FACTORS ASSOCIATED WITH UTILIZATION OF SKILLED BIRTH ATTENDANCE AMONG WOMEN OF REPRODUCTIVE AGE IN TURBI WARD, NORTH-HORR SUB COUNTY, MARSABIT COUNTY, KENYA

BY

ANNA QABALE DUBA

A THESIS SUBMITTED TO THE SCHOOL OF PUBLIC HEALTH, COLLEGE OF HEALTH SCIENCES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN FIELD EPIDEMIOLOGY

DECLARATION

Declaration by candidate:

This thesis is my original work and has not been presented for an award of degree at any other University.

INVESTIGATOR

Anna Qabale Duba.....

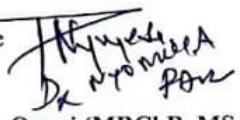
SPH/PGH/FE/05/18

Signature  Date 15/08/2023

DECLARATION BY SUPERVISORS

This thesis has been submitted for examination with our approval as Moi University supervisors.

1. **Dr. Paul Nyongesa (MBChB, MMED (OBGYN), PhD**
   Dept of Reproductive Health
   Moi University

   Signature  Date 21/8/2023

2. **Dr. Elvis Oyugi (MBChB, MSc)**
   Epidemiology & Medical Statistics
   Moi University (KFELTP)

   Signature  Date 15/08/2023

DEDICATION

I thank almighty God for giving me strength and good health to complete my study research. I dedicate this research paper to my parents, in-laws, my husband Halkano, and my children Hirkena and Helena for their patience and understanding during the years I undertook my studies.

ABSTRACT

Background: Maternal mortality remains a major public health problem in developing countries. Maternal mortality rates (MMR) in Kenya declined from 362/100,000 live births in 2014 to 353/100,000 live births in 2021 as a result of improved utilization of skilled delivery services. Marsabit County, which despite the nation's decline still has a high MMR of 1,127/100,000 live births. In the North Horr sub-County in 2018, just 26% of expectant women had skilled births. The purpose of this study was to determine coverage and the factors associated with the low utilization of skilled birth attendant services.

Objectives: To estimate coverage for skilled delivery; determined the factors associated with the utilization of skilled birth attendant services and describe challenges experienced by pregnant women in the North Horr sub-County.

Methods: This was a cross-sectional study targeting women of reproductive age, women leaders, and healthcare workers from North Horr sub-County in November – December 2021. A total of 294 women were identified and interviewed using structured questionnaires at the household level. Twelve key informant interviews (KII) and three focused group discussions (FGD) were conducted with participants (health care workers and women leaders) selected purposively based on their expertise in maternal health care. Mean, median, and standard deviations were calculated for continuous variables; frequencies and proportions were calculated for categorical variables. Bivariate analysis and multivariate logistic regression analysis were used to identify factors associated with the utilization of skilled birth attendance services. A Chi-square test was used to assess statistical significance with a p-value set at $p<0.05$. The qualitative data collected were thematically analysed and used to support the quantitative results.

Results: Of 294 respondents interviewed the mean age was 28.5 years (SD±5.89 years); 170 (57.8%) either delivered at home, on the way to the health facility, or at the Traditional Birth Attendant (TBA); while 124 (42.2%) delivered under skilled birth personnel. Four factors; religion (adjusted Odds Ratio (aOR)= 3.70; 95% C.I 2.03 – 6.76; $p<0.05$); distance to the nearest health facility (aOR= 4.8; 95% C.I 1.99 – 12.02; $p<0.001$); Monthly income (aOR= 2.8; 95% C.I 1.28-6.27; $p<0.01$); and accompanied by the husband to the clinic (aOR= 9.4; 95% C.I 1.69-53.01; $p<0.05$); were independently associated with utilization of skilled birth attendance services. It was clear from the KIIs and the FGDs that respondents understood the significance of using skilled delivery services, although parity, birth order, insecurity, bad roads, and past experiences affected where the women went to give birth.

Conclusion: The proportion of women utilizing skilled birth attendance in the study area remained low compared to the national. Long distance to health facilities, religion, monthly income, and being accompanied by the husband to the health facility were associated with the utilization of skilled delivery services.

Recommendation: The county government should construct more health facilities to reduce the long distance. Religious and community leaders should be sensitized and allowed to take a leading role in advocacy for the utilization of skilled birth attendance. It should also be promoted for partners to attend prenatal appointments and delivery together.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANC	Ante Natal Care
CHEWs	Community Health Extension Worker
FANC	Focussed Ante Natal Care
KDHS	Kenya Demographic and Health Survey
LBW	Low Birth Weight
MMR	Maternal Mortality Ratio
NOP	No One Present
PTB	Preterm Births
SBA	Skilled Birth Attendants
SDGs	Sustainable Development Goals
TBAs	Traditional Birth Attendants
UNFPA	United Nations Population Fund
WHO	World Health Organization

DEFINITION OF OPERATIONAL TERMS

Ante Natal Care (ANC): Care and treatment given to mothers during the pregnancy period, usually begin from first trimester and are required to be at least four MCH visits before delivery. Care is given to pregnant women from time she realizes to be pregnant until the birth of a baby by a skilled health worker at a health facility

Data- Facts and Information collected for a special purpose

Maternal mortality: Pregnancy related deaths among women in the study area that are not from accidental cause.

Reproductive age- Age between 15 – 49 years in women

Skilled attendant: A healthcare worker who is certified to offer midwifery services.

ACKNOWLEDGEMENT

I would like to acknowledge Moi University and the Kenya Field Epidemiology and Laboratory Training Program (FELTP) for granting me the opportunity to pursue a master's degree course. I also wish to express my gratitude to my supervisors, Dr. Paul Nyongesa and Dr. Elvis Oyugi who dedicated themselves fully to this work from its inception to the final thesis submission. My sincere gratitude goes to all the enumerators and the Community Health Volunteers from Turbi Ward, North Horr sub-County who assisted me in data collection. Special thanks goes to the study participants who agreed to take part in the study.

CHAPTER ONE

1.0 INTRODUCTION

In the realm of maternal and child health, ensuring skilled attendance during childbirth is a critical factor in reducing maternal and neonatal mortality rates. The utilization of skilled birth attendance represents a pivotal marker of healthcare access and quality for women of reproductive age. This introduction chapter sets the stage for a comprehensive study aimed at delving into the multifaceted factors that influence the utilization of skilled birth attendance. By examining these factors, the study strives to enhance the understanding of the barriers and enablers that shape women's decisions regarding childbirth care. The study findings not only contribute to the academic discourse but also holds the potential to inform policy and practice, ultimately fostering improved maternal and new-borns outcomes

1.1 Background

Pregnancy and child birth related complications are responsible for close to 830 maternal deaths per day. As per the WHO, around 303,000 women of reproductive age died as a result of pregnancy related complications in 2015. Almost all the 99% of maternal deaths occurs in developing nations, majority being in sub-Saharan Africa (66%) and South Asia. The two regions are responsible for close to 85% of all the global burden, with African region alone being responsible for more than 55%. Close to 8000 women die yearly in Kenya due to pregnancy complications. The most common cause of such deaths is haemorrhage, puerperal sepsis and abortion complications while indirect non-obstetric causes comprise of tuberculosis, malaria and HIV/AIDS.

