

**DETERMINANTS OF UTILIZATION OF SKILLED CARE DURING
DELIVERY AMONG WOMEN OF REPRODUCTIVE AGE IN NAROK
COUNTY, KENYA**

BY

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DECLARATION

DECLARATION BY STUDENT

I declare that this research project report is my original work and has not been submitted in any institution of learning for examination purposes.

Signature Date

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L50/70173/2013

DECLARATION BY SUPERVISOR

This research project report has been submitted for examination with my approval as the university supervisor.

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DEDICATION

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	–	Acquired Immuno-Deficiency Syndrome
ANC	–	Ante-Natal Care
CDC	–	Centre for Disease Control and Prevention
CHMT	–	County Health Management Team
CHW	–	Community health Worker
FIGO	-	International Federation of Gynaecology and Obstetrics
GDP	–	Gross Domestic Product
ICM	-	International Confederation of Midwives
ICN	–	International Council of Nurses
KDHS	–	Kenya Demographic and Health Survey
KII	–	Key Informant Interview
MDGs	–	Millennium Development Goals
MMR	–	Maternal Mortality Rate
NGOs	–	Non-Governmental Organizations
PHO	–	Public Health Officer
SBA	–	Skilled Birth Attendant
SPSS	–	Statistical Package for Social Sciences
SRH	–	Sexual and Reproductive Health
SSA	–	Sub-Saharan Africa
TBA	–	Traditional Birth Attendant
UN	–	United Nations
UNDP	–	United Nations Development Programme

UNICEF – United Nations Children Fund

WHO – World Health Organization

ABSTRACT

In Narok County where the present study was conducted; only 18% of children are born in clinical facilities. Narok county has among the worst Maternal and Child Health outcomes in Kenya including a high MMR of 434/100,000 births. Maternal health service coverage is poor: <30% of the population has access to services; 17% attend ANC; 17.6% of pregnant women have skilled assistance at delivery (KDHS 08/09). The study was guided by the following objective which were to: assess the extent to which social characteristics of women influence the utilization of skilled care during delivery among women of reproductive age, examine the extent to which cultural perceptions, determine the extent to which accessibility to health facility contributes to utilization of skilled care during delivery and assess the extent to which the perception on the quality of care at health facility contributes to women delivering in health facilities. The study was guided by the following hypotheses: There is a significant relationship in the social characteristics of women in Loita and utilization of skilled delivery, cultural perceptions of women of reproductive age in Loita Division contribute to utilization of skilled delivery, accessibility to health facility contributes to women utilizing skilled care during delivery in Loita Division and perception on the quality of care at health facilities contribute to women delivering in health facilities. The study used questionnaires and interview data of 40 married women aged 15-49 years to collect data for the study in Loita Division Narok County. The mean age of the sample women was 26 years. The results showed that the uptake of antenatal and delivery services from a skilled birth attendant is unacceptably low in rural Loita Division, which is a challenge for meeting the millennium development goals. The study recommends programmes for improving economic status as a key to improving newborn care practices. As the vast majority of the deliveries are still assisted by traditional birth attendants. Increasing women's access to a skilled birth attendant and boosting the spirit of the TBA to increase their efficiency is also recommended. Future research on before and after birth health check for both mother and child should be done in focus of identifying other determinants of skilled care practices and child survival. Qualitative studies to understand the cultural perspectives of skilled care practices are also recommended.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

In 2000, the largest-ever gathering of heads of state at the United Nations in New York, USA, adopted the UN Millennium Declaration. This historic compact among nations includes eight critical goals—the Millennium Development Goals (MDGs)—for combating poverty and accelerating human development. Under MDG5, countries committed to reducing maternal mortality by three quarters between 1990 and 2015. Since 1990, maternal deaths worldwide have dropped by 45% (World Health Organization (WHO), UNICEF, UNFPA and The World Bank, 2012). Maternal mortality is still unacceptably high. About 800 women die from pregnancy- or childbirth-related complications around the world every day. In 2013, 289 000 women died during and following pregnancy and childbirth. Almost all of these deaths occurred in low-resource settings, and most could have been prevented.

In sub-Saharan Africa, a number of countries have halved their levels of maternal mortality since 1990. In other regions, including Asia and North Africa, even greater headway has been made. However, between 1990 and 2013, the global maternal mortality ratio (i.e. the number of maternal deaths per 100 000 live births) declined by only 2.6% per year. This is far from the annual decline of 5.5% required to achieve MDG5 (WHO, 2014). The high number of maternal deaths in some areas of the world reflects inequities in access to health services, and highlights the gap between rich and poor. Almost all maternal deaths (99%) occur in developing countries. More than half of these deaths occur in sub-Saharan Africa and almost one third occur in South Asia. The maternal mortality ratio in developing countries in 2013 is 230 per 100 000 live births versus 16 per 100 000 live births in developed countries.

There are large disparities between countries, with few countries having extremely high maternal mortality ratios around 1000 per 100 000 live births. There are also large disparities within countries, between women with high and low income and between women living in rural and urban areas (WHO, 2014). Poor women in remote areas are the least likely to

receive adequate health care. This is especially true for regions with low numbers of skilled health workers, such as sub-Saharan Africa and South Asia. While levels of antenatal care have increased in many parts of the world during the past decade, only 46% of women in low-income countries benefit from skilled care during childbirth (WHO, 2014). This means that millions of births are not assisted by a midwife, a doctor or a trained nurse. In high-income countries, virtually all women have at least 4 antenatal care visits, are attended by a skilled health worker during childbirth and receive postpartum care. In low-income countries, just over a third of all pregnant women have the recommended 4 antenatal care visits.

The Kenya Demographic and Health Survey reported that children born in rural areas are twice as likely to be born at home as urban children (KDHS, 08/09). The 2008-09 KDHS found that two out of five births (43 per cent) are delivered in a health facility, while 56 percent are delivered at home. Similarly, 44 percent of births in Kenya are delivered under the supervision of a health professional, mainly a nurse or midwife. Traditional birth attendants continue to play a vital role in delivery, assisting with 28 percent of births. Relatives and friends assist in 21 percent of births.

In Narok County where the present study was conducted; only 18% of children are born in clinical facilities. Narok county has among the worst Maternal and Child Health outcomes in Kenya including a high MMR of 434/100,000 births. Maternal health service coverage is poor: <30% of the population has access to services; 17% attend ANC; 17.6% of pregnant women have skilled assistance at delivery (KDHS 08/09). The majority of maternal deaths in SSA are associated with birth complications related to lack of trained supervision at delivery, with only 10% of maternal deaths attributable to infection or disease. Factors associated with unsupervised deliveries include the education level and wealth of them other, with 84% of children whose mothers have no education being born at home, compared with 30% of those whose mothers have secondary education. Controlled hospital environments, quality of care, skilled personnel and the availability of resources to manage possible complications are considered corner-stones for the achievement of safe motherhood. Despite support for this health message by Ministry of Health guidelines and international programs such as the United Nations Development Programme (UNDP), United Nations Children Fund (UNICEF)

and the Centers for Disease Control and Prevention (CDC), there is little evidence of fundamental change in Kenyan maternal health statistics in the past decade (KDHS, 08/09).

1.2 Statement of the problem

Labor and delivery are the shortest and most critical period during pregnancy and childbirth because most maternal deaths arise from complications during delivery. Even with the best possible antenatal care, it is established that delivery could be complicated and therefore skilled assistance is essential to safe delivery care. For numerous reasons however, many women do not seek skilled care due to cost of service, the distance to the health facility, and quality of care thereby bringing about a low coverage of 18% skilled deliveries despite the various strategies being put in place (KDHS 08/09). Assessment of the trend of skilled delivery services in Loita Division, Narok County compared to antenatal services shows that although antenatal services is at an appreciable level of 52% in 2013, skilled deliveries however is as low as 12%. With the introduction of the free delivery services which is in place to solve the problem of cost of services, it was expected that expectant mothers in the division will take advantage of such strategies to have skilled attendance during delivery which will thereby show a corresponding increase in the coverage of skilled deliveries; but this is however not the case. The coverage of 12% for skilled birth attendance which is below the national target of 65% (Kenya Health Sector Strategic Plan, 2013-2017) is a source of concern and this calls for the need for a study to find out the factors contributing to this low trend of skilled deliveries. In addition to the low trend of skilled deliveries, identifying community attitudes and current practices are an important starting point for behavior change (National Institute for Health and Clinical Excellence.2007).

This study therefore sought to determine the proportion of births attended to by skilled birth attendants, identify the socio- demographic characteristics associated with access to skilled delivery services, and also to establish the barriers to utilization of skilled delivery services by women of reproductive age in Loita Division, Narok County.

1.3 Purpose of the study

The purpose of this study was to identify the determinants of the utilization of skilled care during delivery among women of reproductive age in Narok County.

1.4 Objectives of the study

The study was guided by the following objectives:

1. To assess the extent to which social characteristics of women influence the utilization of skilled care during delivery.
2. To examine the extent to which cultural perceptions contribute to utilization of skilled care during delivery.
3. To determine the extent to which accessibility to health facility contributes to utilization of skilled care during delivery.
4. To assess the extent to which the perception on the quality of care at health facility contributes to utilization of skilled care during delivery.

1.5 Research questions

The study answered the following questions:

1. In what ways do the social characteristics of women contribute to utilization of skilled care during delivery?
2. To what extent do cultural perceptions contribute to utilization of skilled care during delivery by women of reproductive age?
3. To what extent does accessibility to health facility contribute to women utilizing skilled care during delivery?
4. To what extent does perception on the quality of care at health facility contributes to women utilizing skilled care during delivery?

1.6 Research Hypothesis

The study was guided by the following hypotheses:

1. There is a significant relationship in the social characteristics of women and utilization of skilled care during delivery.
2. Cultural perceptions of women contribute to utilization of skilled care during delivery.
3. Accessibility to health facility contributes to women utilizing skilled care during delivery.

4. Perception on the quality of care at health facilities contributes to women utilizing skilled care during delivery.

1.7 Significance of the study

The findings of this study will equip the Government of Kenya, County Health Management Team, local policy makers, NGOs, programmers, other countries and stakeholders at health facilities with the relevant information to inform policy on their health services for quality improvement on health care and especially reproductive health services.

This study will also be useful for future researchers and academicians as it will provide them with reference information for further studies. It is worth noting that this study area has not been widely researched and therefore, the study is significant in that it will contribute to the literature.

1.8 Assumptions of the study

To achieve the objectives of the study, the following assumptions were made:

That the opinions expressed by the respondents were fairly representative of the views of the general population and that these findings were extrapolated to the general population; that the respondents understood the questions; that the respondents were truthful and did not give socially desirable answers.

1.9 Delimitations of the study

The study was conducted among women of reproductive age (15-49 years) in Loita Division, Narok South sub-county, Narok County with children below the age of 2 years. The numbers of respondents who participated were 40 women and 10 key informants. The study variables included; Social characteristics of women; Cultural perceptions of women; Accessibility to health facility; and Perceptions on the quality of care at health facilities.

1.10 Limitations of the study

There was worry that vastness of Loita Division and the rough terrain especially when it rains might interrupt data collection. This was solved by starting data collection in the morning to cover a wide area and avoid the rains that mostly rain in the evenings.

The researcher also expected the problem of fear from the respondents as respondents might be reluctant to provide the required information; this was solved however by the researcher first informing the respondents the purpose of the study and assuring confidentiality.

1.11 Definition of significant terms

Skilled care

Skilled care refers to the care provided to a woman and her newborn during pregnancy, childbirth and immediately after birth by an accredited and competent health care provider who has at her/his disposal the necessary equipment and the support of a functioning health system, including transport and referral facilities for emergency obstetric care.

Social characteristics

These are the distinguishing features of the respondents used in this study they include; age at the time of the survey, religion, marital status, family composition, education, employment status and occupation. This information is useful for understanding the factors that influence reproductive behaviour as they provide a context for the interpretation of demographic and health indices.

Cultural perceptions

This refers to beliefs, norms and values of specific ethnic groups in relation to pregnancy, childbirth and utilization skilled care services.

Accessibility to health care

This refers to ease of reach or use. It includes physical proximity of health care services and availability of transport means to the health facility.

Perception on the quality of care

This refers to a consumer's opinion of a health facility's services and personnel's ability to fulfill his or her expectations. It may have little or nothing to do with the actual excellence of the services received.

