complying with the advice of health professionals include demographic, socio-cultural, and structural variables as well as the cues to action from a variety of sources. On the other hand, the three main barriers identified in the literature were inaccessibility of the clinic, unacceptability, and affordability of a health facility. These perceived barriers could negatively influence mothers against delivering in the clinic (Mathenjwa, 2005). These factors will be discussed in detail and these barriers will be discussed in terms of accessibility, acceptability and affordability of health facility delivery.

Modifying Factors

Demographic factors

The most consistently found determinant of reproductive health service utilization has been a woman's level of educational attainment, age, parity, religion, occupation, and residence among others. A study was conducted by Stephenson, Baschieri, Clements, Hennick, & Madise, 2006) on contextual factors on the use of health facilities for child birth in Africa. The study involved data analysis of six countries that is Malawi, Tanzania, Kenya, Burkina Faso, Ivory Coast, and Ghana. The above demographic factors were shown to increase health care use.

Age

The age of the respondent is associated with the decision of whether to deliver in a health facility (United Nations Population Fund, 2004). A study conducted by Letamo and Rakgoasi (2003) on factors associated with non-use of maternal health services in

Botswana found that a significant majority of teenage mothers had institutional deliveries. For example, 93% of all births to teenage mothers were institutional births compared to 90% among women aged 20-34 and 79% of women over 35 years respectively. Several studies found that younger women were more likely to use maternal health care services than older women (Stephenson, Baschieri, Clements, Hennick, & Madise, 2006; Eijk *et al*. 2006; Mrisho *et al.* 2007).

Birth order

The higher the birth order of a delivery, the less likely the mother is to receive professional delivery care. In other words, women in their first or second pregnancy are more likely to deliver with a skilled birth attendant than women who have already had several children (United Nations Population Fund, 2004). Several studies have found a strong association between birth order and use of health care services (Paul & Ramsey, 2002; Stephenson, Baschieri, Clements, Hennick, & Madise, 2006; Gage, 2007; Gabrysch, 2009).

Family size

Another important factor influencing home deliveries is family size. Women from a large family size underutilize various health care services because of too many demands on their time and due to resource constraints (Chakraborty, Islam, Chowdhury, Bari, & Akhter, 2003). Family size has a great impact on the allocation of household income in the various income necessities **(**Hossain & Hoque, 2005). The little money which is available is prioritized for food and children's education.

Parental education

Parental education, especially maternal education, is considered one of the strongest factors associated with receiving trained assistance at delivery (United Nations Population Fund, 2004). Lack of education is associated with poor health-related and health-seeking behavior and may result in poor health status (Ratsma & Malongo, 2009). Similar results were found by Nuwaha and Amooti-Kaguna (2000); Chakraborty, Islam, Chowdhury, Bari, and Akhter (2003); Celik and Hotchkiss, (2000); Letamo and Rakgoasi, 2003; Mrisho, et al. (2007). It is argued that education can have an empowering effect on women by broadening their horizons and making them aware of available opportunities. Education helps women to take personal responsibility for their health and that of their children. The educated family, in general, has better access to resources than the less educated family. Also educated families are more knowledgeable of health practices that may influence the use of safer and more comfortable child birthing procedures in hospital settings (Ratsma & Malongo, 2009; Paul & Rumsey, 2002; Stephenson, Baschieri, Clements, Hennick, & Madise, 2006). It is believed that educated people can perceive their health and health related problems better than illiterate people.

In many cases, illiterate people remain out of access to health care despite of having well-off economic standing and good social conditions. Due to illiteracy they suffer from various misconceptions and choose the traditional home delivery system driven by superstitious and traditional beliefs and other social taboos. From their study on determinants of choices of delivery care in some urban slums of Dhaka city it was clear that increasing maternal education status was closely associated with a significant

decrease in the likelihood of home delivery (Hussain & Hoque, 2005). From previous studies, it is clearly seen that education is a strong factor which can affect home delivery. This variable was also assessed in the context of Thekerani situation in Thyolo district.

Marital status

Marital status may influence the choice of delivery place, probably via its influence on female autonomy and status or through financial resources. Single or divorced women may be poorer but enjoy greater autonomy than those currently married. Young single mothers may be cared for by their natal family, which may encourage skilled attendance, especially for a first birth (Gabrysch & Campbell, 2009). On the other hand, single mothers may be stigmatised and prefer to deliver at home because they anticipate a negative provider interaction (Duong, Binns, & Lee, 2004).

Mother's occupation

Women who are working and earning money may be able to save and decide to spend it on a facility delivery. However, in many settings women either do not earn money for their work or do not control what they earn. An increased range of movement and better access to information are suggested as reasons why formal work may promote women's use of health facilities for childbirth. On the other hand, working may be poverty-induced and indicate resource constraints, which would make working women less likely to use health services for delivery (Gabrysch & Campbell, 2009). Several studies found that farming women are less likely to have skilled attendance at delivery than women in other occupations (Addai, 2000). This may stem from limited financial resources and health services in rural areas (Gabrysch & Campbell, 20009).

Husband's occupation

Wives of husbands with higher status occupations could be more able to use facilities for delivery. High status occupations are associated with greater wealth, making it easier for the family to pay costs associated with skilled delivery care (Gabrysch & Campbell, 2009). Most studies find that higher status occupation of the husband is associated with skilled attendance at delivery. In rural Haiti, however, a mother is less likely to deliver in a facility when her partner contributes all or part of the household expenses, after controlling for household wealth (Gage & Calixte, 2006). This is possibly because she has less autonomy in that situation. A study in Turkey did not find any effect of paternal occupation in itself but when the father had household health insurance, the last birth was more likely to have occurred in a health facility (Celik & Hotchkiss, 2000).

Tribe

Ethnicity influences beliefs, norms, and values in relation to child birth and service use (Gabrysch & Campbell, 2009). A study conducted by Mrisho et al. (2007) on factors affecting home delivery in rural Tanzania found variation between ethnic groups with respect to place of delivery, with the Yao being more likely to deliver at health facility than the Makonde or Mwera. On the hand, certain ethnic groups may be discriminated against by staff, making them less likely to use services (Glei, Goldman, & Rodriguez, 2003)

Religion

Understanding the linkage between religion and utilization of maternal health services in the context of the Sub-Saharan Africa is particularly relevant given the

overriding influence of religion on the social fabric of Africans and the unacceptably high levels of maternal mortality in the region. As African countries struggle to achieve their stipulated reductions in maternal and child mortality levels by two-thirds by 2015 as part of the Millennium Development Goals, the need to examine the complex macro- and micro-factors that affect maternal and child health services cannot be underestimated. Using data from the 2003 Ghana Demographic Survey, religion (measured by denominational affiliation) was found to be a significant factor in Maternal Health Care utilization. This was true even after controlling for socio-economic variables. In general, Muslim and traditional women were less likely to use such services compared with Christians. Wrong explanations of religious belief impede slum women's access to maternal health services (Gymah, Tacyi, & Addai, 2006). This is in agreement with the study conducted by Onah, Ikeako, and Iloabachi (2006) and Nuwaha and Amooti-Kaguna (2000). Similarly, in Malawi there are religions which do not allow their members to access health services such religions as Zion and Apostolic Faith (N. Nyoni, Personal Communication, March 13, 2009).

Pregnancy, Labour, and Delivery

The more antenatal visits she makes, the more likely it is for a woman to receive professional delivery care (United Nations Population Fund, 2004). A study conducted by Hussain and Roque (2005) on determinants of choice of delivery care in some urban slums of Dhaka city, found that antenatal care utilization was strongly associated with delivery care. The results were similar to studies conducted by Bloom, Wypig, and Gupta (2001); Hotchkiss, (2001); Celik and Hotchkiss (2000); Paul and Rumsey (2002); Nigussie, Mariam, and Mitike (2004); and Lubbock and Stephenson (2008). The reason

behind this strong association is that during the antenatal consultation women get concerned and get to learn about the necessity of hospital delivery. Yanagisawa, Oum, and Wakai (2006) had similar findings but noted that this was the case only when the attendance was four times or more.

Experience of complications of pregnancy and labour and delivery may influence where women deliver. In a study conducted by Amooti-Kaguna and Nuwaha (2000) in Rhakai district in Uganda, women reported that health units were very good at handling abnormal deliveries and complications so women go to hospitals when they get complications in labour. In another study conducted by Yaginasawa, Oum, and Wakai (2006), on determinants of delivery care in rural Cambodia utilizing a sample size of 980 women, found that the strongest determinant of hospital delivery was prolonged labour. Women who experienced prolonged labour were 6.5 to 6.8 times more likely to eventually deliver babies in a health facility than those who had not.

Furthermore, women's past experiences with poor quality care or unclear information in health facilities influenced future behaviours. Uncomfortable or negative past experiences in receiving care including lack of attendance, excessive waiting times, lack of urgency regarding one's health, and embarrassing physical examinations discourage women from seeking care in health facilities. Some women who experienced complications and had to deliver by caesarian section believe returning to a health facility for a future delivery would result in the same outcome (Lubbock & Stephenson, 2008). In a study conducted by Amooti-Kaguna and Nuwaha in Rhakai district of Uganda with a sample of 32 women and 32 men for focus group discussions and 211 for structured interviews found habit or previous experience as a determinant for choice of delivery. It

was said repeatedly during the focus group discussions that if the previous experience in the particular place was good then one is likely to go back in the next pregnancy. This was true regarding TBAs if she delivered you well in the previous pregnancies, then you go back in next pregnancy. Respondents repeatedly said that a woman who previously delivered without complications in a previous place is likely to choose to deliver there again. The delivery experience of mother's relatives especially mother's-in-law, mothers, aunts, and grandmothers were also mentioned as influencing the place of delivery (Amooti-Kaguna & Nuwaha, 2000).

Other factors biasing decisions towards home deliveries include sudden onset of labour or short labour. Mrisho, et al. (2007) in their study on factors affecting home delivery in rural Tanzania found that reasons for home deliveries was sudden onset of labour or short labour. In-depth interviews, focus group discussions, and participant observation were used to explore determinants of delivery in southern Tanzania. Quantitative data was collected on 21,600 randomly chosen households. Similar results are documented in a study conducted by Amooti-Kaguna and Nuwaha (2000). Their study focused on factors influencing choice of delivery sites in Rakai district of Uganda. Eight focus group discussions were held with 32 women and 32 men. Semi-structured interviews were held with 211 women from 21 random cluster samples that had a delivery in the previous 12 months. Twenty of the 94 women who delivered at home indicated that labour started too quickly and that there was no time to go to the hospital. The other major reasons given by the mothers were: labour started at night (10), unexpected labour (7), and health unit far away (7).

Cultural Factors (Sociopsychological Variables)

Culture is frequently mentioned as having a major influence on the way in which health behaviours are viewed (Bowden & Manning, 2006). According to George (2002) traditional factors and cultural values influence individual behaviours, thoughts, decisions, and actions. Traditional beliefs and knowledge society has on child birth influence women to deliver at home. It tailors the way individuals perceive their own health (Stephenson, *et al*. 2006). Study results in Benin found that women who delivered at home were admired (Kyomuhendo, 2003; Stephenson, et al. 2006). In West Africa childbirth is considered a woman's battle (Andaleeb, 2000). Traditionally, childbirth is seen as a normal occurrence which does not require health facility service since it is not a disease (Liamputtong, Yimyam, Parisunyakuls, Baosoung, & Sansiriphun, 2005). Complications are seen as a result of the contrary to a custom behavior of the woman who is giving birth (Liamputtong, Yimyam, Parisunyakuls, Baosoung, & Sansiriphun, 2005). In some cultural groups in Africa, the belief that obstructed labour is due to infidelity hinders care-seeking (Mrisho, *et al*. 2007). Furthermore, Paul (2000) observed that the vast majority of people in rural Bangladesh believe childbirth is an act of God and is a natural event. For this reason, they do not expect delivery complications or problems and therefore, use TBAs for child birth. Villagers also select TBAs for tradition, convenience, and the special attention they receive. Efforts to reduce maternal mortality and morbidity must also address societal and cultural factors that impact women's health and their access to services.

In Malawi, one of the major factors affecting women's choice of place of delivery is culture (World Health Organization, 2004). Culture tends to make women passive in

decision making. This even involves their health concerns. Social, cultural, and personal reasons support the persistence of some traditional practices that can negatively affect women's health outcomes. National Statistical Office (NSO) Malawi and ORC Macro (2005) indicate that health-seeking behaviour is influenced by a number of factors, including ability to make decisions regarding one's health. Lack of this ability has been cited as a barrier for proper utilization of maternal and child health services in several studies (Parkhurist, Rahman, & Ssengooba, 2006; Seljeskog, Sundby, & Chimango, 2006; Mrisho, et al., 2007). Women's low status in society, lack of access to and control over resources, limited educational opportunities, and lack of decision-making power contributes significantly to adverse pregnancy outcomes. Laws and policies, such as those that require a woman to first obtain permission from her husband or parents may discourage women and girls from seeking needed health care services such as delivery services (National Statistical Office and UNICEF, 2008).

On the other hand, traditional beliefs surrounding childbirth, coupled with misconceptions and fears of medical institutions, have acted to maintain the reliance on home births in Malawi. In a study conducted by Seljeskog, Sundby, and Chimango (2006), in Mangochi, Malawi, older women were considered knowledgeable on matters regarding pregnancy and their advice was listened to. Fear of having an operation on the other hand, was mentioned as a reason for not going for a hospital delivery. Results from a study conducted in Benin found that women giving birth unassisted were admired (Andaleeb, 2000).

Perceived Barriers

Most maternal and neonatal deaths take place at home, beyond the reach of health facilities. Current international policy emphasizes the provision of skilled birth attendants and improved obstetric services as key interventions to reduce maternal mortality and morbidity (Costello, Osrin, & Mandhar, 2004). Sri Lanka and Malaysia reduced mortality by ensuring that all deliveries, whether at home or in a health facility, were attended by a trained midwife. Removal of financial barriers ensured free access for all. Both countries established quality assurance programs that held staff accountable (Parathmanath, 2003). Perceived barriers such as availability, accessibility, and quality of care can affect a woman's decision to utilize maternal health care services. The three main barriers identified in literature relate to inaccessibility unacceptability, and affordability of the clinic. These perceived barriers could negatively influence women against delivering in health facilities.

Accessibility

In this study accessibility refers to physical access to the health facility. The physical barriers include distance, walking time, lack of transport, cost of transport, and place of residence (Claeson, *et al.* 2001). Accessible services are the central goal of health systems (Gilson & Schneider, 2007). In a study conducted in Nepal Rural Districts, low proportions of health facility deliveries were associated with poor physical access (Simkhada, van Teijlingen, Porter, & Simkhada, 2006). In Uganda, access to maternity services was one of the influencing factors in choosing the place of delivery (Amooti-Kaguna & Nuwaha 2000). On the other hand, the provision of relatively accessible services did not guarantee their use, and other social and cultural

considerations governed decision-making. Ensor and Cooper (2004) mentioned important barriers, such as financial, geographical and cultural factors, which, combined with inadequate quality of care within the formal health sector, affect the demand for care–care seeking and serve to discourage service use.

Place of residence

In most developing countries access to safe motherhood services in rural areas is more limited than in urban areas. This issue is of particular importance to Malawi since 80 percent of its population lives in rural areas. There is significant difference between deliveries in urban and rural areas with 81.7% delivering in a health facility in urban areas and 50.5% in rural areas. Similarly, delivery by a skilled attendant is at 81.6% in urban areas and at 50.4% in rural areas (National Statistical Office and UNICEF, 2008). In a study conducted by Stephenson, Baschieri, Clements, Hennick, and Madise (2006), urban residence increased the likelihood of a woman reporting that her last child was delivered in a health facility. The results were similar to studies conducted by United Nations Population Fund (2004) and Onah, Ikeako, and Iloabachie (2006).

Distance

Distance to health units has been found to be a significant factor in deciding where women deliver, and more so distance to units where obstetric emergencies can be handled (Amooti-Kaguna & Nuwaha, 2000). In several studies geographical distance and lack of transport are cited as major barriers to utilization of delivery services (Seljeskog, Sundby, & Chimango, 2006; Chakraborty, Islam, Chowdhury, Bari, & Akhter, 2003; Mrisho, *et al*., 2007; and Tlebere, *et al*., 2007). In a study conducted by Nuwaha and Amooti-Kaguna (1999) on predictors of home deliveries in Rakai district of Uganda the

factors that favoured home deliveries were living more than five kilometers from a maternity centre and living more than one hour walking distance from a maternity centre. A study conducted in Malawi found that 90% of women preferred to deliver in a health centre, but 25% did, and distance was cited as the main obstacle (Lule, *et al.* 2005). In a study conducted in Kalabo, Zambia, 96% of women wanted to deliver in a health centre, only 45% did, citing distance as an obstacle (Stekeleburg, Kyanamina, Mukelebai, Wolfers, & Van Roosmalen, 2004). This means that distance plays a role on where women deliver.

On the contrary, some studies have shown that physical proximity does not necessarily increase use of health facilities (Duong, 2005). In Tanzania it was found that although some government health facilities were equally close to where a majority of women lived, and were free of charge, some women decided to go to more distant private health facilities because of the perceived good quality of care (Mrisho, *et al*. 2007). In Uganda, access to maternity services was one of the influencing factors in choosing the place of delivery. The provision of relatively accessible services did not guarantee their use. Other social and cultural considerations governed their use (Amooti-Kaguna & Nuwaha, 2000).

Walking time

Time taken walking to a distant health facility can discourage women from using the facility for delivery. A study conducted in Nepal found that living more than one hour away from a health facility is eight times more likely to lead to non-use of the facility for delivery (Wagle, et al. 2004). In a study conducted in Tanzania one woman reported

during focus group discussions that she decided to deliver at home because of 2 hours walking distance to a health facility (Mrisho, et al. 2007).

Lack of transport

Transport is a linkage for development and access to essential services such as delivery services (PDPZ, 2008). A study conducted in Kalabo, Zambia, found non-availability of transport to influence on women's choice of health facility delivery. In another study conducted by Mrisho et al. (2007) in five southern districts in Tanzania, lack of transport was reported in all the villages as a contributing factor for home delivery.

Acceptability

The utilization of labour and delivery services is closely linked to the quality of the services available. In order to enhance women's utilization of health facilities the issue that comes first is that if the quality of health care is not satisfactory then utilization of facilities cannot be boosted up (Hossain & Hoque, 2005; and Abraham, Jewkes, & Mvo, 2001). Patient's perception about service quality such as promptness of care, competence of health workers, perceived availability of equipment, abusive behavior, and friendliness of staff might shape confidence and subsequent behaviuors with regard to choice and usage of the available health care facilities (Lubbock & Stephenson, 2008). This is reflected in the fact that many patients avoid the system or avail it only as a measure of last resort (Andaleeb, 2001). It is therefore, vital that attention be paid to improving the quality of reproductive health care services in order that trust is developed in the service and that, women and men are encouraged to access the services.