Skilled birth attendance is actually one of the essential indicators for monitoring the overall achievements of sustainable development goal number 3. At the global stage, skill attendance during childbirth constitutes 78% of all deliveries. Countries with low

utilization of skill birth attendance are associated with poor maternal health outcomes witnessed in the country, especially in the northern part of Kenya where access to skilled birth services is still very poor. In northern region of Kenya, out of 4 627 health facility deliveries in 2004 to 2008, there is one maternal death reported to have occurred in the health facilities, contrary to the MMR in Zambia (Njoki, 2015). There could be under-reporting of maternal deaths in health institutions. Maternal deaths in Kenya may be referring to women who die during labour only, as Monda (2016) states that, maternal deaths are underestimated usually excluding those that take place in early pregnancy.

Antenatal clinic (ANC) coverage was 88% in 2018. Twenty percent of the expected women for delivery used a health facility to deliver in 2018 (Nyongesa, et al., 2018). There is a gap between the 20% of health facility deliveries in Northern region and the 95% national target for rural areas in Kenya (Nyongesa, et al., 2018). The study helps in understanding factors that hinder the utilization of skilled birth attendance among the women in Turbi ward, Marsabit county.

1.2 Problem statement

The introduction of free maternity services and universal health coverage in Kenyan health facilities was expected to increase the utilization of skilled birth services by pregnant women (Njuguna et al, 2017). On the contrary, an estimated 54 percent of deliveries are not attended to by skilled health professionals (Nyongesa et al., 2018) despite the evidence that skilled birth attendance is important in preventing and reducing maternal and perinatal deaths (Joseph et al., 2016). Due to low utilization of Skilled Birth Attendance (SBA), Marsabit county record 1,127 deaths per 100,000 live births, making the maternal mortality ratio (MMR) three times Kenya's average of 342 per 1000,000 live births (UNDP,2018).

In the northern Kenya, majority of mothers (56%) deliver their babies at home often without medical supervision. It has also been found that most of maternal deaths in Kenya occur among mothers who deliver at home or/and stay away from health facilities (KDHS 2008-09). As a result of the low access to SBA services in Marsabit County, there is a high maternal mortality ratio of 1,127/100,000 live births(Ibrae, 2017), an increase in the number of perinatal and neonatal mortality, and the cultural practices have made people believe that skilled deliveries are only meant for the women with complications at birth. Though the national target for hospital delivery in Kenya is at 65%, the proportion of the number of births attended to by health professionals has remained below that at 61% (KDHS, 2014). This can strongly be attributed to the government efforts towards encouraging hospital deliveries. Despite such positive progress, there still exists a high prevalence of home deliveries in a number of Kenyan rural communities. The proportion of all births occurring in health facilities in the entire Marsabit County is less than 50% (CRA 2011). More specifically, in northern region alone, more than 55% of women do not deliver their babies in health facilities.

Marsabit county remains among the bottom three counties with the least number of skilled deliveries in Kenya. Within Marsabit, the North Horr Sub-County reports the lowest number of pregnant women accessing skilled birth services. According to DHIS (2018), only 26% of pregnant women in the North Horr sub-county had skilled births while the Saku sub-county reported 95 percent skilled births from the same county in the same year (DHIS,2018). It is therefore important to conduct a study to identify and understand the factors hindering utilization of skilled birth attendance among the women of reproductive age in North Horr sub-county of Marsabit county.

1.3 Justification for the study

Marsabit County's MMR is three times that of Kenya and it also has low access to skilled birth services. Since Kenya adopted a new constitution and devolved health services in 2013, the County Government of Marsabit has built more than 33 health centres that offer free maternity services. Though it had been expected that free maternity services offered by the Kenyan government would help improve skilled birth attendance in the country, in Marsabit factors associated with the utilization of skilled birth services are beyond financial barriers, some social-cultural factors such as being a patriarchal society where women might not be able to make some reproductive health choices can be a factor. This will also benefit the local communities by reducing maternal and neonatal mortality and thus leading to a healthier community. The study findings also inform the formulation of comprehensive policies or changes to the existing policies on maternal health which will result in improved reproductive health services for women, especially antenatal and delivery services, and also community awareness programs to increase the number of women accessing skilled birth services in Turbi ward, North Horr sub-county of Marsabit county.

With less than 50% of the women in the County delivering in health facilities, and the possible health complications that are likely to be accompanied with home delivery, Marsabit County provide one of the best sites where the study on facilitators and barriers to hospital delivery can be carried out. Scholarly articles state that Pregnancy and childbirth related complications are likely to be encountered during delivery and these can contribute further to childbirth related deaths and disabilities. By age, delivery in a health facility within the rural Kenya is least common among births to mothers age 35-49 (53percent), and it decreases as birth order increases (KDHS, 2014). Findings from this study will inform policy decisions on how to promote hospital delivery among

women of reproductive ages. This will further inform programming of subsequent interventions in the country to promote the aspects of hospital deliveries such as empowering women so that they can make independent decisions of delivering at the hospitals. The study report will contribute to existing literature and especially on solutions to existing barriers to hospital deliveries in our communities.

These study findings can be used to encourage the wide acceptance of hospital deliveries. This is because the factors would have been identified and alternative solutions designed for interventions to promote hospital deliveries for pregnant women. There is advantage of pregnant women delivering at hospital/health facility or attended by skilled personnel in that danger signs will be detected in advance thus avoiding delays and complications of pregnancy and delivery will be handled professionally. Attendance by medically trained persons will also facilitate referral or management of the complications. This would thus reduce/prevent maternal and child mortality, pregnant and delivery complications and mother-to-child HIV/AIDS transmission. Maternal health after delivery (postpartum care), both preventive and curative care is also provided. Such care includes examination of mother's nutritional status, treatment for anemia and advice on diet.

1.4 Research questions

1 What proportion of women of reproductive age in Turbi Ward, North-Horr sub County utilize skilled birth attendance services?

2 What are the factors that hinder the utilization of skilled birth attendance among women of reproductive age in Turbi Ward, North-Horr sub-county, Marsabit County?

1.5 Objectives

1.5.1 Broad objective

To identify factors associated with utilization of skilled birth attendance services by pregnant women in Turbi ward, North-Horr sub-county, Marsabit County.