Skilled birth attendant

The World Health Organization (WHO) defines a skilled birth attendant (SBA) as “an accredited health professional such as a midwife, doctor or nurse- who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of obstetric complications (complications in women and newborns)”.

Maternal Mortality Rate

The maternal mortality rate (MMR) is the annual number of female deaths per 100,000 live births from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes). The MMR includes deaths during pregnancy, childbirth, or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, for a specified year.

1.12 Organization of the study

The study is organized into five chapters. Chapter one contains the introduction to the study. It presents background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, and significance of the Study, assumptions, and limitations of the study, delimitations of the study and the definition of significant terms.

On the other hand, chapter two covers literature based on the objectives of the study, theoretical framework, the conceptual framework and finally the summary.

Chapter three covers the research methodology of the study. The chapter describes the research design, target population, sampling procedure, tools and techniques of data collection, pre-testing, data analysis, ethical considerations and finally the operational definition of variables.

Chapter four consists of the response rate, demographic information of respondents, findings on social characteristics, cultural perceptions, accessibility to health facilities and quality of care at health facilities and testing of hypotheses 1 to 4.

Chapter five entails summary of findings, discussion of findings, recommendations and suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides an extensive literature and research related to barriers to utilization of skilled delivery services by women of reproductive age and it summarizes a diverse spectrum of the same. The chapter is thus structured into; the past studies of what other researchers have done on the same, theoretical review, conceptual and empirical review. The study also presents the knowledge gap the chapter seeks to fulfill.

2.2 Social characteristics of women and utilization of skilled care during delivery among women of reproductive age

Social factors primarily influence decision-making on whether to seek care, rather than affecting whether women reach a facility. One could conceptually distinguish the mother's own motivation to use services from whether she can act on her wishes hence it depends on decision-making of both mother and her family (Gage, 2007).

Age is often presented as a proxy for accumulated experience, including in the use of health services (Burgard, 2004). Older women are also possibly more confident and influential in household decision-making than younger women and adolescents in particular (Glei et al., 2003). Furthermore, older women may be told by health workers to deliver in a facility since older age is a biological risk factor (Bell et al., 2003). On the other hand, older women may belong to more traditional cohorts and thus be less likely to use modern facilities than young women (Navaneethan and Dharmalingam, 2002). Age is highly correlated with parity, and, in some settings, with educational level. It is also associated with marital status, wantedness of a pregnancy, socioeconomic status and decision-making power (Magadi et al., 2007). Most studies on determinants of delivery service use consider age; those with a multivariate analysis (i.e. controlling for parity) find either no effect of age or a higher use of skilled attendance among older mothers compared to younger mothers.

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. On the other hand, single mothers may be stigmatized and prefer to deliver at home because they anticipate a negative provider interaction (Duong et al., 2004). Several studies include marital status and find no association with skilled attendance (Nwakoby, 1994), while some find less facility use among married women (Letamo and Rakgoasi, 2003). Studies used a variety of groupings and some did not adjust for confounders, making results difficult to interpret. One study looked separately at monogamously married, polygamous married, never-married and formerly-married mothers in six African countries. Results vary from showing no association (Tanzania, Ghana, and Burkina Faso), to monogamous women seeking care more often than the other groups (Ivory Coast and Kenya), and to formerly-married and polygamous women seeking more care (Malawi) (Stephenson et al., 2004).

Women with young children may have difficulties finding child-care while they deliver at a health facility, in particular if they live in a nuclear family. Sometimes women are accompanied by family members during their hospital visits, so that even these cannot take care of other children during the time (Duong et al., 2004). In addition to influencing the ease of leaving home, living with an extended family may also influence decision-making power of the woman; and the number of small children at home may also be a proxy for socioeconomic status, which may be hard to control for.

Few studies consider family composition. Some find a significant influence of the number of births in the previous five years on whether the mother delivered the index birth in a health facility (Mekonnen and Mekonnen, 2003). Other studies however do not find any association of preceding birth interval (as a measure of age of the youngest preceding child, of number of children under five in the household or of the ratio children to adults in the household with facility delivery (Magadi, Diamond and Rodrigues, 2000).

There are multiple potential pathways that could explain why "maternal education is consistently and strongly associated with all types of health behavior" (Bell et al, 2003). 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 (Thaddeus and Maine, 1994).

Education also reflects a woman's childhood background, including familiarity with health services and certain beliefs and norms, and some recommend this should be controlled for (Navaneetham and Dharmalingam, 2004). It has also been suggested that there may be community effects of education, with more highly educated communities organizing themselves and demanding better public services and a higher position for health on the political agenda. By contrast, better awareness of poor quality in many facilities and higher confidence in self-care may delay care-seeking among educated women. Furthermore where strong public health programs reach out to disadvantaged sectors of the population, the education gradient in health service use may be small.

Education is likely to be associated with wealth and even residence. Adjusting for current wealth will measure the direct effect of education, excluding its indirect effect through improved living standards (Singh et al., 2002). It is also important to control for confounding by maternal age since average education levels may have changed substantially over time. With few exceptions, all studies in the field include maternal education and find a strong and dose-dependent positive effect of educational level on use of skilled attendance, but levels of education are classified differently. For example, in most African settings, effects of primary education versus no education are already well discernible. In Tajikistan, where most women have secondary education and 40% delivered at home in 1998, there is no differential in service use up to secondary education, but those with higher education are more likely to deliver in a facility than the rest (Addai, 2000).

Where the contextual effect of education is considered by including the percentage of women with secondary education in each cluster, it is highly predictive of an individual woman's

facility use for childbirth in most of the African countries studied, more so than the also substantial individual education effects (Stephenson and Tsui, 2002). In Haiti and Mali the concentration of adults (not just women) with secondary education is also associated with facility delivery but is restricted to women who had lived in the area for at least 5 years in Mali, and in Haiti the association was weakened and lost significance when individual-level variables were added to the model (Gage and Guirlane, 2006).

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. 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. Considerations concerning confounding and pathways are similar to those described for mother's education. Nearly all 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 (Short and Zhang, 2004).

The various dimensions of autonomy, such as position in the household, financial independence, mobility and decision-making power regarding one's own healthcare, may all impact on health facility use. In many countries, women cannot decide on their own to seek care, but have to seek permission from a husband or mother-in-law. Furthermore, women may lack control over material resources needed to pay for expenses, their mobility may be restricted or they may lack access to vehicles or even bicycles or donkeys. However, women's informal power in the household may mitigate some of the above. The interpretation of various measures of autonomy depends on the context – women who take decisions alone in a context where this is unusual, "might be relatively isolated, unsupported individuals and not autonomous agents". As such they may have resource constraints and be less likely to use services (Furuta and Salway, 2006).

Women's status, as it reflects on the importance attached to female health also plays a role. "Sex discrimination as a contributory factor to maternal mortality has been largely ignored, [and] has been hidden within the general issue of poverty and underdevelopment which is

assumed to put everyone... at an equal disadvantage in health terms." Autonomy and status effects are likely to be modified by age, education, marital status, wealth and parity (Gage, 2007). Several studies examine the effect of autonomy dimensions on use of skilled attendance at delivery. Most find significant associations for at least some dimensions, but which ones are important varies from study to study. Dimensions studied include freedom of movement, aspects of decision-making, control over earnings, communication and sharing of housework with the husband, sex of household head and presence of the mother-in-law in the household.

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.

Variables associated with occupation may include education, wealth and place of residence and these may act as confounders. Relatively few studies include women's occupation. Several find that farming women are less likely to have skilled attendance at delivery than women in other occupations (Nwakoby, 1994; Hodgkin, 1996). This may stem from limited financial resources and health services in rural areas – wealth and place of residence were not always adjusted for. A number of studies do not find any effect of maternal working status or occupation (Toan et al., 1996), while others find that formally employed women are more likely to use delivery services. In two Southern Indian states and in Nepal, however, working women are less likely to use services than non-working women, which may signify that working is poverty-induced in that context. Another study in Bangladesh found an interesting interaction effect: There is a large differential in delivery service use favoring gainfully employed women among those living more than 1 hour travel time from a health centre, while employment status does not play a role among those within 1 hour travel time. This could be due to employed women being better equipped to overcome access barriers including transportation costs or female mobility limitations (Stekelenburg et al., 2004).

2.3 Cultural perceptions and utilization of skilled care during delivery among women of reproductive age

Health care seeking may be influenced by the cultural backgrounds, beliefs, norms and values of specific ethnic groups and religion. Ethnicity and religion are often thought to influence beliefs, norms and values in relation to pregnancy, childbirth and utilization of services. Moreover, certain ethnic or religious groups may be discriminated against by staff, making them less likely to use services (Glei et al., 2003).

In his study, Fishbein (2000), suggest that Christian and Muslim women were more likely to use maternal health services than traditional and other religions. This result is consistent with other studies. This may be because women with traditional religion may be less modern and more inclined to traditional beliefs. Regarding ethnicity, Wolaita ethnic groups were less likely to use skilled ANC and delivery care than other ethnic groups. The reason for the low maternal health service utilization by the Wolaita ethnic group may be due to the fact that these ethnic groups culturally may not support facility delivery due to their cultural beliefs and values on maternal health care, and this needs further qualitative study to explore the detailed reasons.

A study by Shiferaw (2007) identified that one of the most important reasons for not seeking institutional delivery in Ethiopia was the belief that it is not necessary and not customary. A study in Vietnam also showed that the risk of not giving birth in a health facility increased significantly among ethnic minority women living in rural areas. Further qualitative investigation on the effects of cultural practices is required. Studies done in developing countries showed that maternal health services utilization is affected by ethnicity, culture and religion of women. This was explained by the fact that women's autonomy, gender relationships and social networks are affected by ethnicity, culture and religion (Gyimah et al., 2006); Mekonnen and Mekonnen, 2003). More specifically, women in some cultures may avoid facility delivery due to cultural requirements of seclusion in the household during this time of "pollution" (Mesko et al., 2003) or because of specific requirements around delivery position, warmth, and handling of the placenta. In some cultural groups in Africa, the belief that obstructed labor is due to infidelity hinders care-seeking (Thaddeus and Maine, 1994).

Beliefs that birth is a test of endurance, and care-seeking a sign of weakness may be another reason for delivering alone in some contexts (Kyomuhendo, 2003).

Most Latin American studies find that indigenous women are less likely to have skilled attendance at delivery. Ethnic minorities in China, Kurds in Turkey, and members of scheduled castes/tribes in India, Catholics in Vietnam and non-whites in South Africa are also less likely to receive skilled care. In Ghana, no ethnic differences were detected, but members of traditional religions and Muslims are less likely to use delivery services as compared to Christians. Several other studies report no ethnic or religious differentials for their settings (Bell et al., 2003). Fewer studies look at beliefs and attitudes directly. Those that do, find that women holding biomedical health beliefs, those who had used family planning and those who did not mind being delivered by a male provider are more likely to use skilled providers. Using traditional medicines is not associated with skilled care in two studies, neither is the presence of ayurvedic providers and traditional birth attendants (TBAs) in the community in a study in Uttar Pradesh (Stephenson and Tsui, 2002).

2.4 Accessibility to health facility and utilization of skilled care during delivery among women of reproductive age

Physical accessibility is one of the most important variables in health service utilization. Several studies have identified that physical proximity of health care services plays an important role in service utilization (Gage, 2007). 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. Many pregnant women do not even attempt to reach a facility for delivery since walking many kilometers is difficult in labor and impossible if labor starts at night, and transport means are often unavailable. Those trying to reach a far-off facility often fail, and women with serious complications may die (Thaddeus and Maine, 1994).

The obstacle effect of distance is stronger when combined with lack of transport and poor roads, and its disincentive effect is less pronounced if women have serious complications or the reputation of the provider is good. Even where facilities are conveniently located, they are underused if their quality is considered bad. Where people have the choice between several

facilities, they sometimes travel further if the target facility is perceived to offer superior quality care (Thaddeus and Maine, 1994). It would thus be useful to consider distance together with service quality and transport options. It has been argued, that in common with rural place of residence, "distance to hospital also captures other aspects of remoteness such as poor road infrastructure, poor communication between communities, poverty, limited access to information, strong adherence to traditional values and other disadvantages that are difficult to measure quantitatively" (Reynolds et al., 2006). Despite general acknowledgement of its importance, distance or travel time to health facilities is not regularly considered in studies on determinants of skilled attendance, partly due to inadequate data (Stephenson and Tsui, 2002; Gage and Guirle, 2006; Thaddeus and Maine, 1994). However, a number of studies have examined the effect of distance. Some also considered road quality, bus services or household transportation means (Potter, 1988).