In addition, quality is not only determined by technical capacity, but also by cultural appropriateness and the dynamic interaction between client and providers. WHO and other key partners support improving provider interactions, with women, men, and the community as key elements of quality. Furthermore, different studies have shown that improving providers' interpersonal and intercultural interactions with women can influence women's knowledge, perceptions of quality, and use of service. All health workers should be aware of the importance of good communication and that good counseling is also a lifesaving tool. Increased awareness and change in provider's practices can result in providing care to women and newborns rather than just curing (World Health Organization, 2004).

Like anywhere in the world, the perceived quality of care in delivery services in Malawi consists of perceptions about technical quality and the interpersonal communication with which it is delivered. Assessment of Emergency Obstetric Care (EmoC) in Malawi revealed that utilization of EmoC services was influenced by quality of care at health facilities. Some of the problems included: health facilities making unrealistic demands on the mothers (e.g. asking mothers to come with boots and shawls etc in preparation for the new baby); lack of technically competent staff; bad attitudes of health staff towards clients. Mothers tend to be neglected during labour and delivery, and sometimes to the extent that they deliver on their own. The shortage of drugs also contributes to poor quality of care (Ministry of Health, 2005). Furthermore, assessment of reproductive health within the Sector Wide Approach conducted in 2008 found that poor technical and perceived inadequate capacity of RH services characterized by poor staff attitudes towards patients, drug shortages, and poor infrastructure continue to reduce

the quality of RH services specifically delivery services (Ministry of Health, 2008). Similar results were found in several studies (Abraham, Jewks, & Mvo, 2001; Andaleeb, 2001; Hossain & Roque, 2005; Seljeskog, Sundby, & Chimango, 2006; and Waisa, Kemigisa, Kiguli, Naikoba, & Pariyo, 2008).

Unfriendly and uncompassionate attitude of health workers, particularly in public health institutions, often creates a considerable social and psychological distance between the population and institutions thereby limiting accessibility. This is partly why in developing countries, high risk pregnant women turn away from hospitals and labour at home with disastrous consequences. If the staff attitude is not positive or there are long waiting times, patients will not be encouraged to benefit from available services, no matter how excellent (Onah, Ikeako, & Iloabache, 2006). A study conducted by Geubbels (2006) on epidemiology of maternal mortality in Malawi found that women felt that quality of technical care in health facilities was better than at TBA's, however, staff attitudes were bad deterring women from utilizing maternal health care services (Geubbels, 2006). Kasenga (2009) had similar findings. Although women in his study felt that the hospital is an ideal place for delivery, women expressed fears of being neglected in the labour ward.

Another factor influencing home deliveries is that of privacy. In a study conducted in Nigeria on place of delivery among women who had antenatal care in a teaching hospital, privacy was identified as a reason preventing women from utilizing health facilities for delivery (Ekele & Tunau, 2007). Similar findings were documented in a study conducted by Hossain and Roque (2005) and Mrisho *et al.* (2007).

Furthermore, a study to identify factors associated with low utilization of ANC and hospital deliveries was conducted in Kano, Nigeria during October, 2000. One hundred and seven women were interviewed using questionnaires. Most women delivered at home with the assistance of family members. The most frequent reason given was ‘‘it is easier at home’’, an explanation that accounted for 26.2% of the responses. Almost all the women interviewed expressed their desire to deliver safely at home within the privacy of their rooms and in the company of their relatives who could understand their situation. Hospital delivery was seen as the unavoidable alternative; that is, unless it was absolutely necessary, women in the study area would not want to deliver elsewhere but at home. On further questioning, it was evident that the pregnant women in the study disliked certain practices associated with hospital delivery. These include the lithotomy position imposed on them instead of the squatting posture they were used to, lack of privacy, presence of a male staff attendant, and episiotomies conducted without plausible explanations. To avoid these inconveniences, in addition to transportation difficulties, the pregnant women in study area felt strongly ‘it is easier at home’’ (World health Organization, 2004)

Furthermore, in a study conducted by Kukulu and Oncel (2009) on factors influencing women’s decision to have a home birth in rural Turkey, several reasons were identified as preventing women from utilizing health facilities. This cross-sectional survey involved 393 women. The reasons why women chose to have a home birth were economic difficulties (69.6%), feeling more comfortable at home (49.7%), difficulties in reaching the hospital (19.6%), being afraid of the hostile behaviour of health-care

providers (18.6%), and trusting the person who would assist in the home birth (17.6%) (Kukulu & Oncel, 2009).

Affordability (economic barriers)

Increased economic opportunities have long been known to correlate directly not only with health status but also with access to and utilization of services (Say & Raine, 2007). A significant part of the population in Malawi is poor. About 60% of the population lives in absolute poverty (below $1 per day). Many rural women experience precarious health conditions and a large proportion of them are not able to access emergency obstetric care in time because they lack enough resources e.g., for transport (despite public facilities providing free maternity services) (Ratsma & Malongo, 2009). In Malawi, wealth plays a major role in the type of assistance a woman has access to during delivery. Women in the highest wealth quintile are almost twice as likely to be assisted by a skilled attendant (77%) compared to women in the lowest wealth quintile (43%) (National Statistical Office and UNICEF, 2008). Several other studies also found strong association between economic status and utilization of delivery services (Nigussie, Mariam, and Mtike, 2004; Yanagisawa et al., 2006; Mrisho, et al., 2007; Say and Raine, 2007).

The same notion is shared by Stephenson, Baschieri, Clements, Hennick, and Madise (2006). Their study was conducted in six countries and focused on contextual influences on the use of health facilities for child birth in Africa. The study found that with exception of Burkina Faso, there was a linear relationship between household amenities index and delivery in health facility in all countries. Relative to the women living in households with a higher index score, women in all other categories of the index

were less likely to report delivering their last child in a health facility. Furthermore, Paul (2000) in his study on utilization of health facilities and traditional birth attendants for child birth in rural Bangladesh showed that landholding size was strongly associated with the use of trained personnel in the study villages. Slightly more than 27% of all respondents' households with medium and large landholding used health centers for deliveries. Fathers employed in non-farm occupations also chose trained personnel for delivery more frequently than fathers who were farmers or members of other occupations. In this study in the absence of actual measures of income and wealth, the amount of land owned and paternal occupation were chosen as a surrogate indicators of the economic status of the respondent families (Paul & Rumsey, 2002).

In another study conducted by Lubbock and Stephenson (2008) on the utilization of health care services in the department of Matagalpa Nicaragua found that while services were free, indirect costs such as financing travel to and from the clinic, leaving work to seek care, and paying for prescribed medications were reported as considerable barriers to accessing care and treatment. Women also cited their need to prioritize spending money on food and school-related expenditures for children and other family members as an economic barrier to service utilization. Women's intentions to utilize prenatal and delivery care were often impeded by their inability to cover the cost of transportation (Lubbock & Stephenson, 2008). Time costs are also considered as determinants of hospital delivery. Time costs are opportunity costs of forgone wages, time spent on travel, waiting and treatment, and time spent by care taker (Amooti-Kaguna & Nuwaha, 2000; and Sseljeskog, Sundby, & Chimango, 2006).

Knowledge about Delivery Services

Information is another prime factor that influences choices. From the economic perspective, it is found that whenever there is an information problem in terms of uncertainty or asymmetry, choices are affected. In this study if the women in Thekerani have information gap in terms of importance of health facility delivery, they may not utilize the health facility for delivery and deliver in their homes. A study conducted by Lubbock and Stephenson (2008) revealed that women's knowledge and acceptance of maternal health care and healthy pregnancy practices were shaped by formal and informal communication within the community and household. Open communication with one's husband about the importance of seeking care facilitated a woman's utilization of services. It was evident that women who utilized delivery services had received information from health workers or community members regarding the services offered and the purpose of delivery services. Many women who utilized maternal health services believed it was important as means of reducing the risks of complications and ensuring the health of the unborn child (Lubbock & Stephenson, 2008). Similar findings were documented in a study conducted by Amooti-Kaguna and Nuwaha (2000).

In a study conducted by Hussain and Hoque (2008) on determinants of choices of delivery care in some urban slums of Dhaka city in Bangladesh, which utilized a sample of 78 women, the result showed that around 96% of the sample women had some form of information about modern delivery care services and 4% reported lack of information. In spite of the indication of no information problem, only 11.5% took delivery care at hospital. Thus information was not a serious constraint for choosing modern delivery care services (Hussain & Hoque, 2005).

Another aspect of knowledge involves knowledge about danger signs. In several needs assessment reports for Safe Motherhood Project (SMP) in Malawi community members with knowledge about danger signs were twice more likely to deliver in a health centre than those with minimal knowledge (Geubbels, 2006).

Perceived Benefits of Health Facility Delivery

The Health Belief Model postulates that a person's related behaviour depends on its perceived benefits of engaging in preventive action in this case delivering in health facilities to prevent complications associated with child birth process. Perceived benefits for facility delivery care are significantly related to delivery in a health facility (Stephenson et al. 2006). There were few benefits of health facility delivery identified in literature. In a study conducted in Ghana by Ankunda et al. (n.d.), health units were viewed as safe delivery sites. Availability of immunization services, provision of some free services, and proper management of complications with an effective referral system were viewed as important benefits for delivering in hospitals.

Similar findings were reported by Khan and Hazra (2010) in their study on increasing institutional delivery and access to Emergency Obstetric Care services in Rural Uttar Pradesh. The reported perceived benefits of hospital delivery were that women get good care and that both the mother and baby will be safe and women get incentives in form of money which was helpful as it subsidized their out-of-pocket expenses. Many women who utilize maternal health services believe it is important as means of reducing the risks of complications and ensuring the health of the unborn child (Lubbock & Stephenson, 2008). Similar findings were documented in a study conducted by Amooti-Kaguna and Nuwaha (2000). This perception of benefits of hospital delivery

is supposed to guide the women to take preventive action of delivering in health facilities with skilled attendance. On the other hand, a study conducted in Eretria reported that knowledge about the benefits of hospital delivery was high, but utilization was low (Michael, Kosia, Usman, Mufunda, & Nyarang'o, 2010).

Individual Perceptions

Individual beliefs about their susceptibility to disease as well as the seriousness with which they view the perceived threat of illness may influence utilization of delivery services (Onega, 2000). Each individual has his or her own perceptions of the likelihood of experiencing a condition that would adversely affect their health. Individuals vary in their perceptions of susceptibility to a condition and the nature and intensity of these perceptions may significantly affect their willingness to take preventive action. In this study the individual perceptions concern the women's beliefs about their susceptibility to complications associated with child birth process if they deliver at home (Bellon, Delgado, De Dios Luna, & Lardelli, 1999).

A woman's knowledge regarding pregnancy and delivery risks is an important factor contributing to her decision to seek care (Lubbock, & Stephenson, 2008). In a study conducted by Nigussie, Mariam, and Mitike (2004) showed that utilization of safe delivery services was about five times higher among those who previously had developed one of the life threatening obstetric complications. The implication is that significant proportions of mothers seek help from skilled birth attendants after developing obstetric complications and other traditional interventions have failed (Nigussie, Mariam, & Mitike, 2004). Studies from India and Iraq showed a lack of recognition of perceived

seriousness of health problems as a significant reason for not seeking health care that accounted for half of maternal deaths (Nigussie, Mariam, & Mitike, 2004).

Cues to Action

Contact with a skilled attendant could increase specific knowledge on childbirth via health education (Gabrysch & Campbell, 2009). In a study conducted by Lubbock and Stephenson (2008) many women stated that their knowledge of pregnancy and delivery practices came from health workers, prior experience, or other more experienced women in the community, especially their mothers, and mothers-in-law. Open communication with one's husband about the importance of seeking care also facilitated a woman's utilization of services (Gabrysch & Campbell, 2009). In addition, having access to information through modern media could influence women's knowledge about delivery risks and availability of services. In turn, this could motivate the women to deliver with skilled attendants (Gabrysch & Campbell, 2009). Several studies examine exposure to radio or TV and to family planning messages in the media and their association with increased use of facilities for delivery (Navneetham & Dharmalingan, 2002; Stephenson & Tsui, 2002; Bashieri, Clements, Hennink, & Madise, 2006).

Conclusion

This chapter has covered a review of previous research studies related to delivery services. The conceptual framework under the guise of the Health Belief Model has also been discussed and guided the literature review. What emerged clearly is that developing countries have a problem of low utilization of maternal health services, compared to developed countries. Several factors have been highlighted as preventing women from

utilizing the delivery services. These include; modifying factors in terms of demographic, sociopsychological factors such as culture, beliefs, and attitudes. Other factors relate to the perceived barriers in terms of acceptability, accessibility, and affordability.

It is also clear that there is limited information on Malawian literature. The available literature is from other African Countries and western countries. As such, this study has therefore attempted to identify the factors influencing home deliveries pertaining to the Malawian setting. In addition, most of the studies focused on factors influencing choice of place of delivery except for one study. This study has specifically identified factors associated with home delivery. Furthermore, there was limited literature on perceived benefits of health facility delivery and womens' perceived susceptibility to problems (risk factors) associated with child birth process. Women may be delivering in their homes as result of lack of perception on benefits of health facility delivery and risks associated with home delivery. This study attempted to identify the perceptions of women regarding the benefits of hospital delivery and individual perceptions regarding risks associated with homebirths. The next chapter discusses the research design and methodology used to identify the factors associated with home deliveries in Thekerani area.

CHAPTER THREE

Research Design and Methodology

Introduction

The purpose of this chapter is to describe the research design and methology used to identify the factors associated with home deliveries in Thekerani Area. The technical aspects of the study are also discussed to justify the quality of the procedure used.

Research design

A quantitative descriptive design was utilized for this study. A descriptive design was chosen in order to give a detailed description of factors which are associated with home deliveries. Descriptive study designs are designed to gain more information about characteristics within a particular field of study. Their purpose is to provide a picture of situations as they naturally happen. A descriptive design may be used for the purpose of identifying problems with current practice, making judgments, or determining what others in similar situations are doing (Burns & Grove, 2005).

Setting

Malawi is situated in South Eastern Africa and has a total population of 13,066,320 of which 6,365,771 are males (49%) and 6,700,549 are females (51%). This study was conducted in Thyolo (Thekerani area) in the Southern part of Malawi. Thyolo District has a population of 587,455 of which 279,979 are males and 307,476 are females (National Statistical Office, 2008) and they are served by 11 health centres, one district hospital, and one private hospital under CHAM. Thyolo has a total of 30,581 deliveries annually of which only 30% are conducted in health facilities and the rest at TBAs or

homes (Chinoko, 2009). However, National Statistical Office and UNICEF (2008) reports that 54% of the deliveries are conducted by skilled personnel

Specifically, the study was conducted at Thekerani Health Centre which is situated 60 kilometers to the South-west of Thyolo District. It takes more than two hours drive in a Foul Wheel Vehicle to get to the health centre. Thekerani Health Centre serves a catchment population of 22,728. Out of this population 5,227 were women within the reproductive age group (15-49 years). The site was chosen because it is a basic emergency obstetric care facility and it is situated in a rural area where most women deliver in their homes.

Target Population and Sample

The target population consisted of women who delivered at home within three years prior to first day of the interviews and were attending under-five, postnatal, or family planning clinics at Thekerani Health Centre. This sample was significant to the study because the women were expected to have fresh memories surrounding the circumstances of their last delivery. Furthermore, the time period enabled the researcher to recruit adequate subjects considering the sample size.

Inclusion Criteria

The inclusion criteria were as follows:

- Delivered at home within the last 3 years prior to the interviews.
- The women were in the child bearing age.
- The participants were those who could speak either the local language (Chichewa) or English which the researcher was conversant with for easy communication.

- The women were those who live in Thekerani area and not just a visitor so that the researcher had a clear picture pertaining to Thekerani situation.

Exclusion Criteria

The exclusion criteria were as follows:

- Mothers whose children were sick because it could be difficult for such women to concentrate on the discussions.
- Any other person other than the mother bringing the child to the clinic such as child minders, neighbours, and aunts were not recruited because they did not have knowledge concerning the circumstances surrounding the child's delivery.
- Furthermore, mothers who were sick or were mentally disturbed were not recruited because they could not be able to give proper information because of their disease condition and it was unethical to do that.
- Women who did not live in Thekerani area were not recruited for they could not give the researcher true picture of the situation.

Sampling and Sample Size

The researcher utilized convenience sampling to select 253 participants who were attending under-five, postnatal or family planning clinics at Thekerani Health Centre. The participants were those who had home deliveries and met the inclusion criteria. This method was chosen because the researcher wanted to get a research population which consisted of specific traits in this case, those with home births. This method is simple, practical, and cheap; and provided easy access to the subjects (Polit & Hungler, 1999).

The participants were recruited in such a way that the researcher introduced herself to the women who came for under-five, postnatal or family planning clinics and explained to them about the study before the clinic started. Thereafter, the researcher asked the women if they were women who have had a home delivery within three years prior to the survey and were interested to participate in the study. The women who showed interest were asked to meet the researcher one by one in a private room where details of the study were explained and an informed consent was obtained. Thereafter, numbers were assigned to those women who consented for easy identification. The child health card was also checked to ascertain the age of the child. The village health registers were utilized to determine women who delivered at home but had attended ANC at Thekerani Health Centre with the help of Health Surveillance Assistants. These were also recruited after obtaining an informed consent.

The sample size was arrived at by utilizing the following formula: $n=\frac{z^2\ p\ (1-p)}{e^2}$ by Lemeshow, Hosmer, Klar, and Lwaga (1990).

The meanings of the symbols are as follows:

- n=number (sample size)
- z=Confidence Interval in this case 95% CI was utilized
- p=estimated population
- e=desired precision or standard error and in this case 0.05^2 was utilized

From literature review, the estimated prevalence of home deliveries was calculated by the number of deliveries (684) for the year 2008 divided by the total number of antenatal attendees (2,613) for the same year which equaled to 0.24.

Utilizing the above formula, the sample size was calculated as follows:

$$n = \frac{1.96^2 = 3.8416 \times 0.24 \times (1-0.24=.76)}{0.05^2 = 0.0025} = 280.$$

Thereafter, a finite correction factor was utilized to get a sample of 253 women. The following is the formula which was utilized:

$$\frac{n=s}{1+s}$$

$$\frac{\text{Population}}{=280}$$

$$\frac{}{1+280}$$

$$\frac{}{2{,}613}$$

= 253 (World Health Organization, 2005)

Research Instrument

A structured questionnaire developed from the theoretical framework and the literature review was utilized for collecting data (See Appendix A and B). The questionnaire was selected because it enabled the investigator to be consistent in asking questions and the data yielded was easy to analyze. In addition, this method is the most powerful method to obtain information as the interviewer met each respondent face to face (Polit & Hungler, 1999). Furthermore, structured interviews have a list of specific questions. This means that the researcher did not deviate from the list or inject extra remarks into the interview. The respondents were interviewed directly to avoid misinterpretation and ensure clarity on all issues. Interview is the best method for collecting data, especially if the respondents cannot read and write (Polit & Hungler, 1999).