1.5.2 Specific Objectives

1. To estimate coverage for skilled delivery in Turbi ward, North Horr Sub County, Marsabit county
2. To determine the factors associated with the utilization of skilled birth attendant services

1.6 Limitations of the Study

The Marsabit County is vast and has uneven terrain hence it took a lot of time to successfully cover it during field work. Road networks within the county are very poor which made accessing interior regions of the communities' abit difficult. This therefore meant hiring of more research assistants, dividing them into two teams then allocating each team a sub location to cover to reduce fatigue therefore leading to inaccurate data. The mention of place of giving birth might be difficult socially and hence research assistants were trained to first of all build adequate rapport with the respondents before introducing the subject of where they had delivered their babies.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the relevant literature on studies carried out on barriers to skilled deliveries. The first part focuses on the utilization of skilled birth attendance, the other part looks at the major demographic, socio-economic, health service and social cultural factors that hinders the use of skilled birth attendance. The aspect of women delivering with no one present was also covered. The conceptual framework has been described in this section as well.

2.2 Theoretical Perspective

The theoretical perspective outlines the safe motherhood framework, as postulated by Charlotte Warren and Wilson Liambila (2004). The two frameworks analyses behavioural, economic, social and cultural factors that influence the overall maternal mortality and morbidity. Warren and Liambila's framework specifically analyses the impacts of the results on the mother's or new-born babies' health.

The safe motherhood framework outlines the determinants of safe pregnancy outcome. Among the determinants outlined in the framework are: access to various services, reproductive health behaviours, and lastly women's nutritional and health status (AbouZahr, 2003). As per the framework, the background factors also include the general political commitment, functional infrastructure for transport, and the overall social-economic well-being of the woman.

2.3 Utilization of Skilled Birth Attendance

Skilled birth is one in which a qualified healthcare professional like a nurse or doctor conduct deliveries for a mother (WHO, 2016). Skilled birth attendance is a major factor in saving the lives of both mothers and newborns. Yet, in Kenya, utilization of skilled

birth attendance is subpar compared to other neighboring countries. As of 2011, the World Health Organization (WHO) estimated that only 45% of births were attended by a skilled health professional in Kenya (Shah et al., 2015). This compares starkly to neighboring countries. For example, in Tanzania, the rate of skilled birth attendance is over 65%, while in Uganda it is over 60%. This profound difference highlights a need for increasing skilled birth attendance utilization in Kenya.

Variation in utilization of skilled birth attendance across different countries is primarily due to differences in health infrastructure, access to care, and public health education. Governments play an important role in developing sound public health policies, such as providing access to quality antenatal care, health resources and services for pregnant women, and better communication platforms for health workers (Shah et al., 2015). Furthermore, the availability of job opportunities for healthcare workers, their role in community development, and their income can also influence the utilization of skilled birth attendance. In the case of Kenya, health infrastructure and access to health services are still lacking in many rural areas, and insufficient or poor quality health communication platforms further impede utilization of trained health professionals at births (Say et al., 2014). One World Health Organization (WHO) study showed that in nine of Kenya's 47 counties, women were more than two times more likely to not have a skilled birth attendant present at the time of delivery.

In order for the utilization of skilled birth attendance in Kenya to increase, several strategies need to be addressed. Community health education is imperative in order for the public to be aware of the importance of using a skilled birth attendant. Health workers need to be able to reach out to traditional birth attendants and provide them with resources, training, and support. Additionally, the national government needs to develop better infrastructure and policies that support their health workers' income and

workload, and provide them with the necessary resources and equipment for them to best serve those who need it (Ibrae, 2017). The government also needs to ensure that the healthcare system is transparent and efficiently manage resources. This will ensure that all citizens, regardless of location, have access to quality health services.

One initiative to increase the utilization of Skilled birth attendance in Kenya is the Maternal, Newborn, and Child Health (MNCH) Integrated Package. The goal of this initiative is to improve the health of mothers, newborns, and children by increasing the access and use of quality care. The initiative includes appropriate antenatal care, safe delivery, immunization and post-natal care services (WHO-RHR, 2018). This initiative focuses on strengthening the capacity of the health system, increasing access to services, and creating an environment that is conducive to the utilization of this care. The Ministry of Health has plans to expand the MNCH program to all regions of Kenya. An analysis of government policy also highlighted investment in finaincial incentives for health workers. Kenya ranks among the world's lowest in doctor-to-patient ratios, and evidence suggests that overall population health can be improved with increased budgets devoted to healthcare. Adding additional financial incentive for health workers in the form of salary was seen to have a positive effect on the number of skilled birth attendants present (AbouZahr, 2003). Additionally, better access to electricity and reliable communication networks in rural areas reduced the distance and time that health care workers need to travel to perform a delivery and improved overall delivery outcomes.

As argued by Starrs (2006), through education, infrastructure development, financial incentives, and increased access to quality healthcare services, Kenya is beginning to see an increase in the utilization of Skilled birth attendance. However, Kenya still lags behind its neighbouring countries and significant progress is needed to improve access

and utilization of Skilled birth attendance in order to save the lives of mothers and new-borns. To achieve that, the national government needs to implement policies that prioritize maternal and new-borns healthcare, invest in financial incentives for health workers, strengthen the health system, and increase access to services.

The presence of a skilled birth attendant when the mother is giving birth is an intervention that ensures women access to proper health care including medication and referral services in case of any obstetric emergencies. Skilled delivery care also leads to a reduction in maternal mortality (Hardee et al., 2012). It has been reported that skilled birth delivery help reduce maternal mortality with around 13-33%. The global statistics have shown that close to 78% of women are assisted by skilled attendant when giving birth. However, usage of skilled attendants is still low in both Africa and Asia regions, as compared to the more developed regions or countries(WHO, 2016). For instance, only 44% of births are delivered by a skilled birth attendant in Kenya, usually a nurse or midwife (KDHS, 2014). Marsabit County in Kenya is among the bottom three counties reporting the minimal number of skilled deliveries with North Horr -sub-county reporting the lowest with only 26% of pregnant women utilizing the skilled birth attendance.

In Kenya, the utilization of antenatal services is high. The KDHS 2008-09, states that 92% of mothers receive antenatal care from a skilled provider, most commonly from a nurse (63%). However, only one third (1/3) of these women attend before the last trimester of pregnancy, which is too late to receive the optimum benefits of ANC. Moreover, only 44% of births take place in health facilities. This figure however varies from around 89.4% in Nairobi, 44.4% in Coast to17.3% in North Eastern Province.

The most common source of ANC is government health centres and government hospitals. In comparison to other provinces, the data shows that women in Coast

Province are most likely to use public/government sources for ANC at 90.8% (Ogolla, 2015). However, based on the place of delivery, the KDHS 2008-09 indicate that 54.6% of women in coast province deliver at home while only 44.4% deliver in health facilities (both public and private).

2.4 No One Present (NOP)

Skilled attendance at birth is a proven intervention to improve maternal and new-born health outcomes. Unfortunately, in Nigeria, many women give birth alone, with no one present (NOP) (Austin et al., 2015).