Many qualitative studies mention distance as an important deterrent from delivering in facilities, in particular when labor starts unexpectedly or at night and in the absence of transport options (Mesko et al., 2003). A study in Maharashtra, however, reported that unexpectedly two women from the remotest village had delivered at a distant private hospital, because "the distance from their village to the primary health centre made them skeptical about delivering at home in the village in case complications occurred" (Celik, 2000).

The vast majority of quantitative studies that include distance report less use of skilled attendance at delivery in women living far away from a facility. Some however find no effect of distance: One such study in Cambodia (Yonagisawaoum and Wakai, 2006) found that distance from both health centre and hospital had a strong deterrent effect on health facility use for childbirth in bivariate, but not multivariate analyses. The study controlled for birth attendant at the preceding delivery, which is likely to be a very good proxy for physical access to services, potentially better than distance itself which does not contain information on transport options or whether the facilities are functional at all. This may partly explain the loss of significance of the distance variables in the multivariate model. In two other settings where distance does not seem to play a role, the authors reported that health care and transport infrastructure in the area are good (Duong et al., 2004), and thus distance differentials are probably small and unimportant. Even small distances can pose a barrier,

however, as shown in Bangladesh, when transport difficulties and cultural barriers augment their effect. In the most extreme cases, the odds of having skilled attendance are only one fifth for women in the most distant category as compared to women close-by ((Yonagisawaoum and Wakai, 2006).

Two studies reported interesting interactions. Potter found in rural Mexico that road quality ceases to matter when a village is more than 25 km away from a market and Pebley described an interaction with ethnicity in Guatemala: Ladino women living far away from a clinic are less likely to use formal delivery care than those nearby, while there is no such effect for indigenous women. The latter seem to rely on TBAs no matter how close a clinic is, probably due to other barriers. In fact, non-Spanish speaking indigenous women have only 1/100 and Spanish speaking indigenous women 6/100 the odds of ladinas of having formal delivery assistance (Pebley, 1996).

2.5 Perception on the quality of care at health facilities and utilization of skilled care during delivery among women of reproductive age

Perceived quality of care, which only partly overlaps with medical quality of care, is thought to be an important influence on health care-seeking. Assessment of quality of services "largely depends on people's own experiences with the health system and those of people they know." (Thaddeus and Maine, 1994). Although some elements such as waiting times can be measured objectively, the perception of whether these are a problem and affect quality is more subjective. Elements of satisfaction cover satisfaction with the outcome, the interventions and with the service received – including staff friendliness, availability of supplies and waiting times. In many cases, the medical 'culture' may clash with the woman's, for example, when family members are not allowed to be present, supine birthing position is imposed or privacy not respected; this may lead to perceptions of poor quality. Some studies mention that women report better quality of care in private facilities, but that cost deters them from using those (Mrisho et al., 2007).

Perceived interpersonal quality of care overlaps to some extent with traditional beliefs and possibly sometimes with ethnic discrimination. Concerns about quality interact with other barriers, for example with distance or cost. Objective measures of quality of care such as

facility infrastructure, equipment and staffing are associated with physical accessibility, access to information and other aspects of remoteness such as poverty and traditional values (Thaddeus and Maine, 1994).

Nearly all qualitative studies of service use in the literature report quality of care to be an important issue, with staff attitudes featuring prominently. Many women report dissatisfaction with rude, arrogant and neglectful behavior at health facilities and prefer the care of a TBA or relative. In several settings women complain about culturally inappropriate care, for example in Hoima district in Uganda providers urge women not to express pain openly. Shortcomings in personal care at facilities are often coupled with shortcomings in hygiene and medical care. Women criticize dirty toilet facilities, lack of water and aseptic practices as well as lack of necessary drugs or too early Caesarean sections (Kyomuhando, 2003).

Few quantitative studies assess quality of care. A Vietnamese study found that women who delivered in a facility give a significantly higher average quality score for "health care delivery", but not for "communication and conduct of personnel" as compared to women who delivered at home (and who judged these quality aspects from others' experience or earlier contacts with the facility) (Duong et al., 2004). Another study in a rural district of Zambia found no effect of perceived quality of care on service use; however, service satisfaction levels were 96%. Facility delivery is associated with higher total number of doctors in the facilities of the area where the woman lives in Uttar Pradesh, but not with staffing levels or drug stock-outs in Paraguay, Uganda or Tanzania. Studies in Morocco and Burkina Faso also found no significant effect of number of health workers or infrastructure on delivery in a facility. A survey in Afghanistan also failed to find an effect of presence of obstetric equipment, but equipment levels were shockingly low overall (Thaddeus and Maine, 1994).

Antenatal care (ANC) services can provide opportunities for health workers to promote a specific place of delivery or give women information on the status of their pregnancy, which in turn informs their decisions on where to deliver. Risk assessment during ANC may explicitly recommend a place of delivery, for instance to deliver in a hospital for a twin pregnancy. On the other hand, women who are told their pregnancy is fine may feel encouraged to deliver without a skilled attendant. In Uganda, a study described that nurses

abuse women without ANC cards and hinder their admission for delivery services; this deters women who did not use ANC from seeking delivery services (Grosse, 1989).

ANC attendance can be a marker of familiarity in interacting with the health system and with the health facility. Women who use ANC may therefore be more likely to use facilities for delivery. Alternatively, use of ANC may signify availability of a nearby service, which may also provide delivery care. In many settings, however, ANC is also provided by mobile clinics and small facilities that do not offer delivery services. Moreover, while timing for ANC is flexible and the service free in most places, this is not true for delivery services (Toan et al., 1996). Any observed association between ANC use and facility use for delivery is always suspect of arising from confounding by other factors, in particular availability of and access to services, since those women closer to facilities are more likely to go to both. Other confounding factors may be knowledge of pregnancy risks and attitude towards health services, complications and most other factors influencing service use. When examining the effect of other determinants on use of skilled attendance, controlling for ANC use may be inappropriate as it is likely to be on the causal pathway (Thaddeus and Maine, 1994).

About a quarter of studies investigating determinants for skilled attendance at delivery assess the role of ANC use as a predictor. Some find no effect but most find that women who use ANC are much more likely to receive skilled attendance at delivery. The presence of a health worker providing ANC in the community can also increase use of skilled attendance, as described for Haiti. A study in Mali found that the level of antenatal care uptake in the enumeration area is highly predictive of individual women's health facility use for delivery, even when controlling for individual ANC use, which suggests that area-level use may be a proxy for other factors including accessibility (Brentlinger et al., 2005).

Women who delivered with a skilled attendant previously become more familiar with this setting, which may make them more likely to use it again. Also most determinants, particularly those that do not change (e.g. education, place of residence, beliefs) which influence a previous place of delivery, are likely to operate in the same fashion again. Even more than for ANC, any observed association between previous and subsequent facility delivery use is likely to be confounded by availability of and access to services, attitude towards health services, previous complications, knowledge about pregnancy risks and

various other factors. Naturally, the same determinants that played a role for previous use are likely to influence present use (Bell et al., 2003).

The 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 (Navaneethan and Dharmalingam, 2002). Furthermore, health workers may recommend a facility delivery for primipara. By contrast, 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. Very high-order births, however, are more risky. Additionally, women with several small children may have greater difficulty in attending facilities due to the need to arrange child care (Flo IT, 1992; Stephenson and Tsui, 2002).

In one setting, referrals for free tubal ligation in public hospitals after delivery were seen as an incentive for older women to seek a facility birth, but we interpret this as an effect of higher parity rather than age. In China, the one-child-policy deters women with higher order pregnancies from using services for fear of punishment. High parity may reflect a lack of access to family planning services which may be associated with lack of access to delivery care. High parity can also indicate traditional attitudes, and sometimes lower socioeconomic status which is hard to control for adequately. Most studies in the field consider the effect of parity on delivery service use. The vast majority find higher levels of service use for the first and lower order births as compared to higher order births (Thaddeus and Maine, 1994).

Complications experienced during previous deliveries or loss of the newborn can make women aware of the dangers of childbirth and the benefits of skilled interventions and thus make them use skilled attendance for subsequent deliveries. Furthermore, women with specific medical interventions in a previous delivery, e.g. a Caesarean section, will be encouraged by health workers to seek skilled care for subsequent deliveries since there is an increased risk for rupture with a scarred uterus (WHO, 1999).

Another possible pathway is that problems experienced during the index pregnancy can make women seek antenatal health services and health workers may then recommend health facility delivery. Finally, complications during an attempted home delivery often influence women

and their families to seek professional care, even though the original intention was to deliver at home. Alternatively, a precipitate labor may mean a woman intending to deliver in a facility ends up delivering at home or on the way (WHO, 1999).

The type and severity of complications that lead to a change in place of delivery depend on the perception of what is abnormal and what is amenable to medical treatment. As mentioned earlier, the factors involved in decision-making are likely to differ for preventive facility deliveries and for emergency care-seeking of attempted home deliveries that run into problems. In the latter case, the severity of complications may override the perception of barriers like distance and cost. Presence of complications could thus be an effect modifier for other barriers. People who consider "normal deliveries" or minor problems as not justifying cost, time and travel to a facility may attempt to overcome those barriers if there is danger to life, even if the cost is much higher (Thaddeus and Maine, 1994).

Many studies in settings with low levels of skilled care find that a large proportion of women say they have facility deliveries because they experienced complications. While few quantitative studies investigate the role of complications, those that do mostly find that at least some types of current or previous complications are associated with health service use for delivery. In one study, facility delivery is associated with prolonged labor, while another study did not detect any association with prolonged labor or bleeding, but found one with breech delivery (Gage, 2007).

2.6 Theoretical Framework

This study was based on two theories: Theory of reasoned action and Health Belief Model.

2.6.1 Theory of reasoned action

The Theory of Reasoned Action was originally developed by Fishbein and Ajzen (1975, 1980) as a general model of behavioral prediction. According to the model, behavior is a function of intention to behave in a particular manner. Intention, in turn, is a function of an individual's attitude about the act and the subjective norm regarding the behavior. The attitudinal component of Theory of Reasoned Action consists of the individuals' perception about consequences of the act, as well as the evaluation of those consequences. Its assumptions are that they assumed that individuals are usually quite rational and make systematic use of information available to them. People consider the implications of their actions before they decide to engage or not engage in a given behavior" (Ajzen & Fishbein, 1980). This theory provides a framework to study attitudes toward behaviors.

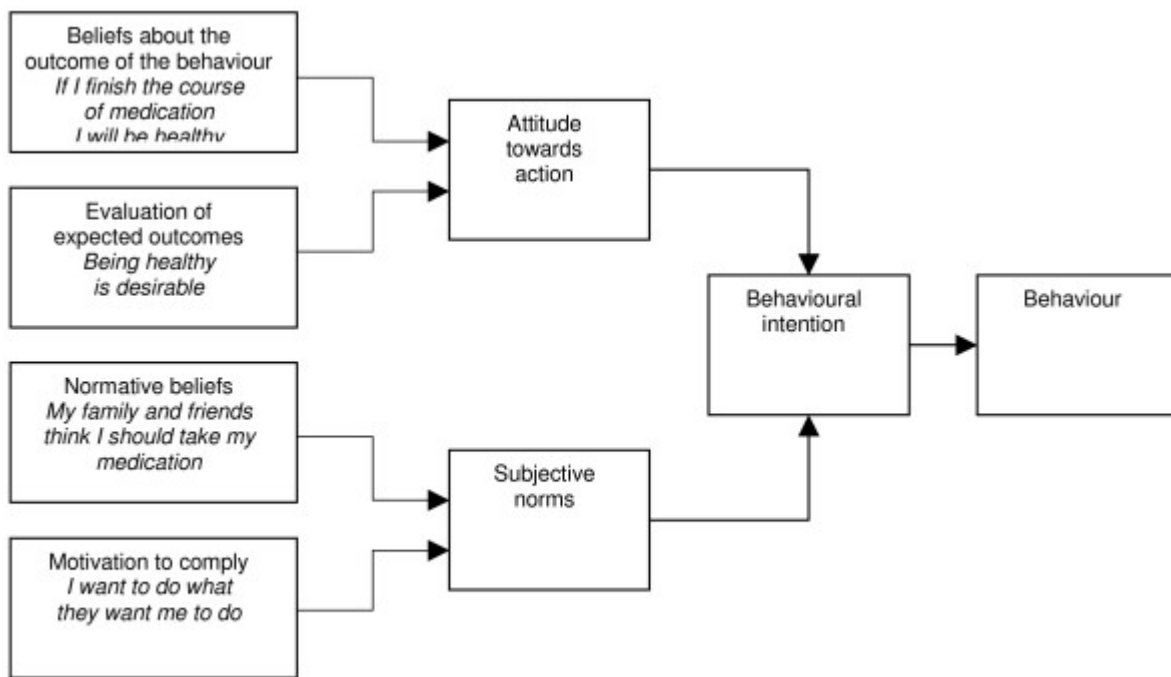
If a person perceives that the outcome from performing a behavior is positive, she/he will have a positive attitude toward performing that behavior for instance, if a woman believes that by delivering in hospital she will lessen her chances of dying while delivering, then she will have to deliver in hospital for every birth. The opposite can also be stated if the behavior is thought to be negative. However if one perceives that delivering in a health facility is not effective then she will develop a negative attitude towards its use (Ajzen & Fishbein, 1980).