The instrument was divided into six sections. Section A was used to collect modifying factors in terms of demographic data, which involves personal details such as age, number of children, religion, and marital status etcetera. Section B on the other hand, contained questions on pregnancy and delivery as part of modifying factors. Section C sought information on cultural factors (sociopsychological variables) and section D on barriers related to a health facility and section E on barriers related to economic factors. The final section F sought to explore individual perceptions on risks associated with home delivery and to determine the women's perception on benefits of health facility delivery.

Validity and Reliability

The questionnaire focused on content validity which refers to the accuracy with which the instrument measures the factors under study. Content validity was concerned with how accurately the questions asked tended to elicit the response being sought. To ensure content validity the instrument was based on an extensive literature survey, local knowledge of the community and their customs and it was then given to a panel of experts which included experts in midwifery. It was also given to the supervisor for assessment and acceptance. In their subjective judgement (Polit & Hungler, 1999) the questionnaire was found to be valid. Additionally, the instrument was pilot tested on ten respondents at Mpemba Health Centre which assisted the researcher in evaluating and refining the questionnaire.

Reliability of the instrument was ensured by accurate and careful phrasing of questions to avoid ambiguity and leading respondents to a particular answer. Respondents were informed of the purpose for the study and the need to answer truthfully.

Furthermore, the questionnaire was pilot-tested to ensure that the wording, format, length, and sequencing of questions were appropriate. The pilot study also assisted in identifying any parts of the instrument that were difficult for the participants to understand or that may have been misinterpreted by them. After pilot study, feedback was obtained from the respondents to help refine the quality of the questions. In addition, the use of face-to-face interview and the use of a structured questionnaire were some of the methods which were used to improve reliability in the study.

Pilot Study

A pilot study was conducted in March, 2010 at Mpemba Health Centre. This clinic is similar to Thekerani Health Centre. Its purpose was to check the feasibility of the study in terms of resources, time, availability of subjects for the study and their willingness to participate, and the support required from others to facilitate data collection (Polit & Hungler, 1999). A pilot study was also done to test the accuracy and reliability of the questionnaire.

The health centre in-charge was approached for her permission for the researcher to conduct a pilot study. The researcher was welcomed and given a quiet, private room for the interviews. Explainations were given to the women who were attending under-five clinic and six women who delivered at home three years prior to the date of the pilot study were recruited based on the inclusion criteria and after a verbal consent was obtained from each of them. Time for interviewing each client was determined and the interviews took about half an hour. Following the pilot study some ambiguous questions were rephrased and those which were repeated were removed.

Data Collection

Data were collected over a period of 4 weeks from May to June, 2010. Data was collected by the researcher and four other trained research assistants who were trained for two days. Two of these were qualified enrolled Nurse/ Midwives working at Thekerani Health Centre. The remaining two research assistants were qualified Community Development Assistants. The data collectors were trained on the general objective of the study, technique of the interview, how to approach the respondents and keep confidentiality. Face-to-face interviews were conducted utilizing a structured questionnaire (See Appendix, A and B) and after getting informed consent from the mothers who met the inclusion criteria. Information about the intention of the study was explained to the women, how the information would be gathered and how it would be utilized. This was done in privacy on individual basis, in a quiet closed room where nobody could hear what was being discussed. The rooms were well ventilated for comfort. The researcher and the trained assistant data collectors were filling in the response made by the respondents. The interviews were conducted in vernacular language (Chichewa) so that the participants were free to talk without any language barriers. The participants were encouraged to ask questions where they did not understand. The interviews took about 30 to 45 minutes.

Data Management

Data management involved data cleaning which is the preparation of data for analysis by performing checks to ensure that the data are consistent and correct (Polit & Hungler, 1999). Data cleaning involved checking questionnaires for completeness, accuracy, and consistency. Questionnaires were reviewed soon after interviews to ensure

completeness of responses. Incorrectly filled or questionnaires with missed information were sent back to the respective data collectors for correction. This was done to maintain the quality of the data. Further editing of the data occurred after data entry by running frequencies and checking for out of range responses.

The other aspect of data management involved data storage. All filled questionnaires were kept in a locked cupboard with key access restricted to the researcher only. This was done to protect it against unauthorized or unlawful processing of the data and against accidental loss, destruction of, and damage to the data. Electronic data was protected using a secret password which was only accessed by the researcher. This was done to protect the confidentiality, integrity, and availability of information.

Data Analysis

Data was entered and analyzed using Statistical Package for Social Sciences (SPSS) version 16 with the help of a professional statistician. The Laptop which was used to enter and process the data was secured by an ID number (Identifying number) which was accessed by the researcher and the authorized statistician. Analysis was done according to the objectives of the study. Descriptive statistics such as means, frequencies, and percentages were used to analyze the data. Data was presented in tables and charts.

Ethical Consideration

It is crucial that all researchers are aware of research ethics. Ethics relate to two groups of people: those conducting research, who should be aware of their obligations and responsibilities, and the researched that have basic human rights that should be

protected (Pera & Van Tonder (1996). The study should ensure that participants are treated with justice and that they are protected from any form of harm. Protection of the rights of human subjects should be exercised when humans are used as study respondents (Polit & Beck, 2004). Such being the case, written permission to conduct the study was obtained from Thyolo District Hospital (See Appedix F). The proposal was also sent to College of Medicine Research and Ethics Committee (COMREC) for approval (see appendices E).

Participants as autonomous individuals had the right to choose to either participate in the study or not. Participants were allowed to act independently by giving their informed consent to participate in the study without coercion. Before carrying out the study, detailed explanations of the objectives of the study were given to the participants in the language that they were conversant with in this case chichewa. Criteria for inclusion on the study were explained to them. Voluntary permission to participate in the study was sought from the respondents. They were explained to that they were free to withdraw from the study any time they felt like without any reprimand or being denied a service, free to answer questions or not and that they have the right to avoid being made uncomfortable. At the end of the explanation participants were asked to sign a consent form before participating in the study (See Appendix C & D).

Furthermore, the participants were ensured of confidentiality and anonymity of information in that no identifying information obtained was made public and by publishing the information in a way that would not relate to the participants. Anonymity was also achieved by not putting names on the questionaires but instead code numbers were utilized. Information given by participants was kept secret. At the end even the

researcher did not link any information to any subject. Filled questionnaires were kept in a locked cupboard and the keys were accessed by the researcher only. Electronic records were password protected to protect them against unauthorized access. Respondents were reassured that recorded information will be destroyed upon completion of the study. Furthermore, their right to privacy was promoted by face-to-face interviews in quiet, private, closed offices where no third person could hear or tape the conversation. In addition, the assistant data collectors were trained for 2 days to maintain confidentiality.

Avoiding harm is another basic human right to be considered when conducting research on human subjects. Risks that can be encountered in research include physical, psychological, emotional, social, and financial ones. The probable risks for this research included psychosocial risks in terms of long periods of waiting and the participants might have been uncomfortable with some of the questions and topics about their personal situation. These risks were minimized by interviewing the participants within the agreed time period and were free not to answer questions which they were not comfortable with. Physical comfort was also ensured by conducting the interviews in well ventilated rooms.

Furthermore, justice is another basic human right which relates to fair treatment of those in the study (Burns & Groove, 2005). Justice was insured by selection of the sample following guidelines of inclusion criteria. In addition, the participants were allowed to make informed choices to participate in the study and that they were free to withdraw any time.

Lastly, participants were asked to sign consent form after full explanations regarding the intention of the study, procedure and duration of the study, methods of data collection, how the data will be used and the benefits and that there would be minimal

risks as discussed above in participating in the study. This is a legal requirement before one can participate in the study.

Conclusion

This chapter has discussed the design and methodology used in the study. The next chapter presents the findings of the study before taking a step further of discussing them in chapter four.

CHAPTER FOUR

Results

Introduction

This chapter presents the findings of a study exploring factors associated with women who select a home delivery in Thekerani area in Thyolo District in Malawi. The objectives of the study were to identify modifying factors in terms of demographic and sociopsychological variables that influence home deliveries, determine women's perceived benefits of health facility and home delivery, explore individual perceptions of women associated with home deliveries, assess women's perceived barriers to health facility delivery associated with home delivery, identify the existence of cues to action that could motivate the women to deliver in health facilities with skilled attendance. The results will be presented in line with the objectives. The results focus on modifying factors, perceived barriers associated with home deliveries. Focus will also be on perceived benefits of a hospital and a home delivery, perceived susceptibility (risk factors) associated with home deliveries. Tables, charts, and summary statistics were used to present the findings.

Modifying Factors Associated with Home Deliveries

Information on modifying factors was organized into demographic, obstetric, and delivery characteristics of the mothers, sociocultural factors in terms of decision making processes in the family and traditional beliefs regarding pregnancy, labour, and delivery.

Demographic Characteristics of the Mothers

Table 1 contains the detailed demographic characteristics of the mothers and their spouses. A total of 253 mothers participated in the study. The results indicate that 80% (n=203) of the mothers were in the age group of 20-35 years with mean age of 29 years and age range of 13-44 years. Seventy-eight percent (n=197) were Khokhola by tribe. In terms of the marital status of the mothers, 74% (n=187) were married, 16% (n=41) were divorced, and 2% (n=4) were single. Christians from a variety of denominations accounted for the majority of the mothers. Seventh Day Adventists (SDA) were the largest percentage with 40% (n=102) and the smallest percentage, 11% (n=270) were Ana Amulungu. Sixty-eight percent (n=173) of the mothers attended school and sixty-two percent (n=158) of these mothers had some primary school education. Those with no education accounted for 32 percent (n=80). The findings further indicated that 44% (n=112) of the mothers were house wives while only two women were employed as teachers. On the other hand, the mothers indicated that 64% (n=162) of their husbands had some primary education and that 50% (n=126) were farmers.

Demographic factors for this study specifically related to child birth as such included number of living children and parity. The mother's parity ranged between one and twelve with the mean parity of 6. A large percentage, 67% (n=170) were between para 2 and para 4 while 6% (n=15) were para 1.Similarly, the number of living children ranged between one and twelve. A large percentage, 68% (n=172) had between two and four children while 20% (n=51) had between five and twelve children. The mean number of living children was 5.7.

Table 1

Demographic Characteristics of the Mothers and their Spouses: n=253

Characteristics	Frequency	Percentage
Age		
20-35 years	203	80
36-44 years	35	14
13-19 years	15	6
Marital status		
Married	187	74
Divorced	41	16
Widow	21	8
Single	4	2
Tribe		
Khokhola	197	78
Lomwe	31	12
Sena	7	3
Yao	5	2
Chewa	5	2
Other	8	3
Religion		
SDA	102	40
Roman Catholic	48	19
CCAP	32	13
Ana Amulungu	27	11
Others	44	17
Education		
Some primary school	129	51
Completed primary school	29	11
Some secondary school	14	6
No education	80	32
Occupation		
House wife	111	44
Farmer	107	42
Business	33	13
Teacher	2	1

Table 1 Continued

Parity		
2-4	170	67
5-10	68	27
1	15	6
Number of living children		
2-4	172	68
5-12	51	20
1	30	12
Husband's educational level		
Some primary school	131	52
Completed primary school	31	12
Some secondary education	32	13
Completed secondary school	9	4
Husband's occupational status		
Farmer	126	50
Piece work	48	19
Business	38	15
Unskilled manual worker	26	10
Skilled manual worker	7	3
Teacher	3	1
Others	5	2

It should be noted that 19% of the mothers did not answer the question regarding husband's educational level.

Antenatal Attendance

Table 2 summarises information on antenatal care. Variables of interest for antenatal care were antenatal clinic attendance, reasons for antenatal attendance and reasons for not attending antenatal clinic. The results indicated that 83% (n=209) of the mothers attended antenatal clinic. A variety of reasons were given for antenatal attendance. Fifty-one percent (n=107) attended antenatal clinic to know the growth and progress of pregnancy. Furthermore, the mothers who did not attend antenatal clinic were

asked the reasons for their non attendance of antenatal clinic. Thirty-six percent (n=18) indicated that they saw no need to attend and a smaller percentage of the mothers (8%, n=4) reported lack of money. Details are presented in Table 2.

Table 2

Information on Antenatal Care of the Mothers: n=253

Variable	Frequency	Percentage
Antenatal attendance		
Yes	209	83
No	44	17
Reasons for antenatal attendance		
To know the growth and progress of pregnancy	107	51
To know if everything was normal	49	24
To obtain drugs and immunizations	28	13
To have problems diagnosed and treated	12	6
To obtain an antenatal card which could act as a precautionary measure if they were to deliver in a health facility	12	6
Reasons for not attending antenatal Clinic		
See no need	18	36
Long distances to the health centres	14	28
Poor midwives attitudes	6	12
Lack of money	4	8
Others	8	16

Labour and Delivery

Mothers were asked whether they received any advice on place of delivery and the source of advice. They were asked to indicate if the home delivery was planned and if it was planned to indicate the reasons for planning to deliver at home. Information was sought regarding delivery

attendants and the reasons for choosing that attendant. In addition, mothers were asked if they experienced any problems during and after delivery and if they sought care for each of the reported problems. Information was sought from the mothers regarding prior experience for home delivery The results indicated that majority of the mothers, namely, 87% (n=216) were advised to deliver at a health facility. Seventy percent (n=177) received the advice from Nurse/Midwives. Furthermore, 61% (n=155) indicated that they had not planned to deliver at home however, 70% (n=178) delivered at home. Those who had actually planned to deliver at home accounted for 39% (n=98). Various reasons were indicated to have influenced the mothers to deliver at home. Family involvement was identified by 36% (n=14). Thirty-four percent (n=85) of the mothers were assisted in delivery by their mothers. The most commonly cited reason for choosing to be assisted by a particular attendant was that the concerned attendant was considered knowledgeable (57%, n=143).

Furthermore, mothers were asked if they experienced any problems during or after delivery. A majority of the women, namely, 77% (n=194), denied experiencing any problems. For those who experienced problems the most commonly cited problem was heavy bleeding in 42% (n=25) of the mothers. In addition, the mothers (n=50) who reported to have experienced problems were asked if they sought care for each of the reported problems and to indicate the source of care. Eighty percent of the mothers (n=40) sought care from a health facility.

On the other hand, the mothers were asked if they had prior experience with home deliveries. Results show that majority of the mothers namely, 61% (n=152) did not have prior experience regarding home deliveries.

Table 3

Delivery Characteristics of the Mothers: n=253

Variable	Frequency	Percentage
Advice on place of delivery		
Yes	216	87
No	37	13
Source of advice		
Nurse/Midwife	177	70
TBA	27	11
Family members	10	4
Medical Assistant	4	2
Doctor	3	1
Neighbours	3	1
Others	29	11
Whether the home delivery was planned or not		
Not planned	155	61
Planned	98	39
Delivery place		
TBA's home	178	70
Woman's home	75	30
Reasons for planning a home delivery		
Family involvement	52	53
Feeling more comfortable at home	11	12
Economic difficulties	10	11
Convenient	8	8
Being afraid of the hostile behaviour of health personnel	7	6
Privacy	4	4
Choosing the birth position	2	2
Personalized care	2	2
Easy to maintain control of the process	1	1
less intervention	1	1

Table 3 Continued

Delivery attendants		
Mothers	85	34
TBA	78	31
Family member	33	13
Mother-in-law	25	10
No attendant	14	5
Husband	6	2
Others	12	5
Reasons for choosing the attendant above		
Considered knowledgeable	143	57
Trust in the person who conducted the delivery	79	31
TBA's are handy and near places of abode	31	12
Problems experienced during/after delivery		
Yes	194	77
No	59	23
Reported problems		
Heavy bleeding	25	42
Infection	19	32
Others	15	26
Source of care For the reported problems		
Health facility	40	80
TBA	6	12
Others	4	8
Prior experience regarding home deliveries		
No	152	61
Yes	101	39

Cultural Factors (Socio-psychological Variables)

Other modifying factors perceived as of being important were cultural variables. These include decision making processes in the family, a person having a final say on issues concerning the family, and traditional beliefs regarding pregnancy, labour, and delivery.

Decision-making processes in the family

Majority of the mothers reported that the decision for the woman to deliver at home was made by the mother herself (51.0%, n=129) secondary to sudden onset of labour. Husbands were identified by 30% (n=75) while couples decision accounted for 11% (n=29). Figure 1 illustrates the decision-making processes in the family.

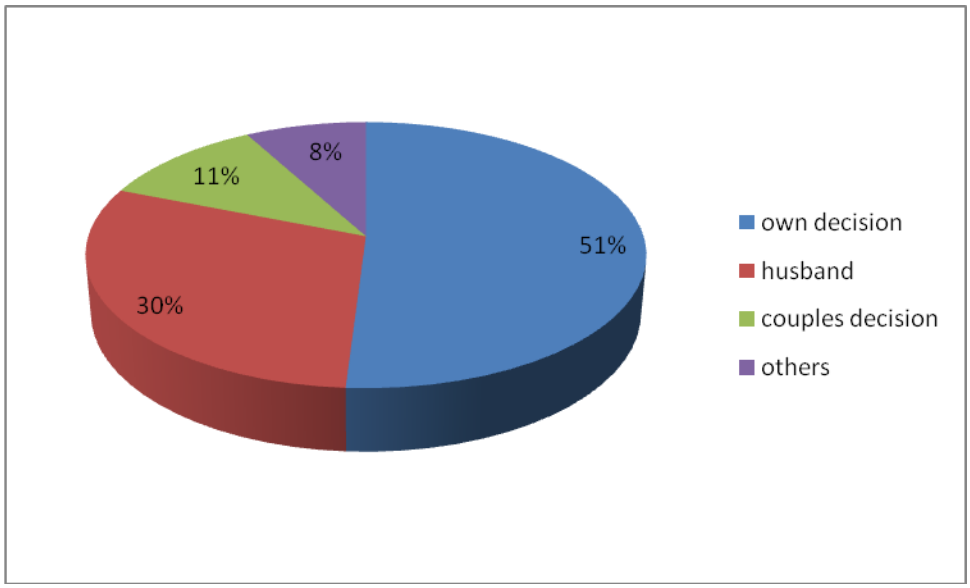

Figure 3: Decision-making Processes in the Family

Several reasons were given as to why the women complied with the decision made by individuals mentioned above. The majority of the mothers reported that because

he/she is someone in authority (39%, n=98). Other reasons include the following: he/she is a money-maker (31%, n=79); relatives and TBAs are handy and near places of abode, (20%, n=51); and fear of losing relationships (10%, n=25).

The mothers were further asked who, in their family, has a final say on issues concerning the family. The results indicate that 61% (n=154) felt it is the job of husbands to make decisions concerning issues affecting the family. Twenty percent (n=52) of the mothers stated that they make individual decisions because they were single, widowed or divorced. Couples decision was reported in 17% (n=42) of the mothers. Two percent (n=5) of the decisions was made by mother-in-law.