Not only are Nigerian women predominantly using unskilled attendants, one in five births are delivered with No One Present (NOP). The study revealed that the prevalence of NOP is highest in the northern part of Nigeria with 94% of all observed cases. Socio-demographic factors, including, women's age at birth, birth order, being Muslim, and region of residence, were positively associated with NOP deliveries. Mother's education, higher wealth quintiles, urban residence, decision-making autonomy, and a supportive environment for women's social and economic security were inversely associated with NOP deliveries (Fapohunda& Orobaton, 2013)

One key intervention to improve maternal health outcomes is to ensure that all women have access to skilled care during labor and delivery. Unfortunately, less than 40% of Nigerian women gave birth with a skilled attendant in 2013, and there has been no real change in that proportion over time. These data suggest that over 60% of Nigerian women are at excess risk of maternal death, as they do not have access to or utilize available life-saving services(Austin et al., 2015). Within this population, some women deliver with unskilled companions who could, in the case of an emergency, potentially act as a conduit to the health system where needed services might be available, while they also provide emotional support and comfort to women during labor. But there is

also a considerable proportion of women giving birth alone with no one present (NOP) who are even more vulnerable as they neither have access to skilled attendance nor do they have the marginal protection and social support supplied by an unskilled birth companion(Austin et al., 2015).

According to the most recent NDHS data available, Nigeria is a clear outlier in terms of the proportion and absolute numbers of births with NOP (Ugo, 2016). Only one country, Niger, had a higher percentage of women who gave birth with NOP (2012 estimates of 15.1%). While the percentage of women who give birth with NOP in Niger may be slightly higher, the sheer number of women giving birth with NOP in Nigeria is much larger due to its population base(Austin et al., 2015).

2.5 Advantages of skilled birth attendance

Skilled attendants offer maternal care right from the period of pregnancy, childbirth to postpartum period, and new-born care for around 59 months. Deliveries in hospitals are important because complications can be treated immediately, and women and babies are referred promptly to appropriate facilities in case of complications to avoid preventable deaths and disabilities (Gitonga, 2017).

Skilled birth attendance is actually some of the essential indicators for monitoring the overall achievements of millennium development goal number 5 (Say et al., 2014). Health care professionals can be able to contain or solve life-threatening problems that may be experienced during the time of giving birth (Nour, 2008). These preventable maternal deaths could easily be reduced when the mother is handled by a skilled birth attendant (Noordam et al., 2011). Skilled birth attendants equally offer women with practical and emotional support by helping them deliver healthy babies and subsequently promote birth as a positive experience for all the mothers and family at large.

As argued by Austin et al. (2015), the primary advantage of skilled birth attendance during delivery is the improved health outcomes it can help to achieve both for mothers and their offspring. Skilled birth attendance, which typically involves the presence of trained medical personnel during the labor and delivery, can help to anticipate, diagnose, and manage the complications of childbirth and ensure that the mother and baby receive the appropriate and timely health care interventions. Skilled birth attendance can help to ensure that mothers are able to give birth safely and that the labor and delivery processes are conducted efficiently and with minimal complications.

Due to the presence of experienced personnel during labor and delivery, skilled birth attendance increases the chances of identifying complications early on. This is especially important in the case of emergencies such as lacerations and heavy bleeding. Early identification and treatment of these potential complications can help to improve the health outcomes of both the mother and baby (Ugo, 2016). Additionally, trained staff will be able to reduce the risk of maternal and infant mortality by recognizing and managing any potential complications during the labor and delivery.

Another advantage of skilled birth attendance is increased access to pain relief medications, such as epidurals, which can help to reduce the mother's discomfort during labor. This can help to make the delivery process smoother for both the mother and the baby, and reduce the stress associated with childbirth (Fapohunda& Orobaton, 2013). Additionally, skilled birth attendance helps to ensure that the mother can receive any other medications, such as antibiotics, that may be necessary during labor and delivery.

Skilled birth attendance also helps to ensure that the mother's family and support network are kept informed and updated about her labor and delivery progress. This allows them to provide comfort and reassurance to the mother and be involved in the

decision-making process (Austin et al., 2015). Additionally, skilled personnel can provide psychological support to the mother before, during and after labor, which can help to reduce any anxiety or stress she may be feeling.

Fapohunda& Orobaton (2013) concluded in their study that skilled birth attendance during delivery offers immense health benefits to both the mother and baby. Due to the increased access to medical interventions and the presence of skilled personnel, mothers and infants are more likely to experience fewer risks and complications during the labor and delivery process. Furthermore, skilled birth attendance helps to ensure that families and support networks are kept informed and involved, and can provide maternal psychological support if needed. For these reasons, skilled birth attendance can be highly beneficial in achieving improved health outcomes for mothers and their offspring during delivery.

2.6 Socio-demographic barriers to utilization of Skilled Birth Attendance

In modern society, a skilled birth attendant is a midwife, doctor, or other professional who has the skills and knowledge to provide care for mothers and babies during labour, delivery, and after childbirth. It is widely accepted that women who have access to quality, professional care during childbirth are much more likely to have safe and successful deliveries and healthy babies. Unfortunately, many women in Kenya face numerous barriers to utilizing skilled birth attendants. Among these barriers, age, marital status, and parity play a significant role. Socio-demographic factors like maternal education level, marital status, income and cultural beliefs, among other things tend to influence utilization of skilled delivery. Marital status is an issue that is closely tied to access to skilled birth attendance. The KDHS found that married women (46%) were less likely to deliver with the aid of a skilled birth attendant than their unmarried counterparts (54%). In addition, they were less likely to use a health facility as a place

of delivery (32.3% vs. 36.7%). Moreover, the rate of deliveries without professional aid was higher among married women (45% vs. 42%). These findings indicate that married women may be at a higher risk of complications due to the lack of professional care during delivery. A study in Botswana on the other hand showed that teenagers often did not use health facilities for delivery (Olayinka, et al., 2014). Similarly, in Uganda, young women consider themselves at risk because they have never delivered before and emphasised at the ANC so they use the health facility more than the older women. Women in rural areas, 35 years and older and women who have delivered more than twice often opt for home deliveries. Some married women will depend on husbands to decide where the delivery will take place. Therefore, from the review it is found that age, marital status and parity are barriers to using skilled birth attendants during delivery. The three delays, in making decisions which is mainly influenced by the socioeconomic and cultural beliefs, the delays in accessing the health care site for the services sought and the health facility related factors also have an influence to the level of utilization of the skilled birth attendants.

Moreover, parity (the number of prior children born to the mother) is another important factor in access to SBA in Kenya. The KDHS found that mothers who had a higher number of prior births (2 or more) were less likely to utilize UBA services than those with only one prior birth (46.6% vs. 54.0%) (Fapohunda& Orobaton, 2013). Further, the likelihood of delivering in a health facility decreased among women with a higher parity (32.6% vs. 38.2%). These findings suggest that mothers of higher parity are at a higher risk for negative outcomes during childbirth due to the lack of professional care.

2.6.1. Education for women and their partners

The education level of the mothers is a key determinant for seeking skilled or non-skilled care during childbirth. Educated women are empowered such that when they

become mothers, they can independently make decisions on health matters of their own and that of their children (Palamuleni, 2011). Larger gender gaps in education are conditioned by society's level of socio-economic development (International labour organisation, 1995 cited by Central Statistics Office, 2008). Eighteen percent of women married to men with no education used skilled birth attendants compared to 64% of women married to men with 10 years or more of education. There are various barriers to women empowerment in most parts of Kenya, such as inequality to access education, discrimination in employment and occupation. Only 5.4% rural women can make decisions over their husband's earnings (Central Statistics Office, 2008).