If relevant others see performing the behavior as positive and the individual is motivated to meet the expectations of relevant others, then in this context she tries to search for any subjective norms from partners on delivering in a health facility. For instance how women feel about whether or not their partners or significant others approve or disapprove delivering in a health facility. This also involves who makes decisions on skilled delivery. If relevant others see the behavior as negative and the individual wants to meet the expectations of these "others", then the

experience is likely to be a negative subjective norm for the individual. In a nutshell, this theory covers two components of theory of reasoned action; the attitudinal component and the normative component (Ajzen & Fishbein, 1980).

The attitudinal component of theory of reasoned action consists of the individuals' perception about consequences of the act, as well as the evaluation of those consequences. This entails how individual feel towards skilled delivery in terms of its positive and negative consequences for instance harsh treatment by facility staff, language barrier, and any others. The goal of this theory is to guide the study in trying to get all the attitudes that women have towards skilled care during delivery and more so if those attitudes are deterrent factor in delivering in health facilities especially in this study (Ajzen & Fishbein, 1980).

Theory of reasoned action diagram



Adapted from Stroebe, 2000

2.6.2 Health Belief Model

The Health Belief Model (HBM; Becker, 1974) is based upon the premise that perceived severity of consequences, perceived susceptibility to consequences, and perceived benefits of preventive behavior and perceived barriers to taking action all contribute to engagement (or lack of engagement) in health-promoting behaviour. A stimulus, or cue to action, must also be present in order to trigger the health-promoting behaviour.

Perceived severity refers to subjective assessment of the severity of a health problem and its potential consequences. The health belief model proposes that individuals who perceive a given health problem as serious are more likely to engage in behaviours to prevent the health problem from occurring (or reduce its severity).

Perceived susceptibility refers to subjective assessment of risk of developing a health problem. The health belief model predicts that individuals who perceive that they are susceptible to a particular health problem will engage in behaviours to reduce their risk of developing the health problem. Individuals with low perceived susceptibility may deny that they are at risk for contracting a particular illness.

Health-related behaviours are also influenced by the perceived benefits of taking action. Perceived benefits refer to an individual's assessment of the value or efficacy of engaging in a health-promoting behaviour to decrease risk of disease. If an individual believes that a particular action will reduce susceptibility to a health problem or decrease its seriousness, then he or she is likely to engage in that behaviour regardless of objective facts regarding the effectiveness of the action.

Perceived barriers refer to an individual's assessment of the obstacles to behaviour change. Even if an individual perceives a health condition as threatening and believes that a particular action will effectively reduce the threat, barriers may prevent engagement in the health-promoting behaviour. In other words, the perceived benefits must outweigh the perceived barriers in order for behaviour change to occur. Perceived barriers to utilizing skilled delivery services include the

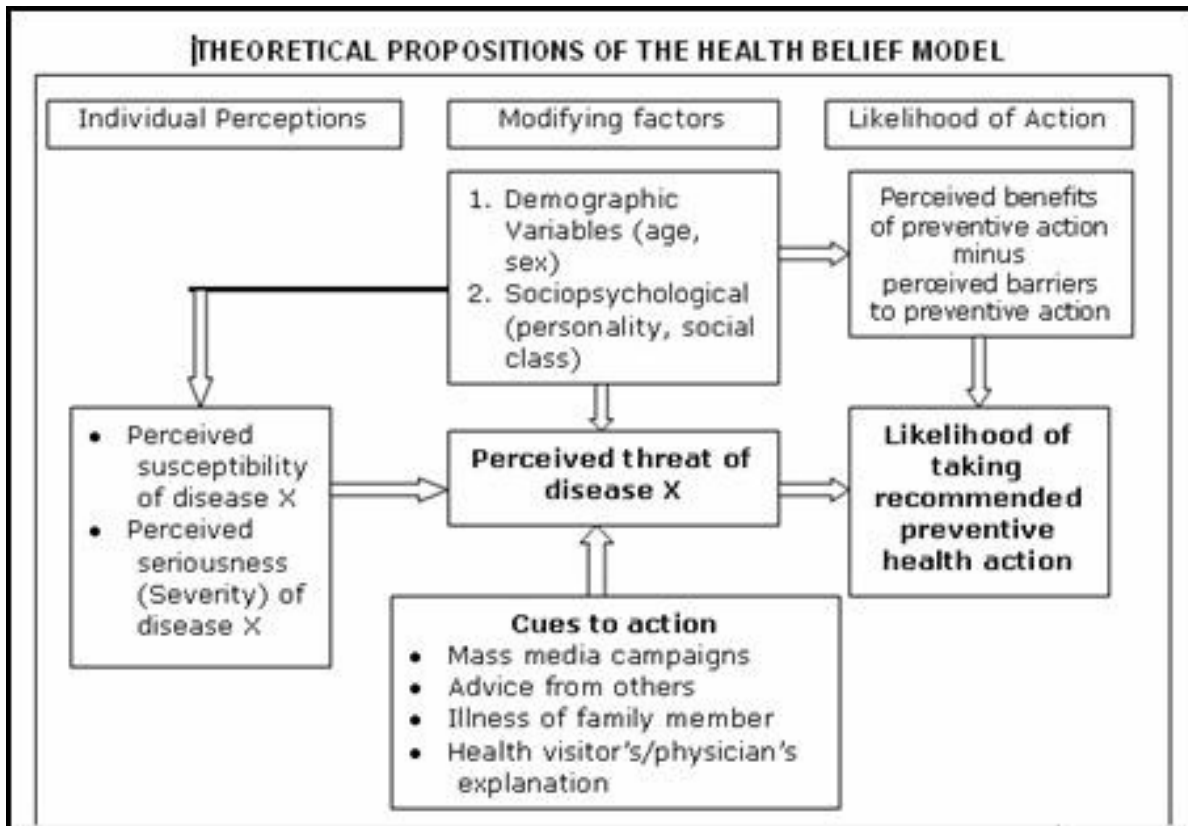
long distance to health facilities, expense, and harsh treatment by medical staff etc. involved in accessing the services.

The health belief model suggests that modifying variables (Individual characteristics, including demographic, psychosocial, and structural variables) affect health-related behaviours indirectly by affecting perceived seriousness, susceptibility, benefits, and barriers.

The health belief model posits that a cue, or trigger, is necessary for prompting engagement in health-promoting behaviours. Cues to action can be internal or external. Physiological cues (e.g., pain, symptoms) are an example of internal cues to action. External cues include events or information from close others, the media, or health care providers promoting engagement in health-related behaviours. The intensity of cues needed to prompt action varies between individuals by perceived susceptibility, seriousness, benefits, and barriers.

Self-efficacy was added to the four components of the health belief model (i.e., perceived susceptibility, seriousness, benefits, and barriers) in 1988. Self-efficacy refers to an individual's perception of his or her competence to successfully perform behaviour. Self-efficacy was added to the health belief model in an attempt to better explain individual differences in health behaviours.

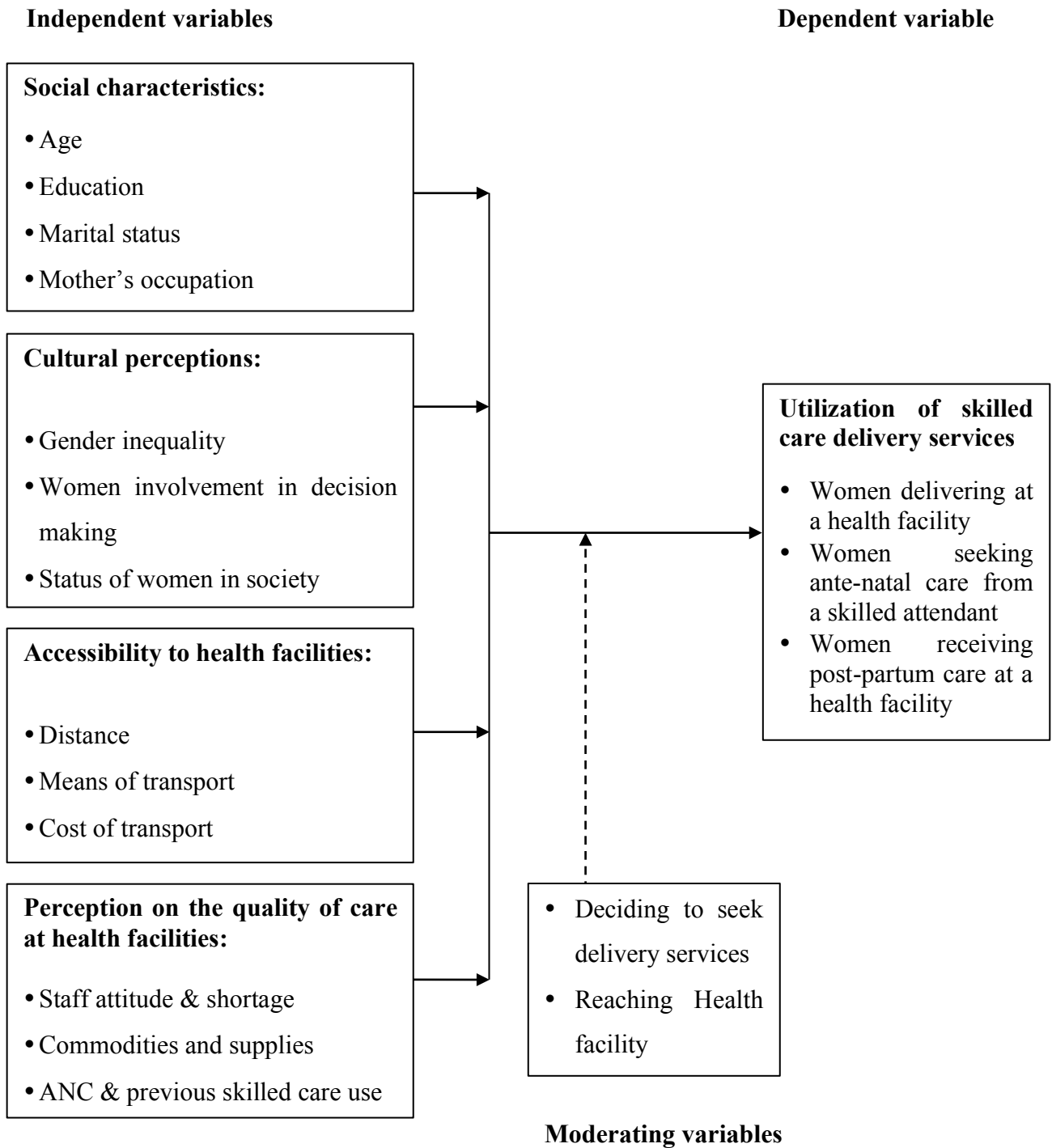
Figure 2: Theoretical propositions of the health belief model



2.7 Conceptual Framework

A conceptual definition is an element of the scientific research process, in which a specific concept is defined as a measurable occurrence or in measurable terms; it basically gives one the meaning of the concept (Mugenda & Mugenda, 2003). Conceptual framework is a diagrammatic presentation of the relationship between dependent and independent variables. In this study, the dependent variable will be utilization of skilled care delivery services while the independent variables will be the determinants to utilization of skilled care.