Traditional beliefs regarding pregnancy, labour, and delivery

In terms of traditional beliefs which are associated with pregnancy, labour and delivery. Thirty-one percent (n=78) of the mothers indicated that in pregnancy and delivery, older women are trusted and considered knowledgeable. A similar 31% (n=78) indicated that deep rooted beliefs in herbs such as mwanamphepo influence home deliveries. Details are outlined in Table 4

Table 4

Traditional Beliefs Regarding Pregnancy, Labour and Delivery

Traditional Belief	Frequency	Percentage
In delivery older women are trusted and considered knowledgeable	78	31
Deep rooted beliefs in herbs as part of pregnancy care	78	31
Pregnancy and delivery are natural phenomenon requiring no interventions	48	19
Others	49	19
Total	253	100

Women's Perceived Barriers to Health Facility Delivery Associated with Home Deliveries

The perceived barriers were looked into in terms of factors related to the health facility which influence the women to select a home delivery. These include time taken to reach Thekerani Health Centre, means of transport used, acceptability of maternal health care services in terms of attitude of health workers with regard to serving women in labour, and problems that women face if they are to deliver in health facility. Information was also sought to determine reasons for no hospital delivery in the recent pregnancy. Detailed results of the above variables have been presented in the table below.

Table 5

Perceived Barriers that could influence women to deliver at home: n=253

Varible	Frequency	Percentage
Distance/Travel time		
More than one hour	192	78
25-60 minutes	49	19
Less than 25 minutes	8	3
Means of transport		
Walk by foot	251	99
Own bicycles	2	1
Reasons for no health facility delivery in recent pregnancy		
Too far to clinic/hospital	127	49
Sudden onset of labour or short labour	64	25
Family did not feel it necessary	39	15
Religious barriers	15	6
Long waiting time before being attended to	12	5
Attitude of health workers with Regard to serving women in labour		
Understanding	156	62
Rude and not receptive	34	14
Unconcerned	26	10
Neglegent	21	8
Did not respond	16	6
Problems experienced by women When delivering at a health facility		
Hostile behaviour of health personnel	102	40
Women are left to deliver on their Own without supervision	96	38
No drugs and supplies	25	10
Did not respond	30	12

Table: 5 Continued

Variable	Frequency	Percentage
Financial Challenges Faced if Mothers are to Deliver at a Health Facility		
Lack of financial support while in hospital	131	52
Travel costs to and from the clinic	51	20
Women's reliance on male partners for financial assistance	41	16
Leaving work to seek care	17	7
Opportunity costs in terms of long waiting time	13	5
Total	253	100

Perceived benefits of Hospital Delivery

Information was sought from the mothers to determine what they perceived were benefits associated with health facility delivery. More than half of the mothers (60%, n=151) stated that nurses are supportive when there are complications. The rest of the mothers reported that you get nets, medication, and immunizations for the baby (22%, n=55); you get blood test and get counseling (7%, n=17); and you get material assistance such as pieces of clothes (zitenje), soaps, and shawls (5%, n=13). Those who did not identify any benefits accounted for 4% (n=12) and other reasons accounted for 2.0% (n=5).

Perceived benefits of Home Deliveries

Regarding benefits of home deliveries, 60% (n=151) indicated that there are no benefits and that one can lose their life and that of the child. Some women (24%, n=61) reported that there are benefits to a home delivery namely, no costs in terms of transport

and hospital requirements such as basins, plastic paper, and razor blade. Thirteen percent (n=34) indicated family involvement while 3% (n=7) indicated use of herbs as some of the benefits for home deliveries.

Individual Perceptions

Nearly half of the mothers reported that a woman can die if there are complications and then there is no doctor to help (47%, n=118). Other reported risks were excessive bleeding (30%, n=76); and retained products of conception (6%, n=16). Other risks accounted for 8% (n=20). Those who did not respond accounted for 9% (n=23).

Options Available about Possible Places of Birth

Information was sought to determine if the mothers knew other possible places of delivery apart from where they last delivered. All the mothers identified more than one possible place. Forty-seven percent (n=119) reported the health centre, followed by hospital with 33% (n=83); TBA (11%, n=28); and home (9%, n=23). Figure 3 below illustrates possible places of delivery as indicated by the mothers.

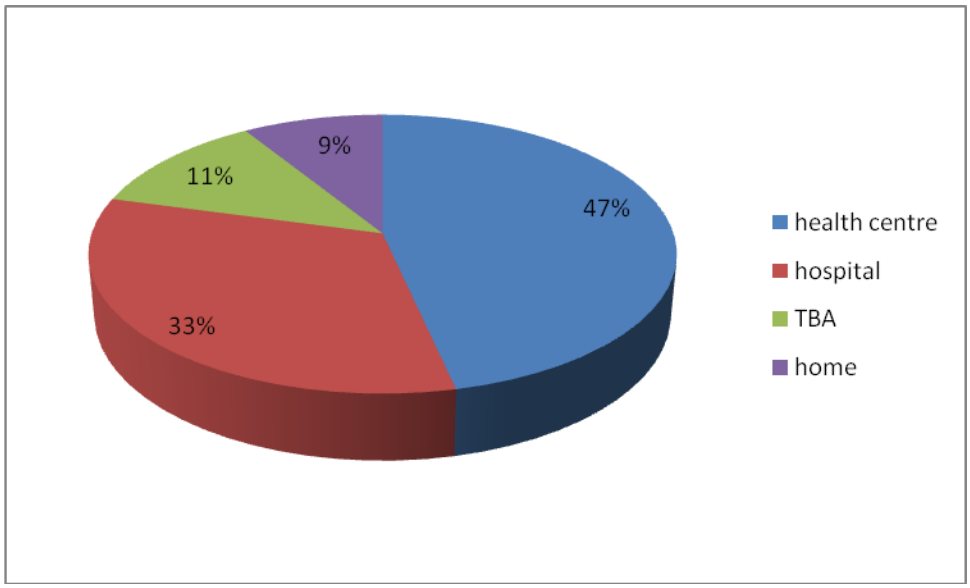

Figure 4: Options available about possible places of delivery

Conclusion

In this chapter, the findings of the study have been clearly presented. The next chapter discusses the findings of the study; implications for practice, nurse/midwifery education, management and research; and recommendations based on the conclusions drawn.

CHAPTER FIVE

Discussions, Conclusions and Recommendations

Introduction

This quantitative descriptive study investigated factors associated with home deliveries in Thekerani area in Thyolo District. The objectives of the study were to: identify modifying factors in terms of demographic and sociopsychological variables associated with home deliveries, determine women's perceived benefits of health facility and home delivery, explore individual perceptions of women associated with home delivery, assess women's perceived barriers to health facility delivery associated with home delivery, and identify the existence of cues to action that motivate women to deliver in health facilities with skilled attendance. The sample comprised of 253 women who experienced a home delivery in recent pregnancy within three years prior to the survey. This chapter aims at interpreting and discussing the results.

The study identified several factors which may assist in modifying women's perception and influence women's likelihood of not complying with the advice of health professionals of delivering with skilled attendance. These include: demographic, sopsychological, obstetric, and economic factors as well as cues to action. In addition, the three main perceived barriers to health facility delivery identified in the study were economic barriers in terms of lack of financial support while in hospital; inaccessibility of delivery services in terms of long walking distance of more than 1 hour, worsened by lack of transport to the clinic, and unacceptability of delivery services in terms of poor staff attitudes manifested by hostile behaviour of health personnel and women being left to deliver on their own without supervision. These identified factors will be discussed in

detail in this chapter. Recommendations arising from the findings of this study will be made on how the services can be improved in order to improve the uptake of women for health facility delivery.

Modifying Factors that are Associated with Women who Deliver at Home

Modifying factors associated with home delivery include demographic factors such as age, tribe, religion, education of the women and their spouses, occupation of the women and their spouses, marital status, parity, and number of children; obstetric and delivery factors such as antenatal attendance, delivery attendant, problems experienced during delivery ; socio-psychological variables such as social class, peer group pressure, family pressure, culture, attitudes, and beliefs; perceived benefits of health facility delivery and individual perceptions regarding risks associated with home deliveries. These variables create positive or sometimes negative influences towards the utilization of delivery services in health facilities.

Demographic Characteristics of Mothers

A number of socio-demographic characteristics of the individuals affect the underlying tendency to seek maternity care or not (Addai, 2000). In this regard, good examples are maternal age, education, occupation, and parity. These findings are related to the theories related to the utilization of maternal health care services. The Health Belief Model (HBM) proposed that age, sex, occupation, education, religion among others are modifying characteristics which may influence women's perceived need to utilize maternal health services. Since the study was dealing with pregnancy, labour, and delivery, the HBM was adapted to include parity and number of living children as part of demographic factors.

Age of mothers

The results of this study indicated that 80% of the mothers were in the age group of 20-35 years with the mean age of 29 years. It can be concluded that young mothers in the age group of 20 to 35 years generally deliver at home in Thekerani area. This result was consistent with the finding of a study conducted in Iraq where women of age 25–34 years were 22% more likely be assisted by TBAs during delivery (Siziya, Muula, & Rudatsikira, 2009). These were young mothers. Studies indicate that young mothers are more likely to deliver at health facilities (Yaginasawa, Oum, & Wakai, 2006). In a study conducted by Mrisho, *et al.* (2007) on factors affecting home deliveries in rural Tanzania, younger mothers were more likely to deliver at a health facility than other age groups. However, the results of this study indicate the opposite. Young mothers were the ones in majority delivering at home contrary to what other studies had found. This could be attributed to the fact that majority of these were parity 2 or more. Such being the case other demographic characteristics might have played a role for this finding. This should serve as a warning to health personnel and is a setback to the improvement in skilled attendance.

On the other hand, 14% (n=35) were mothers aged between 36-44 years. This small percentage can be attributed to the fact that older women may be encouraged by health workers to deliver in a facility since older age is a biological risk factor. The results further revealed that 6% were mothers in the age group of 13-19 years. This is an indication that women in that age group were not mostly delivering at home. Younger mothers in the age of 19 years below are encouraged to deliver in health facilities because their age is one of the obstetric risk factors. Mpembeni et al. (2009) commented that

younger women are just starting child bearing and are told to be in a high risk group and so they tend to fear home deliveries. Similar findings were reported by Mpembeni et al. (2009), and Yanagisawa, Oum, & Wakai (2006). On the other hand, teenagers may choose to deliver at home because of fear of being treated badly by health care personnel.

Tribe

Seventy-eight percent of the mothers were Khokhola by tribe. This is the main tribe in Thekerani area. The rest were a mixture of other tribes such as Lomwe, Yao, Chewa, and Sena. However mixed these tribes were there is no significant difference in most of their cultures. Most of them come from the Southern Region which follows the same matrilineal culture except the sena who are patrilineal. Matrilineal culture gives more powers to uncles and mothers to make decisions. However, when it comes to issues related to delivery, the mother of the laboring woman and her husband take charge despite which lineage of culture is followed. In this study, apart from women making decisions to deliver on their own due to sudden onset of labour or short labour, husbands played a role in making the decisions for the wife to deliver at home. It should also be noted that majority of the home deliveries were conducted by the respondent's mother.

Religion

The influence of religion in shaping attitudes and awareness of individuals is indicated in a significant amount of literature. Rani and Bonu (2003) identified religion as having potential influences in seeking care. The majority of the mothers were Christians belonging to Seventh Day Adventist (SDA) Church. This is because SDA is the main religion in Thekerani area. There were a variety of religions. Church of Ana Amulungu

which accounted for 11% is of particular importance because its members were not allowed to use health facilities. In addition, 6% indicated religious barrier as a factor associated with home deliveries. Understanding the linkage between religion and utilization of maternal health services in the context of the Sub-Saharan Africa is particularly relevant given the overriding influence of religion on the social fabric of Africans and unacceptably high levels of maternal mortality in the region. As African countries struggle to achieve their stipulated reductions in maternal and child mortality levels by two-thirds by 2015 as indicated in the Millennium Development Goals, the need to examine the complex of macro- and micro-factors that affect maternal and child health services cannot be underestimated.

Education of mothers and their spouses

The results of this study revealed that levels of education among the women in the area are very low. Fifty-one percent of the mothers had some primary education. Thirty-two percent did not attend school. Given the nature of this sample where all mothers resided in Thekerani area which is a rural area, it is not surprising that 51% of the mothers had some primary school education only. Educational status of women in the rural areas is very low in Malawi (National Statistical Office and UNICEF, 2008). This factor is very important in determining where women deliver. The more educated the woman, the more likely she is to have delivered with the assistance of a skilled attendant (77%), compared to 42% of women with no education (National Statistical Office and UNICEF, 2008).

In a study conducted by Chakraborty, Islam, Chodhury, Bari, and Akhter (2003) on determinants of the use of maternal health services in rural Bangladesh, the level of

mother's education was seen to influence maternal service utilization. The percentage of women who sought care from qualified medical personnel increased from 26.5% among illiterate women to 34.6% among women with secondary education. Therefore, this finding is in line with most maternal and child health studies (Niguse, Mariam, & Mituke, 2004; Makoka, 2009). This may be related to the economic factor since when the woman or her husband lacks or has poor formal education, the occupational status, social class, and family income are likely to be low. This means that women have to be encouraged to be educated up to a higher level.

There are a number of explanations that speculate as to why education is a key determinant of demand. It is argued that education can have an empowering effect on women by broadening their horizons and making them aware of available opportunities. Education helps women to take personal responsibility for their health and that of their children. The educated family, in general, has better access to resources than the less educated family. Also educated families are more knowledgeable of health practices that may influence the use of safer and more comfortable child birthing procedures in hospital settings (Ratsma & Malongo, 2009; Paul & Rumsey, 2002; and Stephenson, Baschieri, Clements, Hennick, & Madise, 2006).

Furthermore, there are multiple potential pathways that could explain why "maternal education is consistently and strongly associated with all types of health behaviour. These include increased knowledge of the benefits of preventive health care and awareness of health services, higher receptivity to new health-related information, socialization to interact with formal services outside the home environment, familiarity with modern medical culture, access to financial resources and health insurance, more

control over resources within the household and wiser spending, more egalitarian relationship and better communication with the husband, more decision-making power, increased self-worth and self-confidence, better coping abilities and negotiating skills as well as reduced power differential towards health care providers and thus better communication and ability to demand adequate services (Gabrysch & Campbell, 2009).

On the other hand, the study revealed that 52% of the mothers' spouses had some primary education. This means that the husbands had low levels of education. Most studies that consider husband's education find that higher education is associated with skilled attendance at delivery, although the effect is often less than that of the mother's own education. Husband's education is associated with occupation and with household wealth. Some studies even use husband's education as their measure of household socioeconomic status. In addition, educated husbands may be more open toward modern medicine, aware of the benefits of skilled attendance, and more able to communicate with health workers and demand appropriate care, as described for women's education. They may also put fewer constraints on their wives' mobility and decision-making, thus facilitating care-seeking.

Occupation of mothers and their spouses

Women's involvement in gainful employment is one of the important factors positively affecting the use of medical care. An increased range of movement and better access to information are suggested as reasons why formal work may promote women's use of health facilities for childbirth (Gabrysch & Campbell, 2009). In addition, women who are working and earning money may be able to save and decide to spend it on a facility delivery. This empowers women to take part in decision-making processes about

health care services. Forty-four percent of the mothers in this study were housewives with no formal employment and 42% were subsistence farmers. This lack of employment is of particular importance since it limits the empowerment of women to make decisions to deliver at a health facility. In Malawi, many rural women experience precarious conditions and a large proportion of them are not able to access emergency obstetric care in time because they lack enough financial resources for transport (despite public facilities providing free maternity services) (Ratsma & Malongo, 2009). Similar findings were reported by Chakraborty et al. (2003). This is the reason why 20% of the mothers indicated travel costs to and from the clinic as a financial barrier from utilizing delivery services in health care institutions. This suggests that improving women's access to income might strengthen their bargaining power to influence place and timing of delivery.

Similarly, the majority of the women's husbands were subsistence farmers which could prevent them from sending their wives to health facilities due to lack of financial resources. This finding is similar to a study conducted by Chakraborty, Islam, Chodhury, Bari, and Akhter (2003) where women whose husbands worked in business or services were more likely to be users of modern health services than women whose husbands worked in agriculture or as day laborers. This probably not only reflects their low level of education but also the seasonal nature of their income. This is the reason the majority of women indicated lack of financial support while in hospital as one of the financial barriers to utilization of delivery services in health facilities. However, one study conducted in Turkey found that husband's occupation was not important for the use of antenatal and safe delivery care (Celik & Hotchicks, 2000).

Marital status

The majority of the mothers (74%) were married. In Malawi, most of the decisions in the homes are made by husbands including those related to their wives health (National Statistical Office and UNICEF, 2008). In this case, since most of the women were married, it is likely that their husbands made decisions for them to deliver at home. Moreover, the study results indicate that husbands were the second most common decision makers for the wife to deliver at home apart from the decision made by the woman herself due to sudden onset of labour. Furthermore, the study results indicate that husbands (61%) had a final say on most of the issues concerning the family. Therefore, this study concludes that most of decisions were influenced by the husbands. This finding concurs with the study conducted by Seljeskog, Sundby, and Chimango (2006) where husbands were mentioned as decision makers regarding whether the woman should deliver at a health facility or not. This means that any strategies encouraging women to deliver at a health facility should target men who influence their decisions.

Studies have reported that marital status may influence the choice of delivery place, probably via its influence on female autonomy and status or through financial resources. Single or divorced women may be poorer but enjoy greater autonomy than those currently married. Young single mothers may be cared for by their natal family, which may encourage skilled attendance, especially for a first birth (Gabrysch, 20009). On the other hand, single mothers may be stigmatised and prefer to deliver at home because they anticipate a negative provider interaction (Duong, Binns and Lee, 2004). One study looked separately at monogamously married, polygamously married, never-married, and formerly-married mothers in six African countries. Results vary from

showing no association (Tanzania, Ghana, Burkina Faso), to monogamous women seeking care more often than the other groups (Ivory Coast and Kenya), to formerly-married and polygamous women seeking more care (Malawi) (Stephenson, Baschieri, Clements, Hennik, & Madise, 2006).