In Zambia, for instance, forty six percent of the men decide on the number of children they will have without women having a say (Bartholomew, Parcel, Kok & Gottlieb, 2011). However, it was found that 61% of the rural women are able to decide to seek health care on their own (Olayinka, Achi, Amos & Chiedu, 2014)). Women with higher education level, make their own independent decisions than women with lower education. Only, 5% of the women with tertiary education cannot make decisions in the home (Bartholomew, Parcel, Kok & Gottlieb, 2011). Women in the rural areas are disadvantaged because most of them have primary or below level of education and will not make decisions affecting them. Additionally, women married to men of primary and below levels of education are not likely to use the health facility for delivery. Women who are educated are mostly civil servants found in schools, community development offices and will usually use the centres for delivery (Bartholomew, Parcel, Kok & Gottlieb, 2011). The literature reviewed shows that low levels of female and male education are barriers to health facility delivery.

In Central Tanzania, a study found that educated women and those with high income had a higher likelihood of delivery in a health facility. The husband's education has also been found to influence women's health-seeking behaviour in a study done in Ethiopia (Fantu et al., 2012).

2.6.2 The level of knowledge of the possible outcome of pregnancy on hospital

Knowledge about pregnancy outcome usually reflects the childhood background of the woman, including her general familiarity with the health services and some types of norms and beliefs and some scholars recommend that this should always be controlled (Monda, 2016). It has also been argued that there is greater effect of educational level when it comes to decision of seeking hospital delivery services, with women who are more educated and hence more knowledgeable likely to demand for better healthcare delivery services. Contrary to that, better awareness on the existence of poor quality at the healthcare facilities and higher confidence on self-care might make women choose not to seek for hospital delivery services (Ogolla, 2015). For instance, in most of the settings in Africa, effects of having primary education on the mother's health seeking behaviour is very severe (Ogolla, 2015).

Studies have shown that women who stay longer in schools always understand the aspects of reproductive health and subsequently tend to seek for hospital delivery in most of the cases compared to women who spend shorter period of time in school (KDHS, 2014). For instance, (Ogolla 2015), in their study found out that among those with secondary education, 60% would deliver in the hospital while only 30% of the uneducated group would deliver in the hospital.

While most studies have solemnly relied on the aspects of formal education and how it influences hospital delivery, it is also recorded in the literature that the informal knowledge that a woman has on the potential outcomes of pregnancy can trigger them

to seek for hospital delivery or not (KDHS, 2014). Women who had ever experienced cases of complications during pregnancy would prefer delivering at the healthcare facility compared to those who are not knowledgeable on the possible complications a woman might experience during pregnancy.

Moreover, having educated husbands can also promote the practice of hospital deliveries in our communities (Monda, 2016). Such husbands might put some constrains on the general mobility of their wives as well as their individual decision-making process and hence facilitate their behaviour of seeking for healthcare delivery services (Njoki, 2015). Moreover, the general education of the household influences the decision they make to seek for healthcare delivery services (Njoki, 2015).

2.6.3 Maternal Wealth Status

Unemployed women could not able to save enough money for maternity fees; this makes them seek services from unskilled attendance during delivery. The long distances from health care facilities and the high costs are considered to be the major hindrance to the utilization of skilled deliveries. The traditional birth attendance is affordable and the payments can be negotiated. Sometimes the TBAs conduct deliveries for free, especially for the relatives and those women known not to afford to pay. On the other hand, the mode of payment does not necessarily have to be in cash (Gabrysch et al., 2011).

Numerous aspects of autonomy, like the position one hold within the household, being financially independent, decision-making power and mobility regarding an individual's health usually impact on the decision women make on whether to seek healthcare services when it comes to delivery (Gebresilase, 2014). In a number of cultures, women can never decide on their own to seek for delivery services at the hospital but has to be

given permission from their husbands or at times the mother in law (Kanyuuru, Kabue, Ashengo, Ruparelia, Mokaya & Malonza, 2015).

Additionally, women might always lack full control over the material resources that is required to pay for the necessary expenses when one seek hospital delivery services, their movement might as well be restricted or they might have very limited access to vehicles or even donkeys. However, the informal power held by women in the households can at times help mitigate some of these (Kanyuuru, Kabue, Ashengo, Ruparelia, Mokaya&Malonza, 2015). The interpretation of numerous measures of autonomy in this case relies on the argument that; women who decide to take individual decisions within a context where this is considered unusual can be isolated somehow, become unsupported and hence less autonomous. In such circumstances, women might lack the amount of resources necessary and hence might not seek healthcare services. The status of a woman, as it is reflected on the importance that is attached to the health of the female also plays a role on whether a woman should seek hospital delivery services or not.

Some cultures dictate that women cannot make informed choice on whether they can deliver in the healthcare facility or not. In such circumstances, it is men who decide where the woman can deliver and this greatly hinders their attempt of practicing hospital delivery (Kenya National Bureau of Statistics, 2015). Studies have shown that in regions where the power of decision making relies squarely on men, then women will always have to follow as per the wishes of their spouses and in such cases, their decisions to seek for healthcare delivery services is highly limited.

However, the status and the autonomy of the women are always impacted on by their marital status, education, age and parity. It is believed that women who are learned have superior roles in the society and hence can make their own decisions on whether to seek

for hospital delivery services or not (Kenya National Bureau of Statistics, 2015). Several scholarly works have always examined the effect that autonomy dimensions have on the application of skilled attendance when it comes to delivery (KDHS, 2014). Most of the studies get very significant associations with a number of dimensions. The dimensions studied in this case comprised of aspect of decision making, freedom of movements, and control over the earnings (Cowgill, Bishop, Norgaard, Rubens & Gravett, 2015).

Those women who are earning money have the ability of saving and making decision on whether to spend such savings on healthcare delivery services (Kwagala, 2013). In such a case, the decision to seek hospital delivery services relies on the willingness of the spouse or the high-income earner in the house (Kwagala, 2013).

2.6.4 Physical accessibility

Physical accessibility includes things such as means of transport, health facilities and the state of the roads within a given area. Moving to the next step of PRSP model is irrelevant if the previous step has problems. Gabrysch et al. (2011) agree with Claeson, et al (2001) that there is no need for instance, of having a centre, which is well, staffed and well equipped but cannot be accessed by the women for delivery due to high cost. Bartholomew, Parcel, Kok & Gottlieb (2011) states that use of services declined with distance. Therefore, the facility must be where women can reach before thinking of staffing numbers. It is the number of women accessing the service that will dictate the number of staff, equipment and how the services will be organised.