Figure 3: Conceptual framework



This framework considers a person's related factors as well as health facility factors. The person related factors include different factors that may influence women's delivery service. The demographic background characteristics such as the variables age of mother at delivery and birth order, and the socioeconomic variables such as maternal marital status and maternal education reflect the individual's own influence on use of health facilities for delivery. These factors determine the perceived benefit and need of facility use. It also considers how community attitudes influence family decision making with the location of residence influencing other factors. Knowledge on skilled birth attendance is also an important factor and all these together have influence on the decision to seek care.

Economic and geographical accessibility mainly influence whether the woman actually reaches the facility. The health facility factors are related to availability of skilled delivery services as well as the quality of care rendered in terms of waiting time and staff attitude.

2.8 Summary of Literature Review and gaps to be filled

A number of researches have been carried out in several parts of the world on skilled care during delivery with majority of maternal deaths occurring in Sub-Saharan Africa and are associated with birth complications related to lack of trained supervision at delivery. The research therefore was intended to identify the determinants of the utilization of skilled care during delivery among women of reproductive age. This chapter highlights the theoretical reviews of literatures which were guided by the objectives and explained under different sub-topics which are; social characteristics of women, cultural perceptions, accessibility to health facilities and perceptions on the quality of care at health facilities all related to utilization of skilled care during delivery. The chapter also highlighted the conceptual framework, relationship between variables and research gaps.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the methodology the researcher used when collecting data: the research design, target population, sampling design, sample size, data collection instruments and data analysis and presentation methods used.

3.2 Research Design

The study adopted descriptive survey research design. A descriptive design is concerned with determining the frequency with which something occurs or the relationship between variables (Bryman & Bell, 2003). Thus, this approach was appropriate for this study, since the study collected detailed information through descriptions and was useful for identifying variables. Mugenda and Mugenda, (2003) noted that a descriptive design seeks to obtain information that describes existing phenomena by asking questions relating to individual perceptions and attitudes. Descriptive studies can be divided into two roles – those studies that emphasize features of a new condition and those which describe the status of communities or populations.

The descriptive survey design was also suitable for this study due to several reasons. One, it enabled the researcher to obtain original information from a population that was to be observed directly and the survey design facilitated collection of the required data. Secondly it enabled collection of data that describes existing phenomenon by asking individual about their perceptions, attitudes, behaviors and values. Thus information on reasons behind it was obtained directly from the population. Thirdly, the survey enabled the exploration of the existing status of two or more variables at a given point in time. The design was also appropriate in trying to establish the determinants to utilization of skilled delivery services by women of reproductive age.

3.3 Target Population

The target population included all hospital staff of Loita Division Hospital and general community members specifically the women of the age between 18-49 who are in the reproductive age bracket hence are best suited to answer questions pertaining to use of skilled care during delivery. The study was carried out in Loita Division, in Narok County.

3.4 Sample Size and Sampling Procedure

The researcher used simple random sampling. From the total population of 500 women of productive age (between the age of 18-49), and community health workers a list was taken and then selected 10% of the population which was used as a sample size. Therefore the sample size formula was 10% of 500 as a population

$$\text{Where } \frac{10}{100} \times 500 = 50 \text{ respondents}$$

The desired level of precision made a total sample of 50 respondents where respondents represented each category. Table 3.1 shows how the sample size was obtained from the target population.

Table 3.1: Sampling frame

Population category	Population size	Sample size	Percentage (%)
Women of productive age	400	40	80
Community Health workers	100	10	20
Total	250	50	100

Source: Report on Christian Aid Project Baseline Survey in Narok, Kenya (2014)

3.5 Data Collection Instruments

Primary data was collected using questionnaires and interviews from the respondents. A questionnaire is a pre-formulated written set of questions to which respondents record their answers, usually within rather closely defined alternatives which is very valuable method of collecting a wide range of information from a large number of respondents (Sekaran, 2006). Kothari (2007) terms the questionnaire as the most appropriate instrument due to its ability to collect a large amount of information in a reasonably quick span of time. It guarantees confidentiality of the source of information through anonymity while ensuring standardization (Chandran, 2004).

It is for the above reasons that the questionnaire was chosen as an appropriate instrument for this study. The questionnaire was structured to provide respondents with easy fill-in the data. The questionnaire contained both open ended and close ended questions. The questionnaire had two sections. Section one was; collected information on the bio data of the respondents while the second section focused on the study variables. Secondary data were obtained from relevant sources that were available to the researcher using a check list.

Interview schedules were used with the Community Health Workers who were the key informants in this study.

3.6 Reliability and Validity of the Research Instruments.

When formulating a specific instrument, reliability and validity are two of the most important aspects to be considered. Reliability and validity are the statistical criteria used to assess whether the researcher provides a good measure.

3.6.1 Reliability of research instruments

Reliability refers to the dependability of a measurement instrument, that is, the extent to which the instrument yields the same results on repeated trials (Mugenda and Mugenda, 2003).

To ensure reliability, questionnaires were administered to four respondents who were part of the study in an interval of two weeks to test the consistency in results. Statistical Packages for Social Sciences (SPSS) was used in computing the reliability analysis to measure how reliable the research instruments are. The reliability coefficient was 0.836.

3.6.2 Validity of research instruments

Validity is the degree to which evidence supports any inferences the researcher makes based on the data collected using a particular instrument.

To ensure validity, questionnaires were pre-tested on four respondents. These respondents were not included in the final study. The questionnaires were then corrected before distribution.

Prior to pre-testing of the research instruments the University of Nairobi lecturers' panel reviewed the questions and gave their opinion in the quest for content validity. Some overlapping questions were detected and corrected. A pilot study was conducted before full scale data collection to check the feasibility of questions and to ensure that the questions had to give out the responses required, uncovered ambiguous wording or errors before the survey was full scale launched.

3.7 Data collection Procedures

Immediately the research proposal was presented and approved by the University's Research Panel, a letter introducing the researcher was written and presented to the County Health Management Team (CHMT) of Narok County. This helped gain access to the facility in-charges and within the area of study. The researcher then went ahead and carried out her research study. She first visited the research location, introduced herself to the target population and administered her questionnaires to the participants as well as interview schedules to the hospital staff participants. The interview schedule respondents were advised to have the questions filled and they were collected back for the analysis process after two days

3.8 Data analysis Techniques

Kombo (2004) defines data analysis techniques as the examination of what has been collected in a research and making deductions and inferences. Data analysis therefore is to present data that has been collected from the field in a more easy way that it can be easily interpreted by the intended users. Bryman and Cramer (2011) noted that data analysis seeks to fulfill research objectives and provide answers to research questions.

The questionnaires were checked for completeness and consistency of information at the end of every field of data collection before storage. The data from the completed questionnaires were cleaned, re-coded and entered into the computer using the statistical package for social sciences (SPSS) Windows for analysis. The research employed both qualitative and quantitative techniques of analysis by descriptive statistics. Bryman (2011) observes that by combining the two techniques, social scientists balance the strengths and weaknesses of the two and hence achieving a higher degree of reliability and validity compared with if only one (i.e. frequency analysis) was computed. The percentages of the social characteristics, cultural perceptions, accessibility to the health facility and quality of care at health facilities were all computed to compare the responses of the mothers who attended and those who did not attend any maternal services. Percentages were estimated to compare the responses of these women. The hypotheses were tested by use of Chi Square.

The findings of the study were interpreted to arrive at the conclusions and recommendation based on the study findings.

3.9 Ethical considerations

Despite the high value of knowledge that was gained through research, knowledge cannot be pursued at the expense of human dignity (Osoo and Onen, 2009). Throughout this study, the ethical issues were upheld to ensure that dignity of the participants was maintained. Major Ethical issues of concern in this study included informed consent, privacy and confidentiality, anonymity and conduct of the individual researcher. The researcher maintained approachable

attitude during the data collection exercise and where clarification was sought by the respondents, they were assisted accordingly.

3.10 Operationalization of Variables

Operationalization is the process of strictly defining variables into measurable factors. The process defines fuzzy concepts and allows them to be measured, empirically and quantitatively. For many fields, such as social science, which often use ordinal measurements, operationalization is essential. It determines how the researcher is going to measure an emotion or concept, such as the level of distress or aggression. Such measurements are arbitrary, but allow others to replicate the research, as well as perform statistical analysis of the results.

Table 3.2: Operationalization Table

Objective	Variable	Indicators	Measurement scale	Types of analysis
To assess the extent to which social characteristics of women influence the utilization of skilled care during delivery.	Social characteristic	- Age - Education - Marital status - Mother's occupation	Nominal Scale	Descriptive
To examine the extent to which cultural perceptions contribute to utilization of skilled care during delivery.	Cultural perceptions	- Women involvement in decision making	Nominal Scale	Descriptive
To determine the extent to which accessibility to health facilities contributes to utilization of skilled care during delivery.	Accessibility to health facilities	- Distance of transport - Means of transport - Cost of transport	Nominal Scale	Descriptive

<p>To assess the extent to which the perception on the quality of care at health facilities contributes to women delivering in health facilities.</p>	<p>Quality of care at health facilities</p>	<ul style="list-style-type: none"> - ANC and previous delivery use - Staff shortage - Commodities and supplies 	<p>Nominal Scale</p>	<p>Descriptive</p>
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CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents how data was captured and entered and generated from the study results. It discusses the outcomes of the data collected from the respondents which is presented on frequency tables. The study discussed variables in the questionnaire where section A was background information and social characteristics of the respondents, section B: cultural perception, section C: accessibility to a health facility and section D; quality of care received. The chapter also has tested the hypothesis and discussed their significance in the field using Pearson Chi-Square where for the study to accept the hypothesis, the p value was expected to be below 0.05.

4.2 Response rate

The study approached women of reproductive age in Loita Division of Narok County for participation in the study after clearly stating the purpose of the study and according to the sample figure 50 (88%) volunteered. The study therefore had 40 questionnaires and 4 interview schedules answered fully.

4.3 Social characteristics of the women and utilization of skilled care during delivery

Table 4.1: Background information of the respondents

Valuables	Values	Frequency	Valid percentage
Mother's Age	15 yrs-24yrs	11	27.5
	25 yrs - 34yrs	20	50.0
	35 yrs- 44yrs	6	15.0
	45yrs – 49yrs	3	7.5
	Total	40	100.0
Denomination	Catholic	5	12.5
	Protestant	35	87.5
	Total	40	100.0
Mother's highest completed level of education	No School	22	57.9
	Class 4-8	10	26.3
	Form 1-2	5	13.2
	Form 3-4	1	2.6
	Total	38	100.0
Current Marital status	Married/cohabiting	37	92.5
	Separated	1	2.5
	Widowed	2	5.0
	Total	40	100.0

Husband's highest completed level of education	No School	14	35.0
	Class 1-3	1	2.5
	Class 4-8	15	37.5
	Form 1-2	6	15.0
	Form 3-4	4	10.0
	Total	40	100.0
<hr/>			
Occupation of mother	Farmer	20	55.6
	Housewife	16	44.4
	Total	36	100.0
<hr/>			
Type of employment	Business	10	47.6
	Farming	11	52.4
	Total	21	100.0
<hr/>			
Income generating activity	Sale of clothes	10	33.3
	Sale of cattle	13	43.3
	Sale of milk	1	3.3
	Sale of Beads	6	20.0
	Total	30	100.0
<hr/>			
How old were you had your first birth	12-15yrs	3	7.9
	16-19yrs	26	68.4
	20-23yrs	8	21.1
	24-27yrs	1	2.6
	Total	38	100.0

4.3.1 Mother's age

The study sought first to know the mother's Age with a highlighted categories of 15 – 24 years, 25 – 34 years, 35 – 44 years and 45 – 49 years where the findings were 11 (27.5%), 20(50.0%), 6 (15.0%) and 3(7.5%) respectively the study therefore realized that majority 20(50.0%) of the respondents were in the age bracket of 25 years to 34 years.

4.3.2 Denomination

Majority 35 (87.5%) of the respondents indicated that they were protestants with 5 (12.5%) indicating that they were catholic followers.