Parity

The majority of the mothers were multiparous women with the mean parity of 6. This finding is in agreement with several studies which found strong association between parity and use of health care services (Paul & Ramsey, 2002; and Stephenson, Baschieri, Clements, Hennick, & Madise, 2006; Gage, 2007; Gabrysch, 2009). The studies indicated that as birth number increased the chance of giving birth at health institutions decreased, implying that more mothers tend to seek modern obstetric care for their first pregnancy than for the subsequent pregnancies. In a study by Mekonnen (2003) in Ethiopia, women with more than one child were 50% less likely to receive professional delivery care than parity one women. The greater confidence and experience of the higher parity mothers together with greater responsibilities within the household and child-care have been suggested as explanatory factors for their tendency to use services less frequently (Mekonnen & Mekonnen, 2002; Mekonnen & Mekonnen, 2003). In addition, women of higher parity can draw on their maternity experiences and may not feel the need to receive professional care if previous deliveries were uncomplicated (Gabrysch & Campbell**,** 2009)**.** Lastly, women's perception of risk is likely to be highest for their first as to compare with subsequent pregnancies. This implies that parity should be one of the criteria for targeting educational campaigns on the benefits of health facility delivery and the risks associated with home delivery.

Furthermore, only 6% of the women who delivered at home were primigravidas in this study. This can be attributed to the fact that first birth is known to be more difficult and the woman has no previous experience of delivery. Often a high value is placed on the first pregnancy and in some settings the woman's natal family helps her get the best care possible. In addition, health workers may recommend a facility delivery for primigravidas.

Similarly, a majority of the mothers had the mean number of 5.6 living children. This finding is in agreement with a study conducted by Stephenson, Baschieri, Clements, Hennik, and Madise (2006). The study found that in Malawi, Tanzania, and Ghana, the higher the average number of children had born per woman in the community, the lower women's odds of having had their last birth in a health facility (odds ratios, 0.5–0.9). Furthermore, a study by Chakraborty, Islam, Chowdhury, Bari, and Akhter (2003) showed a relationship between family size and the use of health services for treating any pregnancy complication. Women from large family size underutilize various health care services because of too many demands on their time and due to resource constraints. Family size has a great impact on the allocation of household income in the various income necessities (Hussain & Rogue, 2005). This means that family size could be another modifying factor that prevented the mothers from utilizing delivery services at Thekerani Health Centre.

Obstetric and Delivery Characteristics

Antenatal clinic attendance

Antenatal care especially when utilized early allows regular checkups on the health of the pregnant woman and facilitate early interventions incase if any complication

is identified. Findings of this study show that majority (83%) sought antenatal care during their recent pregnancy. These findings compare well with those of the National Statistical Office and UNICEF (2008). Main reasons why they reported earlier for this ANC attendance included to know the growth and progress of pregnancy and to know if everything was normal and seeking for immunizations for tetanus, prophylaxis for anaemia, and malaria. Studies have shown that the majority of mothers attend antenatal clinic (ANC) in health units at least once in pregnancy and only a much smaller proportion deliver in health facilities (Amooti-Kaguna & Nuwaha, 2000). This is the case for the whole country where high antenatal attendance does not equate to hospital delivery (National Statistical Office and UNICEF, 2006). When mothers are told that everything is fine, they see no need to deliver in a health facility. In addition, 25% of the mothers indicated that the second major reason for no hospital delivery in recent pregnancy was due to sudden onset of labour or short labour. This means that unlike attending ANC which can be planned or done at the convenience of the mother, delivery came unplanned as majority of the mothers indicated. This means that ANC attendance does not equate to health facility delivery as some studies indicate.

On the other hand, this finding is contrary to other studies which indicated that the more antenatal clinic visits the woman makes, the more likely it is for the woman to receive professional delivery care (United Nations Population Fund, 2004). In a study conducted by Hussain and Roque (2005) on determinants of choices of delivery care in some urban slums of Dhaka City which comprised a sample of 78 women, who gave birth one year prior to the date of the survey, found that antenatal care utilization was strongly associated with delivery care. The results were similar to studies conducted by

Bloom, Wypig, and Gupta (2001); Hotchkiss (2001); Celik and Hotchkiss (2000); Paul and Rumsey (2002); Nigussie, Mariam, and Mitike (2004); and Lubbock and Stephenson (2008). The reason behind this strong association is that during the antenatal consultation women get concerned and get to know about the necessity of hospital delivery. In this study, although 83% of the women attended antenatal clinic, this did not influence them to deliver at a health facility.

Advice on place of delivery (cues to action)

According to the HBM utilized in this study these are cues to action. These are triggers that prompt an individual to action. Eighty-seven percent of the mothers indicated that they were advised to deliver at a health facility. Seventy percent of the mothers were advised by nurse/midwives while 11% were advised by TBA's. Other sources of advice included family members, neighbors, and doctors with small percentages. However, this did not influence the mothers to deliver at a health facility with skilled attendance. This finding is contrary to a study conducted in Tanzania where women who reported that they ever discussed with their husbands or partners on where to go for delivery while pregnant and those who were advised during ANC by health workers to deliver in a health facility had a higher proportion delivering with a skilled attendant compared to those who were not (Mpembeni et al., 2007).

Further, some of the factors influencing the advice given by others include their experiences of childbirth and socio-cultural variables. This advice from others may have a significant influence as to where pregnant women deliver and this may not be the place of their own choice. In Malawian society words of the elders are listened to and difficult to challenge. Advice given to women in rural areas regarding the place of their delivery by

their husbands, mothers or mothers-in-law, is almost mandatory, leaving the pregnant woman little or no choice (Mathenjwa, 2005). This study revealed that husbands were the common decision makers for the woman to deliver at home.

Other factors biasing decisions towards home deliveries were sudden onset of labour or short labour. Women stated that they made the decision on their own to deliver at home because of sudden onset of labour. They could not make it to the hospital. Furthermore, mothers indicated sudden onset of labour and labour starting at night as the second major reason for no hospital delivery in recent pregnancy. This finding is in agreement with other studies (Yanagisawa, Oum, & Wakai, 2006; Mrisho et al., 2007) where sudden onset of labour was found to be influencing home deliveries. Labour pains begin suddenly and often at night. Although women are advised to seek skilled attendance during delivery, they are not sufficiently motivated to overcome the difficulties encountered while travelling at night and the difficulties caused to the woman when labour starts (Yaginasawa, Oum, & Wakai, 2006). This means that there is need to ensure a high level of awareness among expectant women to address the importance of planned delivery and information regarding when to report for care.

Delivery attendants

The level of assistance a woman receives during the birth of her child has important health consequences for both mother and child (Nkentiah-Amposal & Sagoe-Moses, 2009). It is worth noting that 34% of the deliveries in this study were conducted by the respondents' mothers while 31% were conducted by TBA's. This compares well with the findings from the the survey conducted by Malawi National Statistical Office and UNICEF (2008) where skilled attendance at birth in Thyolo District was estimated at

54%. This low level of skilled attendance represents a challenge if the country has to achieve the MDG's by 2015. Moreover, recent estimates indicate that Malawi made no progress from 2000 to 2008 in ensuring skilled attendance at birth (Partnership for Maternal, Newborn and Child Health, 2010).

Furthermore, the results revealed that TBAs, were still conducting deliveries despite their changed roles. The changed roles of TBA's include encouraging mothers to go to the health facility for antenatal, delivery, and postnatal care; referring any woman who presents to her for delivery to the nearest health centre and reporting the case to Village Health Committee/ Village Headman; providing information to communities on danger signs of pregnancy, childbirth, and of the postpartum period and conducting deliveries only in unavoidable circumstances, and should accompany the mother to the nearest health centre as soon as possible among others (Ministry of Health, 2007). Some of the reasons as cited by the mothers were that relatives, family members, and TBAs are handy and near places of abode apart from the fact that respondents indicated that they had trust and considered the mothers and TBAs knowledgeable.

TBAs in Malawi tend to be old and often illiterate women who may not be able to manage the challenges of ensuring that women with complications are referred to relevant health facilities quickly. Indeed, most of the TBAs are poorly connected to health facilities and the referral system quickly breaks down, thereby jeopardizing the lives of the women and their newborns who develop complications during and immediately after delivery (Makoka, 2009). Lawoyin (2007) reported high neonatal adverse outcomes among deliveries occurring out of health facilities. Studies have shown that home deliveries are more likely to be conducted by unskilled attendants (Nkentiah-

Amposal & Sagoe-Moses, 2009). This is especially more important in Malawi where skilled attendance is institutionalized.

Problems experienced during and after delivery

Furthermore, it is worth noting that 77% (n=194) of the mothers reported that they did not experience any problem during or after delivery. This means that majority of women do not experience complications after delivery. This can be another factor associated with home deliveries. Studies have shown that the chances for going for health facility delivery are higher if the woman experience complications during pregnancy, labour, and delivery (Balaji, Dilip, & Duggal, 2003). In a study conducted in Ethiopia, one of the findings was that utilization of safe delivery services was about five times higher among those who previously had developed one of the life threatening obstetric complications. This implies that a significant proportion of mothers seek care only if they experience complications. If they deliver at home and there are no complications associated with the delivery they may not be motivated to seek skilled care at birth (Nigussie, Mariam, & Mitike, 2004).

Women who may have previous non-eventful deliveries may be complacent and expect that home deliveries are safe and see no need to go for health facility delivery. For instance 15% of the mothers in this study stated that one of the reasons for no hospital delivery in the last pregnancy was that family did not feel it necessary. Occurrence of complications following a home delivery can act as an internal cue to action to trigger utilization of health facilities for delivery according to HBM.

Socio-psychological Variables

The sociopsychologic variables of the HBM under the component of the modifying factors incorporate beliefs, attitudes, and culture. Culture is defined as a 'complex whole' that refers to the learnt pattern of thoughts and behavior characteristics of a social group. It involves religion, kinship, knowledge, belief, art, morals, and child bearing practices (Cham, Sundby, & Vangen, 2005). The tendency to act or not in the case of childbirth is also influenced by the interpretation supported by cultural beliefs. Consistent to this point this study confirms that there are social-cultural factors and decision making processes that may prevent mothers from utilizing delivery services in health care institutions and opt for home deliveries. Traditional beliefs and culture were also mentioned as contributing factors for home delivery in a study conducted by Mrisho et al. (2007) in Tanzania. Socio-cultural factors primarily influence decision-making regarding whether to seek care rather than affecting whether women reach a health facility (Gabrysch & Campbell**,** 2009)**.** When it came to deciding to have a home birth, it was found that most women had reached this decision on their own or together with their spouses. This finding is similar to a study conducted in Turkey by Kukulu (2009) where the decision to deliver at home was made by the women themselves. It may be concluded that women decided to give birth at home because of sudden onset of labour and to ensure family involvement as indicated by the women. In addition, these results may reflect the fact that women receive little or no training on healthy births, and the various risks a mother could encounter with home births.

Furthermore, the women were asked on who has a final say on issues pertaining to their family. Sixty-one percent of the women indicated a husband. This means that

women were not empowered to make decisions and this may affect their utilization of health care services. Research shows that women's involvement in household decision-making is positively associated with utilization of maternal health care services, independent of other factors such as education, income, and employment (Matsumura & Gubhaju, 2001; Allendorf, 2007). There is significant and positive association with health care use for women who has a final say on decisions than their counterperts (Allendorf, 2007). Furthermore, 30% of the women reported that the decision for them to deliver at home was made by the husband. The role of men or partners in the decision-making process regarding women's prenatal and delivery care has been noted as a factor influencing women's health care–seeking behaviors (Lubbock & Stephenson, 2008).

Mothers were asked to indicate some of the traditional beliefs which can influence women to select a home delivery. Thirty-one percent of the women indicated that deep rooted beliefs in herbs influenced the decision to have a home delivery. Three percent (n=7) women indicated that one of the benefits of home deliveries is that you receive Mwanamphepo (traditional herb which facilitates delivery and the scientific name is cissus cornifolia). This herb has an effect similar to oxytocin. This result is consistent with the finding of a study conducted in Mangochi Lungwena area where women identified use of herbs for postnatal care which prevented them from utilizing maternity services (Seljeskog, Sundby, & Chimango, 2006).

Another traditional belief which emerged is that in delivery older women are trusted and considered knowledgeable. This finding is in agreement with other studies conducted in Malawi and other countries. In a study conducted in Mangochi by Seljeskog, Sunby, and Chimango (2006) reported that in pregnancy, delivery, and

motherhood matters, it was the older women in the community; like mothers, grandmothers, and mothers-in-law, who are trusted and perceived knowledgeable, and their advices were listened to (Seljeskog, Sundby, & Chimango, 2006). This is in agreement with the findings in this study because most of the deliveries were conducted by the respondent's mother followed by TBA's. In Malawian society pregnancy and child birth are generally regarded entirely as women's entity. Older women in their menopause are seen as experts on pregnancy and child birth, particularly in rural areas. These women are consulted on issues concerning labour and delivery. When consulted they usually decide what should be done and their advice is taken. Words of the elders are hardly challenged in Malawian society. This means interventions for preventing deliveries without skilled attendance should target elderly women in the communities. This initiative is already being done in Ekwendeni area in Mzimba and it is referred to as Agogo Initiative. Thyolo District Hospital should adopt this initiative if the uptake of women for health facility delivery is to be improved.

Perceived Benefits of Hospital Delivery

The findings in this study indicated that knowledge regarding the importance of hospital delivery was high. The perceived benefits of hospital delivery were that nurses are supportive when there are complications, you get nets, medication, and immunizations for the baby, blood is tested and counseling is done, and that mothers get material assistance such as pieces of clothes (zitenje), and shawls for the baby. This finding is in agreement with a study conducted by Ankunda et al. (n.d.). The perceived benefits of health facility delivery as reported by the mothers were availability of immunizations services, proper management of complications, and provision of some

free services. In addition, 60% of the mothers, whether they had a planned home birth or not, indicated that there are no benefits for home deliveries. These perceived benefits of health facility delivery are supposed to guide the women to take preventive action of delivering in health facilities with skilled attendants. On the contrary, this did not influence the mothers to deliver in health facilities with skilled attendance. This finding is similar to a study conducted in Eretria. They reported that knowledge about the advantage of hospital delivery was high, but utilization was low (Michael, Kosia, Usman, Mufunda, & Nyarang'o, 2010). This means that the perceived barriers such as more than one hour walking distance to a health facility outweighed the perceived benefits.

In addition, the results of a study conducted by Hossain and Hoque (2005) showed that 96% of the sample women had information about morden delivery care facilities in government, non-governmental, and private hospitals while only 4% of the women lacked information. Inspite of the indication of no information problem, only 11.5% took delivery care at the hospital. It indicates that the mother's behaviour is influenced by other factors beyond knowledge such as distance, financial challenges, and cultural factors as revealed in this study. The HBM stipulates that other variables that can affect the likelihood of action are the perceived barriers such as distance, transport costs, and acceptability of delivery care services (Glanz, Rimer, & Lewis, 2002).

Individual Perceptions

The mothers were able to perceive some risk factors associated with home delivery. The perceived risks include death, excessive bleeding, and retained products of conception. This suggests that the mothers felt susceptible to complications following a home delivery. The fact that the women were able to mention death means that they were

able to perceive the severity of the complications of home delivery. Still this knowledge did not influence them to deliver in a health facility to avoid death from pregnancy and the other risks associated with it. Similarly, Kyomuhendo (2003) stated that even though women in his study fully recognized the life threatening risks associated with pregnancy and delivery, they did not seek treatment until it was too late due to their tolerance of physical pain. Studies that utilized the HBM also showed that perceived severity was of low significance to influence health behaviour (Mathenjwa, 2005). This means that the perception of threat to complications associated with home deliveries was modified by other factors such as traditional beliefs, demographic characteristics such as age, and high parity among others.

Very small percentages of women identified other risks such as retained products of conception and prolonged labour. Risks such as convulsions, infection or fever, loss of consciousness, severe headache, ruptured uterus, cord prolapse, postpartum depression and leakage of urine from the vagina were not mentioned. It is surprising that the women were not able to mention obstetric fistula as a complication of home delivery because the researcher witnessed three cases of women with obstetric fistula during the period of study. In addition, the participants were not able to mention any risk to the newborn. This is an indication that health care providers do not give adequate information regarding the risks of home deliveries. If women do not perceive these other risks, they may not be able to appreciate the importance of utilizing health facilities for delivery.

This indicates that mothers have to be informed of all the risks associated with home births to enable them make informed choices. It is expected that a better informed individual is better placed to make reasonable decisions. Therefore, maternal care

programs must be designed to include an element that works to increase women's perceived susceptibility to complications associated with pregnancy, labour, and delivery. Studies have shown that women who are more knowledgeable of risk factors are more likely to utilize health facilities for delivery compared to those with no knowledge (Kumbani & Mc Inerney, 2002; Stekelenburg, Kyanami, Mukelabai, Wolffers & van Roosmalen, 2004; Mpembeni et al., 2007). If women do not have adequate knowledge of complications associated with the birthing process they may not feel personally susceptible to such complications following a home birth. According to the HBM information can trigger action to change behaviour (Glanz, Rimer, & Lewis, 2002).

Perceived Barriers to Healh Facility Delivery Associated with Home Delivery

Despite the perceived benefits cited above, the study highlighted important barriers that the women perceived as preventing them from utilizing health facilities for delivery. These include unavailability and long distance coverage from the heath facility; lack of financial resources for their comfortable stay in hospital and to meet travel costs to and from the health facility; perceived poor quality of care in terms of hostile behavour of health workers, women being left to deliver on their own without supervision, and health workers at the facility being rude, not receptive, and unconcerned. Transport problems were the most important barriers as indicated by the fact that 99% of the women walked by foot to Thekerani Health Centre. Distance to the health facility was another equally important barrier as 78% of the women indicated that they walked an average distance of more than one hour to get to the clinic. Each of the identified barriers will be discussed in detail.

Distance/Travel Time and Lack of Transport

Other barriers relate to resources for obtaining services such as transportation. Lack of accessibility of health services has been shown to be an important factor in the utilization of health services in developing countries. The distance to health services exerts a dual influence on use, as a disincentive to seeking care in the first place and as an actual obstacle to reaching care after a decision has been made to seek it (Mpembeni et al., 2007). Many pregnant women do not even attempt to reach a facility for delivery since walking many kilometers is difficult in labour and impossible if labour starts at night, and transport means are often unavailable. Most women live an average distance of 5km from a health and the scarcity of transport makes it even more difficult to access health facilities (Nkentiah-Amposal & Sagoe-Moses, 2009). For instance, 78% of the mothers in this study lived an average distance of more than one hour from the nearest health facility and 99% reported walking by foot.

Mothers indicated distance and transport to a health facility as major barriers associated with the decision to select a home delivery. One of the reasons for no health facility delivery in recent pregnancy was that the clinic/hospital was too far. These results compare well with a study which was conducted at Lundu Health Centre in Blantyre, Malawi, where 54.5% walked a distance of over 2KM to the health centre and 75% of the women used footing as their means of transport (Diness, 2009). This finding is also in agreement with the results of a study conducted by Eijk (2006) in Kenya where factors associated with delivery outside a health facility were 1 hour walking distance to a health facility. Greater distance to health facilities does decrease facility use (Gage, & Calixte, 2006; Gage, 2007; Rahman, Mosley, Ahmed, & Akhter, 2007).