Accessible services are the central goal of health systems (Bartholomew, Parcel, Kok & Gottlieb, 2011). Low use of health facilities for delivery defeats the purpose of maternal health services. For example, Counties in the Northern Kenya region have low proportions of health facility deliveries, because of poor physical access. Equally,

in North Horr Sub-County there are few health facilities, unevenly distributed and not accessible to some women in the district hence differences in the use of health facilities within the district. The western and northern side are poorly serviced, difficulty to reach during the rains and with 4% to 6% health facility deliveries. In a study carried out in Kwale, 96% of women wanted to deliver in a health centre, only 45% did, citing distance as an obstacle Stekelenburg, et al (2004). In Kazungula there are some centres situated within the village and their institutional delivery coverage ranges from 67% to 100%. Centres that are far from most of the villages have coverage ranging from 4% to 12% (Alden, Lowdermilk, Cashion & Perry, 2013). Therefore, it is evident from the reviewed literature that distance is a barrier to facility deliveries.

Kanyuuru, Kabue, Ashengo, Ruparelia, Mokaya & Malonza (2015) found out in their study that a health facility delivery was more likely for a woman living within walking distance. In the rural regions, some of the villages are far away from the health facilities and about 40% of women intending to use the centre for delivery will need to walk for more than 2 hours to the nearest centre. Apart from distance there are wild animals. Literature shows that long walking time due to distance is a barrier to health facility deliveries. Transport is linkage for development and access to essential services such as childbirth (PDPZ, 2008). A study in Kalabo found non- availability of transport to have influence on women's choice of health facility delivery (Stekelenburg, 2004). Due to the remote nature of some regions, there is no public transport to most areas. Women can wait for days without getting transport to a health facility. Transporters do not want to drive their vehicle on poor roads. It takes a 4x4 land cruiser in perfect condition, two hours to cover a distance, which would take only 20 minutes if the roads were good.

Transport infrastructure cost, poverty and physical proximity to a health facility are clearly necessary in two of three delay model factors affecting maternal health service

utilization (Molesworth, 2005 Thaddeus and Maine, 1994). The three delays are however not discussed in this thesis because the thesis reviews barriers for not using the health facility at all for delivery and not factors delaying accessing health care. Additionally, North Horr -sub-County of Marsabit county is the largest -sub-county in Kenya geographically, some health facilities are more than 90 kilometers from the villages making it difficult for the women to get skilled care.

There is evidence that improving the roads has positive results on use of health centres for delivery. In Kenya, construction of the road leads to cost reduction due to increased competition in public transport thus an increase in health facility utilisation (van Lonkhuijzen, 2003). Lesson learnt from the Kenyan experience is that, improving roads could increase uptake of health facility delivery services. It is nonetheless a challenge in Marsabit because it requires political commitment from all levels.

2.6.5 Maternal Age

Age is a major factor when it comes to access to SBA in Kenya. According to the 2016 Kenya Demographic and Health Survey (KDHS), only 52% of deliveries were attended by a skilled birth attendant at the time of the survey. This is in part due to the fact that a higher percentage (54%) of mothers aged 15 – 19 years delivered without the aid of an skilled birth attendance than mothers over the age of 19 (49%). In addition, mothers in the younger age group were more likely to not have given birth in a health facility (49% vs. 42%). Other studies have reported similar findings and conclude that younger mothers in Kenya are more likely to experience delivery complications due to the lack of professional care during the birth.

Aged women in their late 30s or 40 years believe in themselves and have a great influence on the family's decision-making compared to younger women. However, aged women hold the traditional views and therefore are most likely to use unskilled

birth attendants compared to the young ones. A study done in Kenya contrasted with the findings of the above studies, where women aged 35 and above were more likely not to deliver at health facilities, therefore managed by unskilled attendants at home(Kitui et al., 2013). In Kenya, a trend of decreasing health facility delivery was reported to be related with increasing birth orders (Kitui et al., 2013). However, in Marsabit county, the proportion of women who receive skilled birth services is at a very low level compared to the national target. In the North- Horr -sub-county the women only seek skilled birth attendance services when the health facilities are within walking distance and if previous deliveries had complications.

2.6.6 Technical quality of services offered

Technical quality refers to the highest achievable prescribed standard. Technical quality relies on effective provider training and supervision, availability of appropriate case management guidelines, adequate input and workload of the providers (Claeson et al, undated; World Bank, 2001). In Nigeria and Cote D'Ivoire unqualified midwife assistants conducted deliveries without supervision with inappropriate management of complications further, In Benin, Rwanda and Jamaica health providers' knowledge and skills are not adequate (Koblinsky, 2006) therefore were likely to provide sub-standard quality of care. The women using delivery services cannot assess the quality of care. Nonetheless information collected from interviews gives vital ideas on what the women feel about the services provided (Cham et al, 2008).

Environmental health technicians, cleaners with TBA training and TBAs conduct deliveries in the health centers with poor technical skills quality. Gebresilase (2014) observe that staffs with inadequate knowledge and skills tend to refer maternal cases to the hospital more often than midwives and women resent referrals to the hospital only to end up with a normal delivery. It is an added cost to women because the

ambulance will not take them back home. Women who experience such will most likely shun use of the health facility for delivery in future. Thus poor technical quality becomes a barrier to health facility delivery. Information about how women feel about the service is rarely sort for by health workers in most rural regions like the Northern Kenya.

As argued by Kanyuuru, Kabue, Ashengo, Ruparelia, Mokaya & Malonza (2015), one of the important skills required in monitoring a woman in labour is use and proper interpretation of the partograph. A partogram is a tool used to monitor labour, maternal and foetal well-being. Nurses and clinical officers are not able to use the partogram due to inadequate midwifery knowledge. Even some midwives who have been trained on use the partogram will usually not use it. The partogram is a useful tool, used to make life saving decisions, for instance referral in good time. Guidelines on use of the partogram, infection control, and referral protocols, integrated guide for frontline health workers are available in all the centers. Since, most health workers in Kuzungula are in the habit of not reading therefore they continue providing poor quality care. It is however better to refer the mother to hospital if the health worker is in doubt than to end up with a maternal death. Unfortunately, that is not the user's perception. A referral to the woman is failure to solve a problem leading to not using the center even by other women who are observing the care provided. Procedures such as suturing, examinations of the mother and baby are straining to the eye and may not be properly done due to power lighting. This is frustrating to the health care provider and consequently may lead to impoliteness to the women, discouraging women from using the facility the next time they are in labour. A study in six rural districts in Zambia showed that 59% of women were assisted to deliver by traditional birth attendants (TBAs) or their relatives (WHO/CBOH/CSO, 2003). In Kazungula 80% of

the women were assisted to deliver by TBAs or their relatives (Kazungula HMIS, 2008 a). Home deliveries in this context refers to, the whole process of delivery taking place at home.