4.3.3 Mothers highest completed level of education

The researcher also sought to know the level of education among women of reproductive age in Loita division and majority 22(57.9%) of the interviewed respondents indicated had never attended school while others class 1-3, Class 4-8, Form 1-2 and Form 3-4 indicated 10(26.3%), 5(13.2%) and 1(2.6%) respectively.

4.3.4 Current marital status

The study wanted to know the marital status of the respondents and majority 37(92.5) of them indicated that they were married/cohabiting while others stated that they are separated 1(2.5%) and Widowed 2(5.0%).

4.3.5 Husband's highest level of education

From the findings of the study according to the respondents majority 15(37.5%) of women indicated that their husbands' had an education level of class 4-8 while others indicated that No School, Class 1-3, Form 1-2 and Form 3-4 where 14 (35.0%), 1(2.5%), 6(15.0%) and 4(10.0%) respectively

4.3.6 Occupation/type of employment/income generating activity of the mother

From the findings of the study majority 20(55.6%) of the women of reproductive age indicated that they had an income generating activity and 16(44.4%) were housewives. 11(52.4%) were farming and 10(47.6%) were in business. The respondents also indicated their income generating activity where majority 13(43.3%) of them said they earned through sale of cattle, 10(33.3%), 1(3.3%) and 6(20.0%) sale of clothes, sale of milk and sale of beads respectively.

4.3.7 How old were you when you had your first child

From the findings as indicated on the table majority of the respondents indicated that by the time they had their first child they were at the age bracket of 16-19 years while others 8(21.1%) were in the age bracket of 20-23 years.

4.4 Cultural perceptions and utilization of skilled care during delivery

4.4.1 Who should have the greater say in a couple

Table 4.2: Who should have greater say in the following decisions?

No.	Statement	No.	Mean	Median	Std. Dev
a.	Making large household purchases?	40	1.48	1.00	.784
b.	Making small daily household purchases?	40	2.13	2.00	.335
c.	Deciding on development projects to do in the home?	40	1.98	2.00	.947
d.	Deciding when to visit wife's family, friends or relatives?	40	1.93	2.00	.764
e.	Deciding what to do with the money she earns for her work?	40	2.13	2.00	.853
f.	Deciding how many children to have and when to have them?	40	2.08	2.00	.917
g.	Deciding if to visit clinic and deliver in hospital?	40	2.18	2.00	.813
h.	Seeking permission to do things from the other	39	2.10	2.00	.718

In this study the researcher wanted to get to know exactly who in the respondents household had a greater say in decision making and from the findings as indicated in Table 4.2 the variables were labeled and mean, median and standard deviation were generated where 1=husband, 2=wife and 3=both equally. According to the findings majority of decisions are made by both equally like Deciding what to do with the money she earns for her work, Making small daily household purchases, Deciding how many children to have and when to have them, Deciding if to visit clinic and deliver at the hospital 2.08, 2.13, 2.18, 2.10 and 2.00 respectively. Meanwhile there were those decisions that were greatly said by husbands which were making large household purchases, deciding on development projects to do in the home and deciding when to visit wife's family, friends or relatives 1.48, 1.98 and 1.93.

4.4.2 Community practices that are harmful to women/girls.

Table 4.3: Some of the practices that are harmful to women/ girls

Practices	No. of times ticked	Parentage
a) Early marriage	38	18.9
b) Forced marriage	35	17.4
c) Female genital mutilation	36	17.9
d) Domestic violence (physical sexual emotional economic abuse by a husband)	29	14.4
e) Forced sex/rape	19	9.5
f) Girls not sent to school at all	26	12.9
g) Girls stopped attending schools before completing schooling years	18	9

h) Biased feeding in favour of boys/men	-	-
i) Others (specify)	-	-

From the findings of this study as it is indicated on Table 4.3 majority of women of reproductive age in Loita division of Narok county ticked 38 times that early marriage was one of the practices in their community that may be harmful to women/girls. Other close related practices that were ticked many times were Female genital mutilation and Forced marriage were 36(17.9%) and 35(17.4%) respectively. Other ticked practices were Domestic violence (physical sexual emotional economic abuse by a husband), Girls not sent to school at all and Girls stopped attending schools before completing schooling years 29(14.4%), 26(12.9%) and 18(9%) respectively.

4.4.3 The power to make decisions on matters affecting women’s health

Table 4.4: Women’s power on decision making

Description	Frequency	Percentage
Yes	10	25.6
No	29	74.4
Total	40	100

According to the summary on Table 4.4 the study findings majority 10(25.6%) indicated that women do not have the power to make decisions on matters affecting their health like number of children to have and place of delivery.

4.4.4 When best friend is pregnant, where one would advise her to deliver the baby

Table 4.5: Where respondents would advise friend to go for delivery

Description	Frequency	Percentage
Government hospital/ health center/dispensary	31	79.5
Private/ mission hospital or clinic	4	10.3
At her own home	1	2.6
At TBA's home	3	7.7
Total	39	100.0

According to the findings of this study as summarized on Table 4.5 majority 31(79.5%) of the respondents indicated that if their best friend was pregnant they would advise them to go to a government hospital/ health center/dispensary.

4.4.5 Cultural barriers preventing women from delivering in health facilities

Table 4.6: Cultural barriers preventing women from delivering in health facilities

Cultural barriers	Frequency	Percentages
Male decision/male doctors inappropriateness	15	37.5
Respect to traditional rituals/family planning not allowed/beliefs	11	27.5
Unwilling Parents/superiority of in-laws	8	20.0
Availability of TBA's/abrupt birth	4	10.0
Poverty/lack of knowledge	2	5.0
Total	40	100.0

The respondents were asked to state from their feelings what cultural barriers prevent women from delivering in a health facility and majority 15(37.5%) of them indicated that male decision and male doctors inappropriateness like touching them barred them from going to the health facility as summarized on Table 4.6. 11(27.5%) Respect to traditional rituals/family planning not allowed/beliefs. Meanwhile 8, 4 and 2 respondents indicated unwilling parents/superiority of in-laws, availability of TBA's/abrupt birth poverty/lack of knowledge and accessibility to health facility respectively.

4.5 Accessibility to health facility and utilization of skilled care during delivery

4.5.1 How women get to the nearest health facility

Table 4.7: Means of transport to health facility

Transport means	No. of times ticked	Percentage
Walk	31	44.3
Motorbike	22	31.4
Cycle		-
Donkey Cart	17	24.3
Tractor/Motor vehicle		-
Mobile ambulance		-

From the summary on Table 4.7 the study findings indicated that majority 31(44.3%) of women of reproductive age walk to health facilities meanwhile 22(31.4%) used Motorbike and 17(24.3%) donkey cart.

4.5.2 How long it would take for a respondent to reach to health facility using the said means

Table 4.8: Time used to get to a health facility

Frequency	37
Mean	1.70
Median	2.00
Std. Deviation	.463
Minimum	1
Maximum	2

The study wanted to know how long it would take the respondent to get to a health facility using either of the mentioned means of transport where the researcher gave a bracket of 1= less than one hour, 2= 2-3 hours, 3=more than 3 hours and 4=don't know. Majority of the respondents indicated that it took them 1-3 hours to reach to a health facility using any of the three frequently ticked means of transport with an indication of a mean of 1.70.

4.5.2 Who would decide for the respondent to go a health facility

Table 4.9: Who decides whether the respondent goes to a facility?

Who decides	No. of Times ticked	Percentage
Respondent/ Self	17	21.8%
Husband	32	41.1%
Mother	16	20.5%
Mother-in-law	10	12.8%
Father in law		
Friend/neighbors	3	3.8%
Other		

From the summary on Table 4.7 majority of the respondents indicated that their husbands decided that they should go to the health facility others said themselves decided so.

4.5.3 Why respondent think some women do not deliver in a health facility

Table 4.10: Reasons why respondent think some women do not go to a health facility

Reason	No. of times answered	Percentage
Distance very long	33	21.3%
No means of transport	29	18.7%
Cost of transport very high	27	17.4%
Facility not open	9	5.8%
Abrupt delivery	27	17.4%
Staff shortage/ No female provider	6	3.8%
Poor treatment by staff	10	6.5%
Husband/ family did not allow	14	9.0%

The study wanted to know why some women do not deliver in health facilities and most (33(21.3%) times) ticked reason was that the distance was very long. others 29(18.7%), 27(17.4%) and 27(17.4%) ticked reasons were No means of transport, Cost of transport very high and Abrupt delivery indicated= respectively.

4.6 Perception on the quality of care at health facility and utilization of skilled care during delivery

4.6.1 Whether respondents went to see anyone for antenatal care while pregnant

Table 4.11: Did the respondent attend antenatal care clinic?

	Frequency	Percentage
Yes	36	92.3
No	3	7.7
Total	39	100

From the findings of this study majority 36(92.3%) of the respondents indicated that they went to see someone for antenatal care while they were pregnant.

4.6.2 The person respondents went to see during ANC

Table 4.12: Person seen during ANC

	Frequency	Percentage
Medical Doctor	6	16.7
Midwife	1	2.8
Clinical Officer	8	22.2
Nurse	17	47.2
TBA	4	11.1
Total	36	100.0

In the summary on Table 4.12, majority 17(47.2%) of the respondents indicated that they went to see the nurse meanwhile 8(22.2%), 6(16.7%), 4(11.1%) and 1(2.8%) indicated that they went to see Clinical Officer, Medical Doctor, TBA and Midwife respectively.

4.6.3 Whether the respondent was counseled during prenatal clinic

Table 4.13: What was the respondent counseled on during prenatal clinic?

Counseling	No. of times ticked	Percentage
Delivery preparations (<i>matayarisho ya kuzaa</i>)	21	14.7%
Breastfeeding (<i>Kunyonyesha</i>)	19	13.3%
Child Spacing (<i>Kuzaa kwa majira</i>)	17	11.9%
EPI/TT (<i>chanjo ya pepopunda</i>)	27	18.9%
Danger signs during pregnancy (<i>dalili hatari za ujauzito</i>)	16	11.2%
Nutrition (<i>lishe bora</i>)	22	15.4%
Next Visit (<i>wakati wakurudi kwa ushauri</i>)	21	14.7%
None (<i>sikushauriwa</i>)	-	

Twenty seven of the respondents as summarized on table mostly ticked that they were counseled on EPI/TT (*Chanjo ya pepopunda*), 22 on nutrition, 21 delivery preparation, 21 on next visit and 19 on breastfeeding. Other ticked counseling was 17 on child spacing and 16 on danger signs during pregnancy.

4.6.4 Who assisted the respondent with the last baby's delivery

Table 4.14: Respondents assistant during last baby's delivery

Assistant	Frequency	Percentage
Doctor	13	34.2
Midwife	2	5.3
Nurse/Staff nurse	4	10.5
Clinical Officer	3	7.9
TBA	16	42.1
Total	38	100.0

As summarized on Table 4.13, 42.1% (16) of the respondents indicated that they were assisted by a TBA while 13 (34.2%) indicated that they were visited by the doctor.

4.6.5 Where the baby was put after delivery

Table 4.15: Where the baby was put after delivery

Where child was left	Frequency	Percentage
With mother	29	74.4
In cot	6	15.4
Other specify	4	10.3
Total	39	100.0

According to the study's findings majority 29(74.4%) of the respondents indicated that after birth the baby was left with the mother.

4.6.6 After your baby was born, did any one check on your health

Table 4.16: Mother's health checked after delivery

Check on health	Frequency	Percentage
Yes	20	51.3
No	19	48.7
Total	39	100.0

In the summary on table majority of women indicted that their health was checked although 19 (48.7%) said no one checked their health.

4.6.7 Respondents' own opinion regarding the quality of care received from health workers during pregnancy, delivery and after delivery

Table 4.17: Respondents own opinion regarding quality of care at health facility

Mean	3.93
Median	4.00
Std. Deviation	.884

Respondents were requested to give their own opinions regarding quality of care they received during delivery and after from the health workers and majority of the indicated it was good showing a mean of 3.93

4.6.8 Respondents suggestions on how awareness and utilization of skilled care can be improved

The study needed to hear some of respondents suggestions on how awareness and utilization of skilled care can be improved in Loita division and the whole of Narok and here are some of the given suggestions:

Table 4.18: Respondents suggestions on how skilled care can be improved

Suggestions	Frequency	%
Improve care at hospital	3	7.5
Encourage family planning	2	5
Give TBAs alternative source of income so that they encourage women to deliver at hospital	1	2.5
Have enough staff in hospital to work day and night	2	5
Have maternity wings in nearby hospitals	1	2.5
Educate women on dangers of delivering at home	10	25
Improve roads/Transport	15	37.5
Educate TBAs on dangers of women delivering at home	6	15
Remove hospital charges	8	20
Increase number of health facilities	4	10
Address high level of illiteracy/ ignorance	2	5

Majority of the women 15 (37.5%) suggested that roads and transportation means be improved, 10 (25%) women be educated on the dangers of delivering at home, 8 (20%) remove hospital charges and 4 (10%) increase number of health facilities.