A comprehensive review of studies that used the HBM showed that perceived barriers were the most powerful dimension of the model affecting health behaviour (Mathenjwa, 2005). Availability of transport, physical distance of the facility, and time taken to reach the facility undoubtedly influence the health seeking behaviour and health service utilization especially in rural areas. Therefore, this finding is in agreement with several studies (Chakraborty, Islam, Chowdhury, Bari, & Akhter, 2003; Van den Broek, 2003; Sylvester, 2003; Seljeskog, Sundby, & Chimango, 2006; Mrisho, et al., 2007; and Tlebere, et al., 2007)) where geographical distance and lack of transport were cited as major barriers to utilization of delivery services. Due to the remote nature of Thekerani area there is no public transport to most areas forcing 99% of women to walk by foot. Delifa Bvumbwe a nurse/midwife at Thekerani Health Center commented that she knew of some pregnanant women who ended up at traditional birth attendants out of desperation. She futher stated that some pregnant women had to walk over four hours to get to Thekerani Health Centre.

It is argued that distance to a health centre can be taken as an indicator of access to health services because many developing countries have an unequal number of health centers between urban and rural areas. In addition, Stekelenberg et al. (2004) suggested that travel time is a significant factor affecting delay to decide to go to a health centre. In this case, various factors which can prevent home deliveries can be instituted such as, establishing financial savings, most often with the support of their husbands, timely preparation for delivery, including staying at the maternity waiting home, and arranging for a family member or friend to accompany them or to take care for their other children.

Staff Attitudes

Perceived acceptability of care is another factor that may influence choices of where women deliver. If staff attitude is negative clients will be discouraged from using health facilities. In this study the mothers were asked to express their opinions regarding the attitude of health personnel with regard to serving women in labour. Majority of the women felt that health care personnel understood their needs. However, when the mothers were asked to indicate problems women experience in labour, 40% of the mothers indicated 'hostile behaviour of health personnel' as preventing women from utilizing delivery services in health facilities. The second major concern was that women were left to deliver on their own without supervision. These answers contradict each other. This may be because some of the interviewers were nurses so the responses could be viewed as a direct attack on the nurse/midwives as such the mothers were afraid to commit themselves. The second question was indirect thus the mothers were able to answer without fear.

Still the health personnel were rated as having poor attitudes in the second question. Moreover, some participants indicated that health personnel were rude and not receptive (14%) and were unconcerned (10%). The hostile behaviour towards mothers was also observed by the researcher. This finding is similar to other studies where the reason for home delivery was fear of the hostile behaviour of health workers (Kikulu, 2009). Many women report dissatisfaction with rude, arrogant, and neglectful behaviour at health facilities and prefer the care of a TBA or relative (Gabrysch & Campbell, 2009).

In a study conducted by Kasenga at Malamulo in Thyolo district found that one of the barriers for hospital delivery was the negative attitude of health workers,

particularly midwives, towards women in the labour ward (Kasenga, 2009). Several Malawian studies also established that health worker's negative attitudes, poor communication, and negative perceptions about hospital delivery prevented women from actually accessing maternity services (Kamwendo & Bullough, 2005; Manzi, et al., 2005; Seljeskog, Sundby, & Chimango, 2006). This implies that women aught to be treated with respect and dignity. Health workers have moral obligations to discharge their duties professionally and follow the code of ethics which guide their practice.

The issue of women being left to deliver on their own was also identified. One of the midwives at Thekerani Health Centre commented that sometimes women deliver on their own because the watchman they had was not supportive. She indicated that the watchman was not going to their houses to inform them when women were in labour. Therefore, when the women lamented that they were left to deliver on their own without supervision, it was not an unexpected finding. This finding that women were left to deliver by themselves without supervision was also reported by Mathenjwa (2005). The participants in her study indicated that clinic sisters often left women to labour and sometimes to deliver alone in the clinic. This was a frightening experience and influenced women to deliver in a hospital where there was always a midwife present or at home where support is available (Mathenjwa, 2005). So, with this finding it is not surprising that women opted for home delivery to avoid situations in health facilities where they will be left to deliver on their own without an attendant.

Another problem making the clinic unacceptable was lack of family involvement especially when the mothers were asked the reasons for planning to deliver at home. Studies have shown that continuous supportive care during child birth, especially when

the care giver is not a member of the hospital staff, improves the outcome of labour (Mrisho et al., 2007). Roosmalen, Walraven, Stekelenburg, and Massawe (2005), has shown that in many of the delivery rooms in health facilities in sub-Saharan Africa and Asia women are not generally allowed to bring a relative with them into labour. In his observational study in Tanzania the author was dissatisfied with the child birth experience, as women in labour lay in bed in complete isolation, in pain, without support. This is the case with Thekerani Health Centre. Women were not allowed to bring their relatives into the labour ward. That is the reason why the women indicated family involvement as a reason for having a planned home delivery. Similar findings were indicated in a study conducted in Dhaka City in Bangladesh by Hossain and Hoque (2005). Women in his study expressed that they feel it safe and secured to give childbirth in the presence of their family members at home.

Lack of Drugs Supplies and Equipment

Lack of drugs, supplies, and equipment are among issues that can prevent women from seeking delivery services in health facilities. Ten percent of the women in this study reported that sometimes there are no drugs and supplies at the health facility which acted as a disincentive to utilize the facility for delivery. In Uganda, low availability of drugs was among the issues that compromised the quality of care. In order to improve EmOC, ensured availability of drugs, supplies, and equipment were among the suggesions given by women in Kenya (Pearson & Shoo, 2005).

Perceived Economic Barriers

The study examined financial capabilities which can prevent the woman from seeking delivery services. Perceived socioeconomic barriers create disincentives for women from a timely decision to seek care (Mpembeni *et al*. 2007). Women may not take action to deliver in a health facility with skilled attendance because of their perception that it is costly. Prior to decision making women consider opportunity and actual costs to be incurred if they are to deliver in health facilities.The study revealed that 52% of the mothers indicated lack of financial support while in hospital as a major challenge forcing them to select a home delivery. Lack of financial support to ensure their comfortable stay in hospital acted as a barrier to delivery in health facilities. Mrisho *et al.* (2007) had a similar finding. Most women who delivered at health facilities in his study did not do so because they wished to, but were persuaded by a nurse, spouse, parents, or grandmothers. The major reason given for why they were reluctant to make their own decision was lack of money. Lack of access to money was the reason why women in rural Tanzania could not make decisions to deliver in health facilities (Mrisho et al. 2007).

Travel costs to and from the clinic were also mentioned by 20% of the mothers as a barrier. This may directly affect whether a woman can actually reach a facility for delivery or not. Women stated that another reason for choosing a particular attendant was that TBA's and relatives were close to their places of abode. According to Mpembeni *et al.* (2007), the major causes of home delivery include fear of high costs involved when referred to a hospital while there is availability of TBA's. In addition, 24% of the women

reported that the benefits of home deliveries are that there are no costs in terms of transport and hospital requirements such as basins, plastic paper, and razor blade.

Other economic barriers relate to leaving work to seek care and opportunity costs in terms of long waiting time. Seven percent of the women reported that other factors preventing them from utilitizing the health facility were leaving work to seek care and five percent reported opportunity costs interms of long waiting time before being attended to. Time costs are opportunity costs of forgone wages, time spent on travel, waiting and treatment, and time spent by care taker (Amooti-Kaguna & Nuwaha, 2000; Sseljeskog, Sundby, & Chimango, 2006).

Economic accessibility may influence where women deliver. Respondents may know where to deliver but may lack the financial power to do so. In this study 47% of the women reported the health centre and 33% reported the hospital as options available about possible places of birth. Financial problem was a barrier for utilization of the health facilities. Similar findings were reported in a study conducted by Tuladhar, Khanal, Kayastha, Shirestha, and Giri (2009) in Nepal where financial problem was reported by most of the respondents as a barrier to hospital delivery. In a study by Mpembeni *et al*. (2007) in Southern Tanzania, a number of socioeconomic factors were found to have a significant influence on use of skilled care for delivery or not. Women of higher socioeconomic status were able to make wise decisions about their health than their counterparts. Many low-income pregnant women perceive multiple barriers to the action for health facility delivery which can prevent or manage complications associated with the birthing process. Home births are an indicator of low economic status, which is likely to have higher risks associated with the birth as they are predominantly carried out by

untrained women (Kukulu, 2009).This means that maternal health care programmes for low-income women be designed to reduce barriers such as transportation costs.

Limitations of the Study

Midwives at Thekerani acted as interviewers and this may have influenced the women's replies to questions related to health personnel. There is a Community Maternal and Neonatal Health Program in the catchment area for Thekerani. Women were being forced to pay a goat or a certain number of chickens (3 or more) to the village headman as a punishment for delivering at home. This may have influenced some responses to questions such as whether the home delivery was planned where majority of the women indicated that it was not planned. The study was designed to analyze factors influencing home deliveries in Thekerani area and may not be representative of the whole country of Malawi with its diverse socio-cultural and demographic settings. The sampling technique utilized was convenience sampling. As such, some subjects may have been missed during the sampling and interviewing processes further limiting the generalization of results. However, trends can be identified which can be used as a basis for further research.

Recommendations

The findings of this study have important implications for improving the uptake of women for health service delivery with skilled attendance. Recommendations have been made on how the services can be improved. These recommendations need to be implemented not only by the health services but by other sectors and by the community itself. These recommendations have been made in terms of midwifery practice, education, management, and research.

Midwifery Practice

The practitioners should take note of and act on the reasons why mothers do not utilize skilled attendance in health facilities during pregnancy, labour, and delivery. Therefore, practitioners should be able to provide maternity services in a client-oriented manner taking into account the identified social and cultural factors presented and discussed above. Women expect humane, professional and courteous treatment (D'Ambruoso, Abbey, and Hussein, 2005). Nurse/Midwives should intensify individual counseling of women on hospital delivery and on individual birth preparedness. Advice should also be given on when to report for care since sudden onset of labour was reported as the second major reason for home delivery. Male involvement is very important in all activities since the study identified that husbands have a final say on issues affecting the family. Women should be strongly encouraged to deliver in health facilities with skilled attendance and to utilize a maternity waiting home at Thekerani Health Centre.

The results of the study revealed that the problems that women face if they are to deliver in health facilities are the hostile behaviour of health personnel towards clients and women being left to deliver on their own without supervision. Some women felt that health care personnel were rude and not receptive.Therefore, midwife practitioners should promote a welcoming atmosphere for all mothers using the delivery services. They need to be more compassionate and caring to the needs of the people they serve. A mentorship programme through supportive supervision to eliminate the hostile behaviour of health workers and prevent women from delivering on their own should be instituted.

Family involvement was reported as a factor influencing home deliveries for those with planned home births. Women should be allowed to bring their relatives into

the Labour Ward when it is not busy to suffice the cultural need of family involvement. This can also ease the problem of deliveries without supervision and the hostile behaviour of health personnel. As a long term solution, Labour Wards should be built in a way which will accommodate family members.

Nurse/ Midwifery Education

The findings of the study revealed that the respondents had inadequate knowledge of risk factors associated with delivery. Therefore, educators should use the findings to promote information, education, and communication campaigns for raising awareness and promoting use of health facilities during pregnancy, labour, and delivery services. Educators should develop relevant Information, Education, and Communication (IEC) materials on birth preparedness and complication readiness plan. Awareness campaigns on birth preparedness and complication readiness should be conducted targeting women and their husbands with low levels of education, multiparous women, and women and their husbands with no formal employment. People who influence their decisions such as spouses, their mothers should be targeted if this strategy is going to work.

Birth preparedness is a strategy to improve the use of skilled attendance at birth. Birth preparedness and complication readiness include: knowledge of danger signs, plan for where to give birth, plan for a birth attendant, plan for transportation, and plan for saving money (Moran, Sangli, & Deneen, 2006). In a study conducted in Burkina Faso by Moran, Sangli, and Dineen (2006) found that women who had plans for serving money and plans for transportation were more likely to deliver with skilled attendance. In addition, building high levels of awareness on obstetric danger signs can help break the cultures that oppose timely access to EmOC services. This is in agreement with a study

conduted in southern Tanzania where among women who delivered in health facilities, a high proportion were acutely aware of danger signs and therefore came to a health facility on time (Mpembeni *et al*. 2007). Another strategy will be to intergrate maternal health education agenda in every community meeting to address birth preparedness.

Furthermore, the study identified that TBA's were still conducting deliveries despite their changed role. The changed roles of TBA's include encouraging mothers to go to the health facility for antenatal, delivery, and postnatal care; referring any woman who presents to her for delivery to the nearest health centre and report the case to Village Health Committee/ Village Headman; providing information to communities on danger signs of pregnancy, childbirth, and of the postpartum period and conducting deliveries only in unavoidable circumstances, and should accompany the mother to the nearest health centre as soon as possible among others (Ministry of Health, 2007). Awareness campaigns targeting TBAs should be conducted so that they should stick to their prescribed terms of reference and refer maternal/labour cases to a health facility.

In addition, elderly women should be targeted with information on dangers of home deliveries since the results indicated that elderly women were trusted and considered knowledgeable. Midwife educators should collaborate with community non-governmental organization, community health worker programmes, and the community itself to ensure that birth preparedness messages are consistently promoted. The media, especially the radio, should be utilized for child birth education in terms of emphasizing on hospital delivery and risks associated with home delivery to increase awareness. This in turn should facilitate positive health seeking behaviour from health facilities.A study conducted in India in four states shows that mothers who are regularly exposed to

electronic mass media are several times more likely to give birth in a medical institution than mothers not exposed (Sugathan, Mishra, & Ratherford, 2001).

Nurse educators should plan for effective training of health staff in patient care, counseling, ethics, and interpersonal relationships in line with the needs of the mothers who are pregnant, in labour or about to deliver. Nurse educators should review the Midwifery Curricula so that it becomes responsive to the requirements of mothers in the whole society. There is need to reinforce the importance of provider awareness regarding attitude, and the need for development of inter-personal communication skills into education and training. Nurse/Midwife educators should influence politicians to include issues of safe motherhood in their campaigns especially the need for skilled attendance at birth.

The other problem that the study identified was deep rooted beliefs in traditional herbs for management of pregnancy, labour, and delivery. The community should be educated on combating this harmful practice. Traditional leaders and religious readers should be sensitisized on the dangers of these beliefs on maternal health.

Management

The decision makers/policy-makers should use the findings to effectively plan and develop the best strategy (ies) for empowering women to value a health facility as a place of delivery. The reasons given for delivering at home should also be used by the health care planners to effectively design and deliver appropriate maternity services. The District Health Officer (DHO) for Thyolo District Hospital should assess and strengthen the human resource capacity of Thekerani Health Centre in order to prevent deliveries without supervision of health care providers and improve midwives attitudes towards

laboring women. Surportive supervision by District Health Management Team is also recommended.

Efforts should be made to reduce the distance to EMOnC services since distance compounded by transportation problems was reported as a major barrier influencing women to deliver at home without skilled attendance. Government, through Thyolo District Hospital, should consider upgrading existing primary health care centres such as Nkhata-ombere and Nsabwe Health Centres to provide EMOnC services in order to ease the problem of unplanned home births due to sudden onset of labour and/or short labour. This should reduce the distance and make it easier for women to access delivery services and is more cost effective than building new clinics. Using Local Development Fund (LDF), Thyolo District Council should construct a Maternity Unit at Gombe Village bearing in mind the long distance from Thekerani Health Centre and Fatima Mission Hospital. The other option for policy makers is to consider training of midwives on home deliveries and emergency management and position them at community level to conduct deliveries. In Bangladesh where 91% of births occur at home midwives are placed at the village level as a means of reducing distance to health facilities (ICDDR, 2005). Sri Lanka and Malaysia reduced mortality by ensuring that all deliveries, whether at home or in a health facility, were attended by a trained midwife. In addition, midwives should be encouraged to open up Midwifery Clinics in the communities to improve access to safe motherhood services to the disadvantaged. Midwife-run obstetric units, with facilities for rapid transfer to specialist facilities, can be a cost effective strategy.

The other aspect involves improving access to transport services since the study revealed that 99% of the women walk by foot to Thekerani Health Centre. This can be done by provision of motorized ambulances by Ministry of Health (through Thyolo District Health Office) at each group village headman level to ease the problem of transportation. The other option will be to provide motor car ambulance to the Traditional Authority Nsabwe where the community should be able to access it. Motor car ambulance is ideal considering considering the hilly terrain of Thekerani area. In this study 61% of the women did not plan to deliver at home. These women would have sought health facility delivery if an ambulance service for delivery was made available.

Furthermore, Malawi Government through Thyolo District Council (TDC) should improve the road infrastructure in the area. Community should be mobilized to ensure availability of transport. Public and private partnership should be strengthened to address the issue of transport. Government, donors, and non-governmental organizations need to work directly with communities to identify obstacles to transport and the most appropriate ways of overcoming this. The participation of communities will help to make sure that transport arrangements are appropriate and socially acceptable (Institute of Development Studies, 2010).

On the other hand, to ease the problem of financial challenges, Thyolo District Assembly should influence local Non Government Organizations (NGOs) to provide capital funds (in form of loans) to the women in the area to engage in Income Generating Activities (IGAs) in order to strengthen their economic/bargaining power to influence place and timing of delivery. In addition, these women need skills development in agriculture, crafts, cookery, and many possible money-making activities to help them

have money for transport and other utilities while in hospital. Community should be mobilized to institute fund raising initiatives to make sure pregnant women have money for their confortable stay in hospital as well as transport.

As women's education and their husband's education is an important factor for home delivery and non-utilization of skilled attendance in heath facilities, there should be increasing education opportunities for both groups. Adult literacy programmes should be introduced by the Welfare Office under TDC to increase the levels of education for both women and men in the area. Additionally, education policy makers (Ministry of Education, Science, and Technology) in consultation with other stakeholders including relevant NGOs should collectively develop a strategy that will encourage all children (male and female) to go to school to overcome the problem of illiteracy in the long run.

The study identified midwives' poor attitudes towards laboring mothers as one of the barriers hindering women from delivering at Thekerani Health Centre. Therefore, Nurses and Midwives Council of Malawi (NMCM) should intensify regulation of nurses and midwives to make sure that they are maintaining the acceptable standards to safeguard patients' lives in hospitals. Continuing Professional Development programme by NMCM which have defined a minimum set of skills for providers that go beyond clinical skills to include a wide range of interpersonal and attitudinal skills should be enhanced.

Research

Improving access to skilled attendance at birth is essential to achieving the Millennium Development Goal of reducing maternal mortality by 75 percent by 2015. Therefore, this study provides a strong base of evidence needed to promote and refine

strategies to improve delivery care. The study should be replicated to other areas in the country using the same methodology to compare and contrast the findings.