Moreover, experience shows that it is possible to have SBA in most facilities; provided that the sufficient number of SBA is trained on midwifery practices as well as training facilities are put in place (Bhutt, et al., 2009). For example, Nepal developed a midwifery-training centre and was accredited by the national training centre; almost all the auxiliary nurse midwives were trained. In Nepal, SBAs provide 24 hours delivery of CEmOC and BEmOC services. In addition, there is evidence that some skilled providers have low knowledge on basic obstetric care (Bhutta et al., 2009). In Nicaragua, for instance, 16.7% had knowledge on management of third stage of labour (Caravan, 2008). Nepal experience shows that a one-month midwifery refresher course can upgrade the skills of birth attendants. Lessons learnt are that, learning needs assessment of SBA is important so that the training is tailored to address specific knowledge and skills gaps. SBA should constantly attend knowledge and skills refresher courses.

There is evidence that the government and non-governmental organizations have important support roles to play in improving the quality and uptake of delivery services. For example, the Kenyan government with assistance from UNICEF constructed a birthing centre and operating theatres in most hospitals within the northern region (Chaudhary, 2008). This improved the coverage of SBA. The implication for such is, increasing the number of SBA in the region by training the existing nurses. The feasibility of implementing such interventions however is not without challenges. The region does not have training centres for midwifery skills. The refresher course is mainly theoretical with no practice because there are no

sufficient deliveries for practice. Therefore, SBA practice for competence can be done from other districts. It is important to preferably have all the health workers upgrade their midwifery skills. This will ensure increased coverage of quality care and uptake of delivery service, it is attainable but it requires commitment from the district and MOH learning from successful experiences in Cuba, Egypt and Sri Lanka (Bernis, 2003).

2.6.7 Human and material resource barriers on use of health facility for delivery

A survey conducted by Cowgill, Bishop, Norgaard, Rubens & Gravett, (2015) on availability of human and material resources for reproductive health services reported that most health centres have few trained staff to provide health services including deliveries to more than 12,000 inhabitants. Four centres have two trained staff with populations of about 5,300. Fourteen have only one staff each with populations of about 3,500. Two centres have no trained staff. Human resource problems are usually due to poor deployment practices, inadequate resources to provide incentives to staff in rural areas and inadequate training. The issue is not about inadequate resources as Claeson et al, (undated) eludes. It is about the type of professionals who are making decisions for others without involving the affected. Human resource shortage contributes to discouraging women from using the health facilities for delivery. This could be because women know that the chance of skilled attendance during delivery is limited. It is not even feasible to have a 24hrs service at the centres. Therefore, shortage of skilled birth attendants is a barrier for women to use the health facility for deliveries in Kazungula. In Zambia equipment, medical supplies and drugs for essential obstetric care was procured and distributed to districts, this resulted in an increase in supervised deliveries (MOH,2005). On the contrary the Non-Governmental Organizations Coordinating Council, (2008) states that health

indicators were declining in Zambia due to, among other causes, inadequate drugs and medical supplies. In Kazungula equipment such as vacuum extractors are not available in all the centres. The district has how ever bought things such as delivery beds, blood pressure machines, extended some centres to create room for deliveries. Women needing EmOC are referred to another district due to lack of equipment.

2.6.8 Organizational quality and consumer responsiveness as hindrance to health facility delivery

Organizational quality and consumer responsiveness refers to health center performance in organizing and providing maternal services addressing women's needs and to encourage service use (Claeson et al, 2001). Responsiveness of the health facility to health needs of a community is crucial to facility utilization Stekelenburg (2004). Staff attitude, space, privacy, cleanliness, comfort of the delivery rooms, opening times, system of payments and referral service efficiency should be "user friendly." Consumers may not be satisfied with the way health services are organised in terms of operating hours and time of waiting before being attended to. (Stekelenburg, 2004; Claeson et al, 2001), the ideal is that delivery service must be available 24 hours (Campbell and Graham, 2006). This is however currently not feasible in most hospitals in Marsabit and other counties in the northern region due to critical shortage of skilled birth attendants.

In Marsabit, the health centres open at 7:30 to 12:30 hours in the morning and 14:00 to 16:00 hours in the afternoon, except for the level four hospitals which operate 24 hours a day. However, the health worker is not with the woman to monitor labour because of other clinic services. Periodically, the health worker attends to the woman in labour. The health provider can take from a few minutes to an hour before attending to the need

of the pregnant woman. Waiting time will depend on what the provider is doing at the time the woman comes in and the stage of labour. Female relatives almost always accompany the woman in labour. This is convenient for the health worker but not satisfying from the users' perspective. Non-availability of delivery service at all times could be discouraging women from using the health facilities for delivery in the region. The referral system should be well organized and respond quickly to emergences. An efficient referral system is a requirement for enhanced use of the health services Stekelenburg (2004). Cham et al, (2005) states that delay may be due to operational problems. All the health centers can be communicated to through cell phones or high frequency radios. However, it takes about three hours or more get a maternity case to hospital from any of the health centres in the region. It is not always that the vehicles are available. The other option used is that the health centre organises with local transporters where they are available. In general, the referral system is good. The major challenge is the time it takes to get the patient to hospital and women refusing referrals to Livingstone.

Impolite staff attitude deters women from health centre delivery (Claeson et al, 2001). A study in Tanzania found that staffs were abusive, not compassionate and reluctant in assisting women in labour. However, one of the women in a FGD said, "When I went to the health facility for delivery, I was impressed by the midwife who cared for me so much. She was a human, polite and sympathetic." (Mrisho et al, 2007). Some staff can be very rude to the women, especially those who come after working hours in Kazungula. Patients have complained about staffs that are rude through neighborhood health committees. However, some women talk good about some health worker nonetheless, it is evident from the literature review that women do not use the facilities

for delivery due to rude and disrespectful health workers. The situation is similar in most parts of Marsabit.

Space is among the many factors that can prevent health centre delivery (Claeson et al, 2001). In Tanzania, there was lack of privacy in some health centres and a woman said, "some facilities have no special room for deliveries; the room is small and all treatment for both men and women are taking place in the same room: you can easily be seen while giving birth," (Mrisho et al, 2007 pp 866). This happens in six centres in Kazungula. The room used for delivery is the same one used for, general OPD screening. In case of a delivery, every patient has to leave the room; all other activities are stopped and wait until the woman has delivered. Deliveries in some centres are conducted form a narrow firm uncomfortable delivery couch. Within six hours after delivery the woman is discharged home. The community has complained and brought this to the attention of the area member of parliament.

System of payment can discourage women from using the services for delivery (Claeson et al, 2001). Hospital services are said to be free, but there are hidden costs such as medicine and medical supplies. A study in Bangladesh found that free maternal care includes hidden costs that could contribute to low use of maternal services (Nahar and Costello, 1998 cited by Duong, 2005). On the contrary a study in Nigeria indicated that financial cost for maternity was not a main factor in use of health facility. Similar findings are reported in a study in Ethiopia showing that cost of service was not as important as quality of services. Some studies suggest that government centres are less used because they are free (Auerbach, 1982, cited by Duong, 2005). In 1998, Zambian government, attempted to broaden the health resource base by introducing cost sharing user fees (MOH, 2005). Kazungula was charging Kwacha 1 500 (US, 25cents) for a clean delivery pack. The pack contains, half of a single bed size plastic sheet to provide

for a clean area for delivery, a tablet of soap, pair of gloves, a new razor blade, string cord tie, a box of matches and a candle. This pack is still used and available at antenatal clinic. It is thought that the clean delivery pack did not have any effect on use of antenatal services taking into account that it was not free, due to high antenatal coverage. Women are expected to use this pack whether they deliver at home or health centre. In 2005 government abolished all user fees in the rural areas. However the district continues to provide the clean delivery pack at antenatal clinic. It could be that the clean delivery pack encourages home deliveries because the message at ANC is that the pack can be used even for home deliveries in case the woman does not deliver at the health centre.