4.7 Research hypothesis test

The study used four hypothesis for testing in the field which were that: there is a significant relationship in the social characteristics of women in Loita and utilization of skilled delivery,

Cultural perceptions of women of reproductive age in Loita Division contribute to utilization of skilled delivery, Accessibility to health facility contributes to women utilizing skilled care during delivery in Loita Division and perception on the quality of care at health facilities contribute to women delivering in health facilities. To test these hypothesis the study used Pearson Chi-Square to test the hypothesis using a significant value of <.05 to interpret the findings of the study and accept or reject any of the four hypothesis.

4.7.1 Testing of the First Hypothesis using Chi-Square in relation to the First Objective

H₁ There is a significant relationship in the social characteristics of women and utilization of skilled care during delivery.

Table 4.19: Chi-square test for the social characteristics of women and utilization of skilled care during delivery

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22.167 ^a	12	.036
Likelihood Ratio	13.518	12	.333
Linear-by-Linear Association	.660	1	.417
N of Valid Cases	15		

a. 19 cells (95.0%) have expected count less than 5. The minimum expected count is .07.

$$\chi^2_c = 22.167 > \chi^2_{\alpha, 0.05} = 21.026 \text{ at 12 degrees of freedom and 5\% level of confidence.}$$

Since the calculated chi-square value of 22.167 is greater than the critical chi-square value of 21.026 at 5% level of confidence, we accept the alternative hypothesis. Thus, there is a significant relationship in the social characteristics of women and utilization of skilled delivery.

4.6.2 Testing of the Second Hypothesis using Chi-Square in relation to the Second Objective

H₁ Cultural perceptions of women contribute to utilization of skilled care during delivery.

Table 4.20: Chi-Square Tests for deciding what to do with the money she earns for her work

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.625 ^a	8	.024
Likelihood Ratio	19.601	8	.012
Linear-by-Linear Association	.707	1	.401
N of Valid Cases	15		

a. 15 cells (100.0%) have expected count less than 5. The minimum expected count is .27.

$\chi^2_c = 17.625 > \chi^2_{\alpha, 0.05} = 15.507$ at 8 degrees of freedom and 5% level of confidence.

Since the calculated chi-square value of 17.625 is greater than the critical chi-square value of 15.507 at 5% level of confidence, we accept the alternative hypothesis. Thus, cultural perceptions of women contribute to utilization of skilled delivery as summarized in Table 4.18 showing a significance level of p=0.024.

Table 4.21: Chi-Square test for deciding how many children to have and when to have them

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	30.000 ^a	8	.000
Likelihood Ratio	24.099	8	.002
Linear-by-Linear Association	.546	1	.460
N of Valid Cases	15		

a. 14 cells (93.3%) have expected count less than 5. The minimum expected count is .07.

$\chi^2_c = 30.000 > \chi^2_{\alpha, 0.05} = 15.507$ at 8 degrees of freedom and 5% level of confidence. Since the calculated chi-square value of 30.000 is greater than the critical chi-square value of 15.507 at 5% level of confidence, we accept the alternative hypothesis. Thus, cultural perceptions of women contribute to utilization of skilled delivery as summarized in Table 4.19 showing a significance level of $p = .000$.

Table 4.22: Chi-Square Tests for seeking permission to do things from the other

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.750 ^a	8	.046
Likelihood Ratio	13.979	8	.082
Linear-by-Linear Association	.173	1	.677
N of Valid Cases	14		

a. 14 cells (93.3%) have expected count less than 5. The minimum expected count is .14.

$$\chi^2_c = 15.750 > \chi^2_{\alpha, 0.05} = 15.507 \text{ at 8 degrees of freedom and 5\% level of confidence.}$$

Since the calculated chi-square value of 15.750 is greater than the critical chi-square value of 15.507 at 5% level of confidence, we accept the alternative hypothesis. Thus, cultural perceptions of women contribute to utilization of skilled delivery as summarized in Table 4.20.

Table 4.23: Chi-Square Test for whether women have the power to make decisions on matters affecting their health e.g. number of children to have

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.250 ^a	4	.024
Likelihood Ratio	13.689	4	.008
Linear-by-Linear Association	1.500	1	.221
N of Valid Cases	15		

a. 9 cells (90.0%) have expected count less than 5. The minimum expected count is .40.

$$\chi^2_c = 11.250 > \chi^2_{\alpha, 0.05} = 9.488 \text{ at 4 degrees of freedom and 5\% level of confidence.}$$

Since the calculated chi-square value of 11.250 is greater than the critical chi-square value of 9.488 at 5% level of confidence, we accept the alternative hypothesis. Thus, cultural perceptions of women contribute to utilization of skilled delivery.

4.7.3 Testing of the Third Hypothesis using Chi-Square in relation to the Third Objective

H₁ Accessibility to health facility contributes to women utilizing skilled care during delivery.

Table 4.24: Chi square test for accessibility to health facility and women utilization of skilled care during delivery

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.000 ^a	3	.005
Likelihood Ratio	7.051	3	.070
Linear-by-Linear Association	6.944	1	.008
N of Valid Cases	13		

a. 7 cells (87.5%) have expected count less than 5. The minimum expected count is .08.

$$\chi^2_c = 13.000 > \chi^2_{\alpha, 0.05} = 7.815 \text{ at 3 degrees of freedom and 5\% level of confidence.}$$

Since the calculated chi-square value of 13.000 is greater than the critical chi-square value of 7.815 at 5% level of confidence, we accept the alternative hypothesis. Thus, accessibility to health facility contributes to women utilizing skilled care during delivery.

From the study's results as summarized on Table 4.22, the hypothesis tested showed a significant level of p=0.005 on how long it would take a respondent to get to a health facility using the available means of transport. This is in line with Pebley (1996) on Latino women where he stated

that women living far away from a clinic are less likely to use formal delivery care than those nearby, while there is no such effect for indigenous women.

4.7.4 Testing of the Fourth Hypothesis using Chi-Square in relation to the Fourth Objective

H₁ Perceptions on the quality of care at health facilities contribute to women utilizing skilled care during delivery.

Table 4.25: Chi square test for perceptions on quality of care at health facility and utilization of skilled care during delivery

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.000 ^a	4	.005
Likelihood Ratio	15.012	4	.005
Linear-by-Linear Association	.250	1	.617
N of Valid Cases	15		

a. 9 cells (90.0%) have expected count less than 5. The minimum expected count is .20.

$$\chi^2_c = 15.000 > \chi^2_{\infty, 0.05} = 9.488 \text{ at 4 degrees of freedom and 5\% level of confidence.}$$

Since the calculated chi-square value of 15.000 is greater than the critical chi-square value of 9.488 at 5% level of confidence, we accept the alternative hypothesis. Thus, perceptions on the quality of care at health facilities contribute to women delivering in health facilities.

The summary on Table 4.23 shows there is strong relationship between perception on the quality of care at health facilities that contribute to women delivering in health facilities in Loita

Division which is shown by respondents opinion on what was their quality of care received from health workers during pregnancy, delivery and after delivery with level of significance $p=.005$.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter introduces summary of the findings, discussions, conclusions, recommendations and suggestions for further studies. The study focused on analyzing the determinants of utilization of skilled care during delivery among women of reproductive age in Loita Division, Narok County and the chapter therefore concentrates on the significance of the study and its results.

5.2 Summary of the findings

According to the first objective of this study that sought to assess the extent to which social characteristics of women influence the utilization of skilled care during delivery, the findings of the study were as follows: majority 20 (50.0%) of the respondents were aged between 25-34 years, were Protestants and had no level of education. Meanwhile it was clear to the researcher that most 37 (92.5) of the respondents indicated that they were married although 14 (35.0%) of the husbands never attended school and 16 (40%) have only attained primary level of education. In women's occupation majority 20 (55.6%) showed they work as famers or as business women and 13 (43.3%) of them showed they earn their living through the sale of cattle. The test of hypothesis showed there was a significant relationship in the social characteristics of women and utilization of skilled delivery.

According to the second objective that sought to examine the extent to which cultural perceptions contribute to utilization of skilled care during delivery, the results of this study according to majority of the respondents showed that men have greater say in the family especially in sensitive issues compared to women. The study also wanted to know some of the Loita community practices that can be harmful to women or girls and according to the results,

majority 38 (18.9%) of the respondents ticked that early marriage was one of the most harmful practices. Forced marriage 36 (17.9%) and female genital mutilation 35 (17.4%) were also some of the other factors that women felt were harmful to them and the girl child. The study also sought to know if women had the power in the community to make any decision on matters affecting their health for example the number of children to have and place to have them and according to the study result majority 30 (75.0%) indicated that women do not have the power to make those decisions. Also the study wanted to know where the respondents would advise their friends to go to deliver their baby and majority 31 (79.5%) said it would be advisable for them to go to the government hospital/health center/dispensary. Respondents also stated the cultural barriers that prevent them from delivering from a health facility where majority 15 (37.5%) indicated that male dominance and doctor's inappropriateness like touching them barred them from utilizing skilled delivery services. The test of hypothesis showed that cultural perceptions of women contribute to utilization of skilled delivery.

According to the third objective that sought to determine the extent to which accessibility to health facility contributes to skilled care during delivery, the findings were: majority 31 (44.3%) of the interviewed women of reproductive age said that they walked to a health facility which would take 1 to 3 hours showing a mean of 1.70 and this would mostly be decided by the husband according to multiple answers given by 32 (41.1%) of the respondents. The research also wanted to know from the respondents why they thought some women would not want to deliver from a health facility where according to the multiple answers 33 (21.3%) of the respondents said it was due to very long distances and 29 (18.7%) said it was due to lack of transport means. The test of hypothesis showed that accessibility to health facility contributes to women utilizing skilled care during delivery.

According to the fourth objective that sought to assess the extent to which the perception on the quality of care at health facility contributes to women delivering in health facilities, the study found that: during prenatal check the respondents were counseled and through the multiple answers given by respondents, majority 22 (15.4%) said they were counseled on delivery preparation which was coded in *Swahili* as *matayarisho ya kuzaa* for the respondents to

understand. From the study result the study showed that majority 42.1% (16) of respondents were assisted by TBA during last baby's delivery and after that the baby was left with the mother and her health was checked. Majority also indicated that the quality of care received from health workers was good showing a mean of 3.93. The test of hypothesis showed that there was a strong relationship between perceptions on the quality of care at health facilities and women delivering in health facilities.

5.3 Discussions

The first objective sought to assess the extent to which social characteristics of women influence the utilization of skilled care during delivery and the study showed there was a significant relationship in the social characteristics of women and utilization of skilled delivery. In Loita Division of Narok county women of reproductive age deliver at an early age which according to the study is below 20 years showing that this is driven by lack of education powered by community harmful practices like early marriages, forced marriages and female genital mutilation. 'Age is often presented as a proxy for accumulated experience, including in the use of health services', (Burgard, 2004). Older women are also possibly more confident and influential in household decision-making than younger women and adolescents in particular (Glei et al., 2003). There are multiple potential pathways that could explain why "maternal education is consistently and strongly associated with all types of health behaviour" (Bell et al, 2003). 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, 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, as well as reduced power differential towards health care providers and thus better communication and ability to demand adequate services (Thaddeus and Maine, 1994).

The study findings on the second objective showed that cultural perceptions of women contribute to utilization of skilled delivery. The study found that women in this community do not have a greater say compared to their counterparts even in matters regarding their health and number of children to have and also at what time to have them. Despite the strength of women doing businesses or farming in the division the study has found that women do not have full say on what to do with their earnings without involving their husbands. This was explained by the fact that “women’s autonomy, gender relationships and social networks are affected by ethnicity and culture” (Mekonnen and Mekonnen, 2003). The various dimensions of autonomy, such as position in the household, financial independence, mobility and decision-making power regarding one's own healthcare, may all impact on health facility use (Furuta and Salway, 2006).