The question of who decides or chooses the place of delivery for women is very important. This study did not explore how such decisions are made within a household or extended family relations setting. Therefore, further research is required to professionally respond to the question. Such efforts will not only improve maternity utilization but will also hopefully, reduce the high Maternal Mortality Ratios (MMRs) in Malawi thereby achieving the Millennium Development Goals four and five. A qualitative study should be carried out to confirm the findings and/or rule out chance findings. There is need to explore complications associated with home deliveries. Such studies will help to increase awareness on risks associated with home deliveries as a result women will be able to perceive their susceptibility to such complications. This will act as a driving force to health facility deliveries.

Studies should also be conducted with focus on client-provider interactions to address the problem of poor attitudes of health care personnel. There is need for continuing research and documentation of women's perceptions regarding delivery services in health care facilities. Even when birth outcomes are successful some of the accounts of care depict serious neglect and abuse. There is a need to share common responsibility for ensuring that research, policy, and programming address these serious malpractices, sub-standard care and lack of "woman-friendliness" in maternity services. Lastly, it is not known what precautions the traditional birth attendants and relatives take to reduce the risk of HIV/AIDS transmission between the baby, mother, and the birth attendant. This is another area for future research.

Conclusion

The study identified important factors associated with home deliveries in Thekerani area in Thyolo district. Modifying factors in terms of demographic, sociopsychological and obstetric factors were found to be associated with home deliveries. Other factors relate to perceived barriers in terms of distance, transportation problems, financial challenges and midwives poor attitudes towards laboring women. The information will assist in planning interventions focused in improving the uptake of women for health facility delivery with skilled attendance. The key issues for sustainable effects are increasing information available for women to have planned hospital births and on harmful traditional practices, improving accessibility by provision of transport to improve access to health facilities. Efforts should be made to reduce the distance to EMOnC services Emergency obstetric care (especially maternity services). It is evident from the findings that improving access to delivery services requires removal of barriers from both the demand and supply side. Attention to these factors will not only improve maternity utilization but will also; hopefully reduce the high maternal mortality ratios in Malawi thereby achieving the Millennium Development Goal 4 and 5.

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APPENDICES

APPENDIX A: QUESTIONNAIRE

SECTION A: MODIFYING FACTORS (DEMOGRAPHIC DATA)			
	QUESTION	**ANSWER AND CODES**	**SKIP**
A1	How old are you?	……..(Years)	
A2	What is your present marital status?	Married…….……1 Divorced…….……..2 Widow…….……3 Single …….……..4 Other (Specify)…….....5	
A3	What tribe do you belong to?	Lomwe ……..……...1 Khokhola…….……2 Yao…….…….....3 Sena…….…….……4 Chewa…….……..5 Other (specify)…….…….…6	
A4	What languages can you speak enough to have a conversation?	Lomwe…….…..……1 Khokhola……..……2 Yao……..……3 Sena……..……4 Chewa…….…..….5 Other (specify)……..……6	
A5	Which denomination do you belong to?	CCAP…….…..……1 Roman Catholic…….…..……2 SDA…….…….....3 Islam……..……...…4 Ana Amulungu…….....5 None…….…….……...5 Other specify…….…….……..6	
A6	Have you ever attended school?	Yes…….…..……..1 No……..……...…2	If no go to A8
A7	What is your highest level of education?	Some primary school……...……1 Completed primary school……2 Some secondary school……3 Completed form 4……4 Tertiary……...……..5	
A8	Husband's education	Yes……1 No……2	If no skip to A10
A9	What is your	Primary school……..……..1	

	husband's highest qualification?	Secondary school…….……2	
A10	What is your occupation?	Housewife……...……..1 Teacher……...…..2 Nurse…….…...….3 Accountant……...….4 Business ……..……...…5 Farmer……...…6 Retired……..…7 Others (specify)…….....8	
A11	Husband's main occupation?	Retired…….……1 Teacher…….……....2 Nurse…….……...3 Accountant…….……..4 Business ……..……...…….5 Farmer…….…….6 Piecework…….……7 Skilled manual worker……..…….…..8 Unskilled manual worker……..……...9 Other (specify)……..……..…10	
SECTION B: FACTORS RELATED TO PREGNANCY AND DELIVERY			
B1	Did you attend antenatal clinic when you were pregnant?	Yes……..……1 No……..…….2	If no skip to B3
B2	What were the reasons for your attendance	To know the growth and progress of pregnancy……..….…..1 To obtain drugs and immunizations…….…2 To know if everything is normal……..……3 To have problems diagnosed and treated…..…..…4 To obtain ANC card which could act as……..….....5 precautionary measure to avoid harassment by nurse/midwives should it necessitate to deliver in a health unit Others (specify)…….....6	
B3	If not attended why not?	Poor midwives attitudes……..……..1 ANC very far away……..…….2 See no need……..…….3 Lack of money……..……4 Lack of drugs and supplies……..…….5 Long distances to health units……..……6 Other (specify)……..……7	

B4	Did you get any advice regarding place of delivery?	Yes……..……1 No……...……..…2	If no skip to B6
B5	Who gave you the advice?	Nurse/midwife…….1 Medical assistant……..2 Doctor……..3 Traditional birth attendant……...4 Family members……...5 Neighbors…….6 Others (specify)……7	
B6	When did you deliver your baby?	1-5 months ago…….……1 6-11 months ago…….……..2 1-3 Years ago……....3	
B7	What is your parity?	Number……..	
B8	How many children do you have?	Number ……..	
B9	Where did you deliver your recent baby?	TBA……..……1 Home……..……..2	
B10	If delivered at home where at home?	In a bedroom……1 Inside the house…….…...2 Outside the house…….……..…3 Backyard of the house……..4 Other (specify)…….5	
B11	Who assisted with the delivery?	Husband……...1 Mother…….……2 Mother-in-law…….……..3 TBA…….……4 Health provider…….……....5 Other family member……...6 Patient attendant…….……7 No attendant…….…….8 Others (specify)…..9	
B12	Why did you choose to be assisted by the person mentioned above?	Considered knowledgeable…….…….……1 Have trust in the person who assists with the home delivery……..…….……..2 Have a lot of power……..3	
B13	Was the	Planned.....1	

	home delivery planned or not	Not planned …….....2	
B14	Explain the answer	…… …… …… …… …… …… …… …… …… …… ……	
B15	Did you experience any problem during/after delivery?	Heavy bleeding……..……1 Stroke or convulsions…….……..2 Infection or fever…….……3 Postpartum depression…….……4 Leakage of urine or stools from the vagina…..……5 Prolonged labour…….…..6 High temperature……..7 Retained placenta…….....8 Ruptured uterus…….....9 Cord prolapsed…….....10 Others (specify)…….....11	If no problem experienced skip to B18
B16	Did you seek care for each reported problem?	Yes……..……..1 No……..…..….2	If no skip B17
B17	What is the source of care you received?	Health facility……...1 Traditional healer…….……2 Traditional birth attendant…….…..…..3 Health surveillance assistant…….....4 Family doctor…….…..…..5 Religious leader……..…..…..6 Community midwife……..……...7 Self medication…….…..…..8 Others (specify)……..…..…..9	
B18	Do you have any prior experience regarding home deliveries?	Yes…….…,..…1 No…….,...….2	
SECTION C: SOCIOPSYCHOLOGICAL FACTORS			

C1	Who made the decision for you to deliver at home?	Husband……..1 Mother-in-law…….2 Mother……3 Sister-in-law……...……4 Traditional Birth Attendant……5 Sister…….……..…6 Uncle…….…….7 Friends…….....8 Brother…….,….9 Alone…….…,...10 Couple's decision…….…,…11 Others (specify)……...…..12	
C2	Explain why you had to go by the decision made by the person mentioned in D1	He/she is someone in authority…….……..1 He/she is a money maker……2 Fear of losing relationships…….....3 Relatives or TBA's are handy and near places of abode…….…..4 Others (specify)…….…..5	
C3	Who in your family usually has a final say on most of the issues in the home?	Husband…….….1 Couple's decision……...2 Mother-in-law……..…3 Alone……..4	
C4	What are some of the traditional beliefs regarding delivery and motherhood?	Pregnancy and delivery are natural phenomenon requiring no interventions……...…….……1 Primgravidas should deliver at home for husband's to ascertain that the baby is his……...…….…2 In case of prolonged labour the woman has to mention all the men she has slept with to enhance delivery…….……...3 In pregnancy, labour and delivery, and motherhood matters, older women are considered knowledgeable and are trusted……4 In case of obstructed labour the husband has to cleanse his genitals with water for the woman to drink to ease the delivery……5 Deep rooted beliefs in herbs as part of pregnancy	

		care……6 Influence from older mothers……7 The fear of preparing for the unborn whose viability is considered uncertain……8 Child birth is an act of God and a natural event hence do not expect delivery complications or problems……9 Childbirth is considered a woman's battle……10 Only those women who usually experience complications are the ones to deliver in health facilities……11 Not accustomed to hospital delivery……12 Familiar with home delivery……13 Others (specify)……14 …… …… …… ……	
SECTION D: PERCEIVED BARRIERS RELATED TO HEALTH FACILITY			
D1	What were the reasons for no hospital delivery in recent pregnancy?	Too far to clinic/hospital……1 Too expensive……2 Did not have time……3 Long waiting time before being attended to……4 Bad weather/road conditions……5 Family did not feel it was necessary……6 Sudden onset of labour or short labour and labour started at night……7 Lack of transport……8 Lack of privacy……9 Fear of caesarian section……10 Bad road conditions……11 Presence of male attendants in health facilities……12 Others (specify)……13	
D2	Explain answer	…… …… …… …… …… …… ……	
D3	What means	Walking by foot……1	

	of transport do you use?	Own bicycle…….……..….2 Bicycle hire…….……..….3 Oxcart …….……...…4 Car ……..…..….5 Others (specify)……6	
D4	How long does it take you to walk the clinic?	Under 10 minutes……..…1 10-24 minutes…….…...2 25-60 minutes…….…...3 More than 1 hour…….…..4 Other form of estimate (specify)…….……..5	
D5	What is the attitude of health personnel with regard to serving women in labour?	Understanding…….…….1 Unconcerned…….……2 Rude or not receptive……....3 Negligent……...…….…...4 Others (specify)…….…5	
D6	What problems do women experience when they deliver at a health facility?	Women are left to deliver on their own without supervision….1 Hostile behavior of health-care personnel……....2 No drugs and supplies……...3	
SECTION E: PERCEIVED BARRIERS RELATED TO ECONOMIC FACTORS			
E1	What financial challenges do you have if you wanted a hospital delivery	Financing travel to and from the clinic….……1 Support while in hospital…….……..2 Leaving work to seek care……..……...3 Money for food……...…..……...4 Paying for prescribed medications……5 Opportunity costs in terms of long waiting times…..6 Women's reliance on male partners for funds and men unable to raise and sometimes unwilling to give the funds……7 Others (specify)…….…8	
SECTION F: PECEIVED BENEFITS OF HOSPITAL AND HOME DELIVERY			
F1	What are the benefits of hospital delivery?	……. ……. ……. ……. ……...…….. …… …….	
F2	What are the	……	

	benefits of home deliveries	…… …… ……	
G: INDIVIDUAL PERCEPTIONS THAT COULD INLUENCE WOMEN TO SELECT A HOME DELIVERY			
G1	What are the risks associated with home deliveries?	…… …… …… ……	
G2	Do you have any questions or commence?	…… …… …… ……	

APPENDIX B: MAFUNSO M'CHICHEWA

GAWO LOYAMBA: KUDZIWA ZA OTENGA MBALI PA KAFUKUFUKU			
	FUNSO	**YANKHO**	**KULUMPA**
A1	Kodi muli ndi zaka zingati?	……..(Zaka)	
A2	Kodi muli pabanja?	Ndili pa banja……1 Banja linatha……2 Nanfedwa……3 Sindili pa banja ……4 Zina (Fotokozani)……5	
A3	Ndinu a mtundu wanji?	Lomwe ……1 Khokhola……2 Yao……3 Sena……4 Chewa……5 Zina (fotokozani)……6	
A4	Mumalankhula zilankhulo ziti mosavuta?	Lomwe……1 Khokhola……2 Yao……3 Sena……4 Chewa……5 Zina (fotokozani)……6	
A5	Kodi ndinu a chipembezo chanji?	CCAP……1 Katolika……2 SDA……3 Chisilamu ……4 None……5 Zina (fotokozani)……6	
A6	Kodi munapitapo kusukulu?	Inde……1 Ai ……2	Ngati ayi pitani ku funso A8
A7	Kodi sukulu munalekeza kalasi lanji?	Pulaimale sukulu pang'ono……1 Ndidamaliza pulaimale……2 Ndidapita kusekondale pang'ono……3 Ndidamaliza folomu folo……4 Kupyolela pa sekondale……5	
A8	Kodi amuna anu adapitapo	Inde ……1 Ayi ……2	Ngati ayi pitani ku

	kusukulu?		A10
A9	Kodi amuna anu sukulu adalekeza kalasi yanji?	Pulaimale pang'ono……...…….……1 Adamaliza pulaimale……...…….……..2 Adamaliza sekondale pang'ono…...…….…….3 Ndidamaliza folomu folo 4……...……4	
A10	Kodi mumagwira ntchito yanji?	Sindili pa ntchito……..……..1 Ndinapuma ntchito……...……..2 Wokwatiwa koma osagwira ntchito…..…….3 Mphunzitsi ……...……..4 Namwino ……..……5 Bizinesi yaing'ono……..6 Bizinesi yaikulu……..7 Mulimi ……..…..……9 Ganyu……...……11 Ina (tchulani)……..……...…….12	
A11	Kodi amunanu amagwira ntchito yanji?	Sali pa ntchito…….…..……..1 Adapuma pa ntchito…….…..…….2 Mphunzitsi…….…..……...3 Namwino……..……4 Owerengera za chuma……...…….5 Buzinesi yaing'ono……6 Buzinesi yaikulu……7 Mulimi……...8 Ganyu……9 Ntchito za manja za luso..……...…….10 Ntchito zamanja zosasowa luso……11 Ina (tchulani)……...….12	
GAWO LACHIWIRI: MFUNDO ZOKHUZANA NDI UCHEMBERE			
B1	Pamene munali oyembekezera munkapita kusikelo ya amayi oyembekezekera?	Inde……..……1 Ayi……..…….2	Ngati ayi pitani ku B3
B2	Nchifukwa chani munaganiza kuti mukayambe sikelo ya amayi oyembekezera?	Kuti mavuto okhuzana ndi uchembere adziwike....1 Kuti ndidziwe m'mene mwana akukulira…….…..2 Kukapeza chithandizo cha mankhwala ndi katemera…….……3 Kuti ndidziwe ngati zonse zili bwino…….……4 Kuti ndipeze khadi ya kusikelo imene ingazandithandize ngati kuzafunike kuti ndipite kuchipatala kuopera kuchidwa chipongwe ndi madokotala…….….6 zina (fotokozani)……7	

B3	Chifukwa chani simunkapita kusikelo?	Kuopa makhalidwe oipa a namwino……..……..1 Kochitila sikelo kunali kutali……..2 Zinali zosafunikira…….……3 Kusowa kwa ndalama…….……4 Kusowa kwa manhwala ndi zipangizo zina……5 Kunali kutali…….…….….6 Zina (fotokozani)…….…..7	
B4	Anakulangizani za komwe mukachilire?	Inde……1 Ayi…….2	Ngati ayi pitani ku B6
B5	Anakulangizani ndani?	Namwino/mzamba……...……...1 A dokotala ang'ono……..……..2 A dokotala akulu……...……3 A zamba akumudzi…..……...4 Achibale……...……..5 Anzanu oyandikana nawo..……6 Ena (fotokozani)……7	
B6	Kodi mwana ameneyi munabereka liti?	Miyezi 1-3 yapitayo……...……1 Miyezi 4-6 yapitayo……...……2 Miyezi 7-9 yapitayo……...……3 Miyezi 10-12 yapitayo……...……4	
B7	Ndinu ntchembele kangati?	Nambala……	
B8	Kodi muli ndi ana angati?	Nambala ……..	
B9	Kodi mwana ameneyu munachilira kuti?	Kwa a zamba a kumudzi……1 Pakhomo..……...2	
B10	Ngati mpakhomo pamene munachilira malo ake anali ati?	M'chipinda……..1 M'kati mwa nyumba……...2 Kunja kwa nyumba…….……3 Kuseli kwa nyumba……4 Zina (fotokozani)……5	
B11	Ngati munachilira pakhomo anakuthandizirani ndani pa pochirapo?	Mamuna wanga…….……1 Mayi anga..…….……2 Apongozi anga……..……..3 Kwa azamba…….……...4 Wachipatala…….……...5 Achibale……..6 Othandizira odwala ku chipatala……7 Panalibe wothandizira……8	