In matters regarding accessibility to a health facility the researcher found that means of transport in the area is scarce showing that the facilities are far from them therefore forcing women to seek for alternative delivery options available in Loita Division. The obstacle effect of distance is stronger when combined with lack of transport and poor roads (Thaddeus and Maine, 1994). It has been argued, that in common with rural place of residence, "distance to hospital also captures other aspects of remoteness such as poor road infrastructure, poor communication between communities, poverty, limited access to information, strong adherence to traditional values and other disadvantages that are difficult to measure quantitatively" (Reynolds et al., 2006).

According to the fourth objective, the study found that there was a strong relationship between perceptions on the quality of care at health facilities and women delivering in health facilities. Perceived quality of care, which only partly overlaps with medical quality of care, is thought to be an important influence on health care-seeking. Assessment of quality of services "largely depends on people's own experiences with the health system and those of people they know." (Thaddeus and Maine, 1994). The women who delivered in a facility gave a significantly higher average quality score for “health care delivery”, but not for “communication and conduct of personnel” as compared to women who delivered at home. The study further found that the respondents are convinced that there is better quality of care in Health facilities, but cost,

distance, traditional beliefs and possibly sometimes ethnic discrimination deters them from using the better quality of care in Health facilities.

5.4 Conclusion

According to the first objective, this study therefore concludes that there is a significant relationship in the social characteristics of women in Loita and utilization of skilled delivery. The tender age at which women are giving birth and low levels of education has led to failure of women practicing health seeking behaviors including skilled delivery care.

According to the second objective, cultural perceptions of women of reproductive age in Loita Division contribute to utilization of skilled delivery. It has been found in the study that some traditional practices are still practiced in the community which has derailed the development of skilled delivery option among women of reproductive age. Some women avoid facility delivery due to cultural requirements of seclusion during this time of “pollution” or because of specific requirements around delivery position, warmth and handling of the placenta. Beliefs that birth is a test of endurance and care-seeking is a sign of weakness are another reason for delivering alone at home.

According to the third objective, accessibility to health facility contributes to women utilizing skilled care during delivery in Loita Division. Physical proximity of health care services plays an important role in service utilization. Many pregnant women do not even attempt to reach a facility for delivery since walking many kilometers is difficult in labor and impossible if labor starts at night, and transport means are often unavailable. Those trying to reach a far off facility often fail, and women with serious complications may die.

According to the fourth objective, perceptions on the quality of care at health facilities contribute to women delivering in health facilities. Many women reported dissatisfaction with neglectful behavior at health facilities and preferred the care of a TBA or relative. The medical ‘culture’ also clashing with the woman’s, for example, when family members are not allowed to be present, supine birthing position is imposed or privacy not respected especially when attended to by male doctors; this led to perceptions of poor quality.

5.5 Recommendations of the Study

Based on the study findings and the discussion and keeping the limitations in mind, the study highlights the following policy implications and recommendations.

1. Awareness of health problems and available services to solve those problems should be improved targeting the younger cohorts of women of reproductive age so as to improve health seeking behaviour to undertake action to protect their own health and the health of their babies.
2. Gender biases and cultural norms that affect women's utilization of skilled care should be addressed through community forums that will allow the community to evaluate their practices, the harm they are experiencing and come up with solutions an improving maternal and child health.
3. Women of Loita division in Narok have indicated that they walk to a health facility. This finding reinforces that improving the economic status of families is important to improve their health behaviours and status. This is an important finding for programmers and policy makers as it provides direction to them in designing integrated programs, which include components that help to improve economic status together with improving health status. The Ministry of Health together with the County government should improve physical access by ensuring facilities are conveniently located, equipment, supplies and services are available and costs associated with accessing services are reduced or eliminated.
4. It is recommended that pregnant women should receive ANC from a health facility at least four times during their pregnancy under normal circumstances and their deliveries should be assisted by a skilled birth attendant and not by a TBA. In the study, the coverage of ANC and delivery from a health facility are unacceptably low. In Loita Division, lack of access to health facility services is main reason for the low utilization of skilled care. Moreover, pregnant women might be unaware of the benefits of receiving ANC from skilled care workers. Realising the important role of

ANC in reducing maternal and neonatal mortality and morbidity, the MoHP in 2010 formulated the national policy on ANC. In 2006, a maternity incentive scheme was already adopted to increase the demand for maternity services along with a focus on improving access to such services. In 2010, the Kenyan government in a bid to meet the MDGs made delivery and management of obstetric complications free of cost in all public health facilities. The implementation and enforcement of those policies are essential to meet the MDGs related to maternal and child health. Therefore, it is important for pregnant women health that programmers monitor its implementation. An audit of service delivery areas and research is recommended to understand why TBA services are still in existence even after several policy initiatives have been implemented.

5.6 Recommendations for further study

Skilled care has been a relatively new research topic in Narok County but has increased when it was realized that the proportion of newborn deaths constitute such a high portion of the infant and the under-five years mortality. Without a substantial decrease in the mortality and morbidity of newborns, the mother and child health indicators cannot be improved. There have been few research studies on some of the areas of skilled care among women of reproductive age such as community practices. The literature reviewed for the present study showed that there is a lack of international literature that examined the associations of birth preparedness. The reason for the low utilization of skilled care delivery by women of reproductive age in Loita is due to the fact that this community does not culturally support facility delivery due to their cultural beliefs and values on maternal health care. Therefore, this needs further qualitative study to explore the detailed reasons.

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APPENDIX 1: Questionnaire

I am currently a student pursuing a master's degree in the University of Nairobi and I am carrying out a research on determinants to utilization of skilled care during delivery among women of reproductive age in Loita Division, Narok County. This is in partial fulfillment of Master of Arts degree in Project Planning and Management.

Kindly respond to the questions as accurate as possible, to make this research a success. The data collected will strictly be used for academic purposes, and shall remain confidential.

Your cooperation will be highly appreciated.

Please note:

- 1• Please tick where appropriate.*
- 2• Do not write your name on the questionnaire*
- 3• All responses will be treated strictly in confidence*

MOTHERS OF CHILDREN AGED 0-24 MONTHS

SECTION A: Demographic/ Social characteristics (*Please complete this part fully by ticking as appropriate*)

1. Village Name: _____

2. Mother's Age:

1=15 yrs-24yrs 2= 25 yrs - 34 yrs 3= 35 yrs- 44yrs 4= 45yrs – 49yrs

3. Denomination:

1=Catholic 2=Protestant 3=Traditionalist 4=Muslim

88=Other _____

4. Mother's highest completed level of education:

1= No School 2=Primary (Specify Class _____)

3=Secondary (Specify Form _____) 4=Tertiary

5. Current Marital status

1=Single 2=Married/cohabiting 3= Separated 4=Divorced

5=Widowed

6. Husband's highest completed level of education:

1= No School 2=Primary (Specify Class _____)

3= Secondary (Specify Form _____) 4=Tertiary

7. Occupation of mother / Type of employment/ Income generating activity:

1= _____

2= _____

3= _____

8. How old were you when you had your first birth? _____

SECTION B: Cultural Perceptions

9. In a couple, who do you think should have the greater say in each of the following decisions: the husband, the wife or both equally:

No.	Statement	1 Husband	2 Wife	3 Both equally
a.	Making large household purchases?			
b.	Making small daily household purchases?			
c.	Deciding on development projects to do in the home?			
d.	Deciding when to visit wife's family, friends or relatives?			
e.	Deciding what to do with the money she earns for her work?			
f.	Deciding how many children to have and when to have them?			
g.	Deciding if to visit clinic and deliver in hospital?			
h.	Seeking permission to do things from the other			

10. Which are some of the practices in your community that may be harmful to women/girls?

- a. Early marriage
- b. Forced marriage
- c. Female genital mutilation
- d. Domestic violence (physical, sexual, emotional, economic abuse by a husband)
- e. Forced sex/rape
- f. Girls not sent to school at all

- g. Girls stopped attending schools before completing schooling years
- h. Biased feeding in favour of boys/men
- i. Others (specify)_____

11. Do women in this community have the power to make decisions on matters affecting their health e.g. number of children to have, place of delivery, etc?

1= YES

2= NO

98= DON'T KNOW

12. If your best friend was pregnant, where would you advise her to deliver the baby?

1= Government hospital/ health center/dispensary

2= Private/ mission hospital or clinic

3= At her own home

4= At TBA's home

88= Other (specify)_____

13. What cultural barriers prevent women from delivering in health facilities?

1= Government hospital/ health centre/ dispensary

2= Private/ mission hospital or clinic

3= At her own home

4= At TBA's home

88= Other (specify)_____

SECTION C: Accessibility to health facility

14. How do you get to the nearest health facility? (multiple answer possible)

1= Walk

2= Motorbike

3= Cycle

4= Donkey Cart

5= Tractor/Motor

6= Mobile ambulance

88= Other (specify) _____

15. How long would it take you to get there?

1= Less than one hour

2= 1 to 3 hours

3= More than 3 hours

98= Don't know

16. Who would decide that you should go there? (Multiple answer possible)

1= Respondent/ Self

2= Husband

3= Mother

4= Mother-in-law

5= Father in law

6= Friend/neighbors

88= Other (specify)

17. Why do you think some women do not deliver in a health facility?

1= Distance very long

2= No means of transport

- 3= Cost of transport very high
- 4= Facility not open
- 5= Abrupt delivery
- 6= Staff shortage/ No female provider
- 7= Poor treatment by staff
- 8= Inadequate commodities and supplies
- 9= Language barrier
- 10= Hospital is cold
- 11= Husband/ family did not allow
- 88= Other _____

SECTION D: Perception on the quality of care at health facility

18. Did you see anyone for antenatal care while you were pregnant with your last child?
 1= Yes 2= No (Go to 21)

19. If yes whom did you see? (Probe for the type of person and record all persons mentioned by the mothers)

Health Professional (Probe for most qualified person)

- 1= Medical Doctor
- 2= Midwife
- 3= Clinical Officer
- 4= Nurse

Other Person

- 5= CHW
- 6= TBA
- 88= Other (Specify) _____

20. During your prenatal check, were you counselled on the following: (multiple answers possible)

(Read choices “1” to “7” and tick in the box if agreed. If none of 1-7 is agreed tick “8”)

- 1= Delivery preparations (matayarisho ya kuzaa)
- 2= Breastfeeding (Kunyonyesha)
- 3= Child Spacing (Kuzaa kwa majira)
- 4= EPI/TT (chanjo ya pepo punda)
- 5= Danger signs of pregnancy (dalili hatari za uja uzito)
- 6= Nutrition (lishe bora)
- 7= Next Visit (wakati wa kurudi kwa ushauri)
- 8= None (sikushauriwa)

21. Who assisted you with last baby delivery? (Probe for most qualified person)

- 1= Doctor
- 2= Midwife
- 3= Nurse/Staff nurse
- 4= Clinical Officer
- 5= PHO/PHT
- 6= TBA
- 7= CHW
- 8= Family member (specify) _____
- 88= Other (specify) _____
- 98= None

22. Where was the baby put immediately after birth?

- 1= With mother
- 2= In cot
- 3= On floor
- 88= Other specify _____

98= Don't know

23. After your baby was born, did anyone check on your health?

1= Yes

2= No Go to 46

24. In your opinion, what was the quality of care you received from health workers during your pregnancy, delivery and after delivery?

1=Very poor 2=Poor 3=Average 4=Good 5=Very good

25. Suggest various ways in which awareness and utilization of skilled care during delivery can be improved in Loita Division and the whole Narok County.

1= _____

2= _____

3= _____

4= _____

5= _____

Thank You!!!!

APPENDIX 2: Key Informant Interview Schedule

KII with 3 CHW, 3 Health facility in-charges, 1 County public health nurse, 1 County SRH Coordinator, 2 TBAs.

1. What proportion of women utilized skilled delivery services during the year 2014?
2. What are the general characteristics of women who delivered at facilities with skilled delivery services?
3. What are the barriers to utilization of skilled delivery services?
4. How does culture affect utilization of skilled care during delivery by women of reproductive age in Loita?
5. How accessible are health facilities to women of reproductive age in Loita?
6. How does the quality of care offered at health facilities differ with the one offered by TBAs?
7. How do TBAs support delivery at health facilities?