		Ena (fotokozani)…….....9	
B12	Nchifukwa chani munasankha kuthandizidwa ndi munthu mwatchula pamwambayu?	Timamuganizira kuti ndi amene ali ndi nzeru zokhuzana ndi uchembele……..……1 Ndimamukhulupirira..…….……..……..2 Chifukwa ndi amene ali ndi ulamuliro onse…..….3	
B13	Kodi munachita kukonzekera kuti muchilire pakhomo kapena ayi ?	Ndinakonzekera…….…….....1 Sindinakonzekere…….…...……2	
B14	Fotokozani mogwirizana ndi yankho mwapereka pamwambali	…… …… …… …… …… …… …… …… ……	
B16	Manakumana ndi mavuto pamene mumaberekera pakhomo?	Inde…….…….……1 Ayi…….……2	
B16	Ndi mavuto anji amene munakumana nawo pamene munaberekera pakhomo?	Kutaya magazi kwambiri……...……1 kuzizira ziwalo kapena kukomoka-komoka/njilinjili……...……...2 Kudwala kapena kutentha…..……..…….3 Kukhumudwa……..……...4 Mikodzo kapena chimbudzi kudzera kunjira yoberekera…….…….……5 Kusachira msanga…….……..6 Matenda othamanga magazi.…….…….7 Msengwa kukanirira osatuluka…..……..……8 Kuphulika chiberekero……...…9 Nchombo wa mwana kutulukira munjira ya chiberekero……...….10 Ena (fotokozani)……..11	Ngati panalibe vuto pitani ku funso B19
B17	Kodi munalandira chithandizo ndi	Inde.……..……..1 Ayi.……..……...2	Ngati ayi pitani kufunso

	vuto liri lonse mwatchula pamwambali?		nambala B17
B18	Kodi chithandizo chimenechi munalandilira kuti?	Kuchipatala……..……..1 Kwa a sing'anga…….……2 Kwa a zamba……..……..……...3 A zaumoyo……..……4 Dokotala wa pabanja pathu……..……...5 Atsogoleri a tchalitchi……..……...6 Namwino/nzamba woyendera m'mudzi wachipatala….……7 Ndinadzithandiza ndekha …….……8 Zina (fotokozani).....9	
B19	Ndi zifukwa ziti zimene zingapangitsa amayi kuti achilire p!khomo?	Kufuna kuyandikira achibale…….……1 Ndimanva bwino kunyumba…….…….……2 Nkosavuto kutengapo mbali……..…….3 Chifukwa choopa khalidwe loipa la madokotala...4 Mavuto a zachuMa..……...5 Amangoona ine ndekha …….……6 Ufulu osankha mmene ndingaggnere pobereka…….7 Sizilira kuthandhzidwa pafupi pafupi…….……8 Ndi choyenera kapena kuti kumandikwanira kuchilira pakhomo……...…..9 Zina (fotokozani)……...…..10	
B20	Kodi munayamba mwachilirapo pakhomo?	Inde……...…….1 Ayi…….……2	
GAWO LACHITATU: MFUNDO ZOKHUZA CHIKHALIDWE/MIYAMBO			
C1	Kodi anapanga ganizo loti muchilire pakhomo ndi ndani?	Mwamuna wanga……...……1 Apongozi anga……...…….2 Mayi anga……...3 Mlamu wanga…….……4 Azamba…….……5 Mng'ono wanga…….……...6 Amalume anga……..…….7 Nzanga..……..……...8 Mchimwene wanga…….……...9 Ndekha.……..……..10 Tinachita mogwirizana ……..……..11 Ena (tchulani)…….……12	Ngati ndi nokha pitani ku funso C3
C2	Nchifukwa	Ali ndi udido pa ife…….1	

	chani munatsatila ganizo limeneli?	Amene amabweretsa ndalama pakhomopo ndi iye……..……2 Kuopera kuti ubale wathu ukhoza kutha…...…….…3 Achibale/azamba amakhala ali pafupi…...…….4 Zina (fotokozani)……...…….5	
C3	Kodi mbanja mwanu amalamulira zofunika kuchita ndani?	Mamuna wanga…….…….1 Ine ndi mamunawanga pamodzi…….……...2 Apongozi anga…….……..3 Ndekha…….……4 Ena (tchulani)…….……5	
C4	Zikhulupiliro zamakolo zomwe mukudziziwa zokhudza kuchira ndi uchembere wabwino ndi ziti?	Mimba ndikuchira ndi zinthu zachibadwidwe zosafunikira kupitila kuchipatala…….1 Mimba yoyamba ayenera kuchilira pakhomo kuti mwamuna adziwe kuti mwanayo ndi wakedi……...….……2 Ngati mzimayi akutenga nthawi kuti achire akuyenera kutchula amuna onse anagona nawo kuti achire mosavuta……..……..……..3 Agogo ndi amene amadaliridwa kuti ali andi nzeru komanso kukhulupiridwa pa nkhani zauchembere ndi kubereka…….……4 Pamene kuchira kwakanika bambo amapemphedwa kuti atsambitse maliseche ndikuti madziwo mkaziyo amwe kuti mkaziyo achire mosavuta..…….…….5 Kukhulupirira mankhwala azitsamba ngati njira imodzi yachisamaliro cha mimba…….……..6 Kukopedwa ndi ntchembere dzikuludzikulu…….….7 Kuopa kukonzekera chinthu chakuti sunachione ndikuti mwanayo azakhala moyo kapena ayi…….…8 Kuti mzimayi achier ndi cholinga cha mulungu ndinso chinthu chachibadwidwe ndipo sipamayembekezeka kuchitika choipsya chiri chonse……...……..9 Mzimayi kuti abereke ndi nkhondo yake imeneyo akuyenera kulimbana nazo yekha……10 Amayi amene amakuna ndi zovuta pobereka ndi amene ayenera kuchilira kuchipatala……...11 Sindinazolowere kuchilira kuchipatala……12 Ndinazolowera kuchilira pakhomo Zina (fotokozani)……..14 ……	

		……..…… ……..…… ……..…… ……..	
C5	Kodi ndi zikhulupiriro ziti za makolo zimene mukudziziwa zokhuzana ndi malo ochilira?	Amayi amane amakumana ndi mavuto ndi amene ayenera kuchilira kuchipatala…….1 Kusazolowera kuchilira kuchipatala……..……2 Ndinazolowera pakhomo……3	
GAWO LACHINAYI: MFUNDO ZOLEPHERETSA ZOKHUZA KUCHIPATALA			
D1	Perekani zifukwa zomwe simunachilire ku chipatala?	Kutalikira kwa chipatala……...……..1 Kudula kwa chipatala……..2 Ndinalibe nthawi…….……3 Ndinayambekeza nthawi yaitali popanda kuthandizidwa..…….……4 Nyengo yoipa/misewu yoipa…….……..5 Abale sanaone kufunikira kochilira kuchipatala…….…….……6 Matenda anayamba mosayembekezera kapenanso kuti anatenga nthawi yochepa…….……7 Matenda anayamba usiku…….……..…….8 Kuvuta kwa mayendedwe…….…….9 Timatenga nthawi yaitali tikuyenda kuti tifike kuchipatala……..…….…….……10 Kusowa kwa chinsinsi kuchipatala……..…….11 Chipembezo sichilola……..……..12 Timaopa kuchidwa opareshoni/ kuchilira mpeni…….…….……...13 Zina(fotokozani)……15 ……. ……...…… ……...…… ……...…… ……...……	
D2	Fotokozerani yankho limene mwapereka pambali	……..…… ……..…… ……..…… …….…..……	

		…….	
D3	Kodi mumayenda pa chani mukapita kuchipatala?	Timayenda pansi……1 Ndimagwiritsa ntchito njinga yanga……..…….2 Njinga yamatola……..3 Ndimagwiritsa ntchito ngolo…….……4 Ndimakwera galimoto yamatola……..……...5 Ndimakwera galimoto yanga……..6 Zina (tchulani)…….……7	
D4	Mumatenga nthawi yaitali bwanji kuti mukafike kuchipatala?	Zosakwana mphindi 10……...……1 Mphindi 10 mpaka 24..……..……...……..2 Mphindi 25 mpaka 60...…….……...……..3 Kupitilira ola limodzi……...……..4 Nthawi zina (tchulani)……...……..5	
D5	Kodi khalidwe la anthu ogwira ntchito kuchipatala kuthandiza amayi oyembekezera ndilotani?	Omvetsa…….……..1 Osakhuzidwa……..…..…….…..2 Amwano……..……..…..……....3 Osasamala ntchito……...……4 Lina (fotokozani)…….5	
D6	Kodi ndimavuto otani omwe amayi amakumano nayo akachilira ku chipatala?	Amayi amangochira okha popanda owathandiza…1 Amayi amachitilidwa nkhanza n`i madokotala…….…….……2 Amapeza kuchipatala kulibe mankhwala ndi zipangizo zina zoyenerera……..……1	
GAWO: MFUNDO ZOLEPHERETSA ZOKHUZA CHUMA NDIKUCHILIRA PAKHOMO			
E1	Kodi ndi mavuto ati azachuma amene mungakuma ne nawo mutafuna ku kuchilira kuchipatala?	Ndalama yokwerera kUpitira ndikubwerera kuchipatala……...……..1 Chithandizo pamene ndili mchipatala…….…….....2 Kusiya zintchito zina mkupita kuchipatala…….……..…..3 Ndalama ya zakudya……..4 Ndalama yolipirira mankhwala…….…5 Kudikira nthawi yaitali pamene ukanamagwira ntchito zina…….6 Kudalira mwamuna wako kuti akupatse ndalama zopitira kuchipatala pamene nthawi zina safuna kutero…….……7 Zina (fotokozani)…….……..8	

GAWO LACHISANU NDI CHIMODZI: KUDZIWA M'MENE AMAYI AMAONERA PAZAKUFUNIKA KOCHILIRA KUCHIPATALA			
F1	Kodi ubwino ochilira kuchipatala ndi chani?	…… …… …… …… …… ……	
F2	Kodi ubwino ochilira pakhomo ndi chain?	…… …… …… ……	
GAWO LACHISANU NDI CHIWIRI: KUDZIWA ZA M'MENE MAYI ALIYENSE AMAONERA ZAKUOPSYA KOCHILIRA PAKHOMO			
G1	Kodi ndi zovuta ziti zimene munthu angakumane nazo chifukwa cholera pakhomo?	…… …… …… …… …… …… …… ……	
G2	Kodi muli ndi mafunso kapena ndemanga?	…… …… …… …… ……	

APPENDIX C: INFORMED CONSENT FORM

CLIENT INFORMATION SHEET

Factors associated with home deliveries

You are being invited to take part in a research study on factors associated with home deliveries. Before you decide to participate in the study, it is important for you to understand why the research is being done and what it will involve. Please ask if there is anything that is not clear or if you would like more information. Participation is voluntary.

What is the purpose of the study?

The aim of this study is to explore factors which influence home deliveries. Home deliveries are associated with poor maternal and neonatal outcomes and yet in Malawi a considerable proportion of women deliver in their homes without skilled attendant. World Health Organization is advocating for institutional deliveries with skilled attendance as an intervention to reduce maternal and neonatal mortality and morbidity. As such, the findings of this study will help to identify strategies that will help increase the uptake of women for health facility delivery with skilled attendance.

Do I have to take part?

You are free to take part or not or to withdraw at any time you feel like without giving reasons. Your refusal to take part in the study will not affect the quality of health care you are going to receive in any way. If you agree to take part you will be asked to sign a consent form. Information about you will be confidential and no one will identify who answered which question as no names will be written on the questionnaires. Code numbers will be used instead. The questionnaire and responses will be destroyed at the end of the study.

If take part what will happen to me?

You will be asked some questions about factors influencing home deliveries. You will be required to respond to the questions and giving explanations and descriptions where necessary. You have to answer the questions truthfully and to the best of your knowledge. The interviews will take about 30 to 45 minutes.

What are the possible risks for taking part?

There are no known risks associated with the study. The probable risks include the psychosocial risks interms of long time of waiting and you may be uncomfortable with some of the questions and topics about your personal situation.

What are the possible benefits of taking part?

There are no immediate benefits to you. The findings of the study will assist in identifying strategies which will help to increase the uptake of women for health facility delivery and improve the maternal and neonatal outcomes.

If something goes wrong, what will happen?
Complaints concerning how you have been treated during the course of the study can be forwarded to Kamuzu College of Nursing

Contact for further information
If you need further information or you are worried about any aspect of the study, please contact Mrs Dorothy Chanza (Cell Number 0888737479) and Dr E. Chirwa (Tel 01873623)

PLEASE READ AND SIGN THIS FORM IF YOU ARE TAKING PART IN THIS STUDY

1. I have read and (or have had another person read to me) the attached information sheet for this study and have understood the purpose of the study and the problems involved.

2. I agree to voluntarily participate in the study, be questioned and provide answers to the best of my knowledge. I understand that I am free to withdraw any time without giving reasons and this will not influence the health care given to me.

3. I know that I do not have to suffer any injury or harm during the research process. The information that I will give to the researcher should not be used against me in future.

4. I understand that my information will be kept confidentially and will only be accessed by the researcher or those people directly concerned with this study.

5. I understand that I will not benefit financially.

6. I know how to contact the researcher if I need to.

……	……	……
Patient's Name	Signature	Date
…….	…….	…….
Name of person taking Consent (If different from Researcher)	Signature	Date
…….	……	……
Researcher's Name	Signature	Date

THANK YOU FOR TAKING PART IN THIS STUDY!

APPENDIX D: ZIFUKWA ZOCHITITSA AMAYI KUCHILIRA KU NYUMBA

Mfundo zofunika kuwerengedwa

Muli kuitanidwa kuti muzatenge nawo mbali mukafukufuku wofuna kuona zifukwa zimene amayi amasankhira kuchilira ku nyumba. Musanapange chisankho ndikofunika kuti mumvetsetse chifukwa chimene kafukufukuyu akupangidwa ndipo chizafunike ndichiyani. Mukhoza kutifunsa ngati pali china chake chimene simunamvetse kapena ngati mukufuna kumva zambiri. Kutenga nawo mbali pa kafukufukuyu sikoumirizidwa.

Kodi cholinga cha kafukufukuyu nchiani?

Cholinga cha kafukufukuyu ndikufuna kudziwa zifukwa zimene zimachititsa azimayi kuchilira pakhomo. Zotsatira zochilira pakhomo sizimakhala zabwino kwa mayi kapena kwa mwana wobadwayo chikhalilecho amayi ena amachilirabe pakhomo popanda azamba aluso lawo owathangatira. A bungwe la zaumoyo padziko lonse lapansi akufunitsitsa amayi azichilira ku chipatala kumene kuli anthu aluso lawo ndi cholinga chakuti imfa ndi mavuto ena amayi apakati zichepe. Chomwecho zotsatira za kafukufukuyu zithandizira kupezeza njira zothandizira kuti amayi ambili azichilira kuchipatala kumene kuli anthu a luso lawo.

Kodi ndingatenge nawo mbali pa kafukufukuyu?

Ndikufuna kwanu kusankha kutenga nawo mbali mukafukufukuyu kapena ayi. Muli ndi ufulu kufuna kusiya nthawi imene mukufuna popanda kupereka zifukwa. Ndipo izi sizingasokoneza chithandizo chimene mungalandire. Ngati mungavomereze kutenga nawo mbali mukafukufukuyu muzafunsidwa kuti mutsindikize chidzindikiro choti mwavomera. Mayankho anu azasungidwa mwachinsisi ndipo sizizadziwika kuti anayankha mafunso awa ndi ndani chifukwa mayina anu sazayikidwa pamapepala a mafunso mmalo mwake tizagwiritsa ntchito manambala. Mapepala amafunso ndimayankho onse zizawonongedwa pomaliza pakafukufukuyu.

Kodi chidzachitike ndi chiyani ngati nditenge nawo mbali?

Mukavomereza kutenga nawo mbali mukafukufukuyu muzafunsidwa mafunso okhuzana ndi zifukwa zimene amayi amachilira pakhomo. Mupemphedwa kuyankha mafunso mmene mukudziwira ndi moona mtima. Kufunsa kwa mafunso kumeneku kudzatha pafupifupi mphindi makumi atatu kapena makumi anayi ndi mphambu zisanu.

Kodi zovuta zimene zingaoneke potenga nawo mbali ndi ziti?

Palibe zovuta zodziwika mukatenga nawo mbali mukafukufukuyu

Patapezeka zovuta zokhuzana ndi kafukufukuyu chingachitike nchiyani?

Ngati pangakhale zovuta kapena nkhawa ina ili yonse yokhuzana ndi kafukufukuyu, khalani omasuka ndikuzeretsa madandaulo anu ku sukulu ya za unamwino ndi uzamba ku Blantyre. Nambala ya foni ndi 01873623
Ma nambala ena ndi ya a Dorothy Chanza 0888737479 ndi ya owayang'anira yao ndi 01874898.

Kodi phindu lake nchiyani?

Sikuti pali phindu lina lake la padera mukatenga nawo mbali. Pali chikhulupiriro chakuti zotsatira za kafukufukuyi zidzathandizira kupeza njira zothandizira kuti azimayi apakati ambiri azichilira kuchipatala chotero tizachepetsa imfa za amayi ndi ana awo obadwawo.

KALATA YA CHIVOMEREZO

Zifukwa zochititsa amayi kusankha kuchilira kunyumba

1. Ndawerenga (kapena wina wandiwerengera) kalata yolongosola za kafukufuku ali pamwambayu ndipo ndanvetsetsa cholinga cha kafukufukuyi ndi zovuta zake.

2. Ndavomereza kutengapo mbali pa kafukufukuyu mosaumirizidwa, kufunsidwa mafunso ndikuyankha mafunso mmene ndingadziwire. Ndanvetsanso kuti ndili ndi ufulu kusiya nthawi ina ili yonse popanda chifukwa ndikuti izi sizidzasokoneza chithandizo ndingalandire.

3. Ndikudziwa kuti sindiyenera kuvulala kapena kupeza vuto munthawi ya kafukufukuyi.

4. Zomwe ndingayankhule kapena kupereka mukafukufukuyu sizidzanditembenukira.

5. Ndikunvetsa kuti zones zomwe ndiyankhule kapena kupereka mukafukufukuyu zidzasungidwa mwachinsisi ndikugwirisidwa ntchito ndi opanga kafukufukuyi kapena okhuzidwa mwachindunji ndi kafukufukuyi.

6. Ndavetsetsa kuti palibepo phindu la ndalama.

7. Ndikudziwa mmene ndikapezere opanga kafukufukuyu ngati ndikofunika kutero.

……..	……..	……
Dzina la otenga mbali	Tsiku	Chitsindikizo
…….	……	……
Dzina la munthu wotsindikiza (ngati akusiyana ndi mwini kafukufuku)	Tsiku	Chitsindikizo
……..	……..	……..
Mwini kafukufuku	Tsiku	Chitsindikizo

ZIKOMO POTENGA NAWO MBALI

APPENDIX E: APPROVAL LETTER FROM COMREC

UNIVERSITY OF MALAWI

Principal

Prof. R.L. Broadhead, MBBS, FRCP, FRCPCH, DCH

College of Medicine
Private Bag 360
Chichiri
Blantyre 3
Malawi
Telephone: 01 877 245
01 877 291
Fax: 01 874 700
Telex: 43744

Our Ref.:

Your Ref.: P.11/09/842

15th February 2010

Mrs Dorothy Chanza
Kamuzu College of Nursing
Blantyre Campus
Blantyre 3

Dear Mrs Chanza,

P.11/09/842 Factors influencing home deliveries in Thekerani, Thyolo

I write to inform you that COMREC reviewed your proposal which you resubmitted for expedited review. I am pleased to inform you that your proposal was approved on 15thFebruary 2010 after considering that you addressed all the queries which were raised during the previous review.

As you proceed with the implementation of your study I would like you to take note that all requirements by the college are followed as indicated on the attached page.

Yours sincerely,

Approved by
College of Medicine
15 FEB 2010
(COMREC)
Research and Ethics Committee

Prof. M.Mfutso-Bengo
CHAIRMAN – COMREC.

JMMB/ck

APPENDIX F: APPROVAL LETTER TO CONDUCT RESEARCH

Telephone: + 265 1 473 411
Facsimile: + 265 1 473 409

All Communications should be addressed to: The District Health Officer:

In reply please quote No.TDH/PF/
Ministry of Health,
Thyolo District Hospital,
P.O. Box 21,
Thyolo.

29th March, 2010

The Principal,
Kamuzu College of Nursing
P.O. B0x ,
Lilongwe 3

Copy : Mrs Dorothy Chanza

RE: REQUEST TO CONDUCT RESEARCH ON THE FACTORS INFLUENCING HOME DELIVERIES IN THEKERANI AREA IN THYOLO DISTRICT

I write to inform you that your request to allow Mrs Dorothy Chanza to carry out a research on "factors influencing home deliveries in Thekerani Area by District Health Managers in Thyolo Hospital" has been approved.

Please, take note that this office must be updated on the findings from the study once completed and a copy of the report be submitted for our action.

Regards.

Dr A. Likaka
DISTRICT HEALTH OFFICER