Facilities cleanliness is one of the factors that may influence the decision to deliver at a health centre (Claeson, et al 2001). In Kazungula district the health centres are generally clean, and delivery rooms are clean even when visited without notice. The toilets and showers are relatively clean but 18 out of 20 health centres use VIPs and bathrooms are out side the labour room. Women cannot use them freely. They are very inconveniencing both to the health worker and the women in labour. Therefore, some women will decide to deliver at home because of toilets and bathroom location in the health facilities. The way things are organized in the health facility and the manner in which it responds to women can reduce uptake of services. These include staff attitude, space, privacy, cleanliness and comfort of the delivery rooms, system of payments and referral service efficiency.

2.6.9 Timing and continuity of services

Timing refers as to whether time sensitive interventions are delivered the right point in time; while continuity looks at whether women get the necessary number of contacts for services that require repeated visits (Claeson, et al 2001). Antenatal, postnatal and family planning require repeated visits. Increase in use of antenatal services is evident in developing countries. However, it is based on women who received one antenatal contact (Koblinsky et al, 2006). In 2001, World Health Organisation (WHO) recommended focused ANC (FANC). Four visits are required for each pregnancy and not the 13 visits as it used to be done. FANC focuses on maintaining normal pregnancy, not risk assessments (USAID, 2008), with knowledge that fifteen percent of all pregnancies may complicate during labour except it is not known which ones (DFID, 2008).

Focused antenatal, postnatal and family planning services are provided at all health facilities. The services are provided on specific days of each week. The health centers with the DHMT conduct monthly outreach clinics, each center prepares clinic schedules. However, most health workers concentrate on abdominal palpation, poor brief history taking and immunizations, health education is limited to those who have "at risk conditions" such as high blood pressure, first pregnancy, previous caesarean section thus women without "at risk factors" are not informed that every pregnancy is at risk. This could also be attributed to, inadequate orientation to FANC. Urinalysis and weight are usually not done. The rest of the drugs and tests are done. Sometimes fansidar for malaria prevention is out of stock. The district is supported by Boston University in prevention of mother-to-child transmission of HIV and ANC. The quality of care is substandard therefore continuity of care may be broken at ANC. Women will not come back to deliver at the centre because they are not told that care continues even

up to labour, referral to the hospital if needed, postnatal and family planning. Care does not end with ANC.

Timing is crucial in EmOC, many a times it is provided at the wrong time or too late (Claeson, et al 2001). Timely response to emergency obstetric care will build trust of women towards health workers and thus encouraged to use the centre when they have difficulties. This is not related to opening and closing time of the centre. The centre can be opened at the right time but the health worker may fail to provide timely response to EmOC. The opportunity of using ANC as platform for continued care such as advocacy for health facility delivery is missed in most of the hospitals in the hardship regions like Marsabit. In Malawi women who have never used contraceptives before was 1.2 more likely to seek unskilled services during the delivery than those that have ever used the contraceptives before (Palamuleni, 2011).

2.6.10 Cultural practices as barriers to hospital delivery practices

Religion and ethnicity usually have great influence on beliefs, values and norms with regard to what should be done during the period of pregnancy, utilization of hospital services and childbirth. Additionally, certain religious or ethnic groups might be discriminated against by the staff, making them least likely to use the most required healthcare services (Okoth, 2014). Studies have always shown that Muslims and Christians are most likely to make application of the relevant maternal health services than traditional and other groups of religions (Jalango, 2015). Such kind of results has been very consistent across the board, regarding numerous studies. It is assumed that women with strong ethnic or traditional beliefs are less likely to seek for healthcare delivery services when it comes to giving birth.

Regarding ethnicity, Mason, et al. (2015) reported that the nomadic pastoralists are least likely to seek for antenatal care services from the hospitals. Some communities, even

in Kenya do not support hospital delivery based on their strong cultural beliefs and values on aspects of maternal healthcare. Bartholomew, Parcel, Kok & Gottlieb (2011) pointed out that one of the main reason why women do not seek for hospital delivery services among the Maassai community is the kind of belief they have that it is not necessary to seek for such services because culture do not recognize them. Further study by Olayinka, Achi, Amos & Chiedu (2014) did suggest that the risk associated with not giving birth in a health facility did increase at a significant rate among the minority women who are living within the rural areas.

However, there is a great requirement that further qualitative and quantitative investigations are done on how cultures influence hospital delivery services seeking behaviors (Bartholomew, Parcel, Kok & Gottlieb, 2011). For instance, the Maasai culture dictates that the placenta should be buried at home. In such case, the women would be dictated to give birth at home so that the placenta can be buried there. In some other cultures, people believe that obstructed labor is as a result of infidelity and would not seek for health care services in such case (Alden, Lowdermilk, Cashion & Perry, 2013). Scholarly evidence shows that women in some communities cannot take up hospital delivery services without permissions from their husbands (Alden, Lowdermilk, Cashion & Perry, 2013). As a matter of fact, a woman in such communities is not supposed to deliver in a hospital unless with the permission of husband. Traditional beliefs and knowledge society has on childbirth influence women to deliver at home. Traditionally childbirth is seen as a normal occurrence, therefore does not require health facility service because it is not a disease (Liamputtong, 2003). Complications are seen as a result of the contrary to custom behaviour of the birthing woman not a problem needing health facility care. (O'dempsy,

1998; cited by Liamputtong, 2003). However women who ask for the placenta are allowed to take it.

Communities in the northern region believe that women must endure labour pains, never to cry or shout and that shedding tears in labour will kill the baby. Men should not hear a woman in labour shouting from pain. That is an embarrassment to the woman, her mother and mother in law. Out patients department (OPD) is only separated by a wall in some centres and women may be heard crying. This could be discouraging women from delivering at the clinic. At their homes men including the husband are not expected near the room where a woman is giving birth. In some communities, labour is kept a secret. It is believed that some people use black magic and cast spells and cause difficult labour and even death (Monda, 2016). If the woman in labour has to go to the clinic, no one should know about it. The mother, grandmother of the woman in labour and the mother in law are the only ones to be informed.

2.6.11 Conceptual Framework

This study explored different factors which may hinder usage of skilled deliveries. The selection of independent variables was informed by the theoretical underpinnings as already demonstrated in the literature review and they comprise of: access factors, associated benefits and the overall socio-demographic factors.

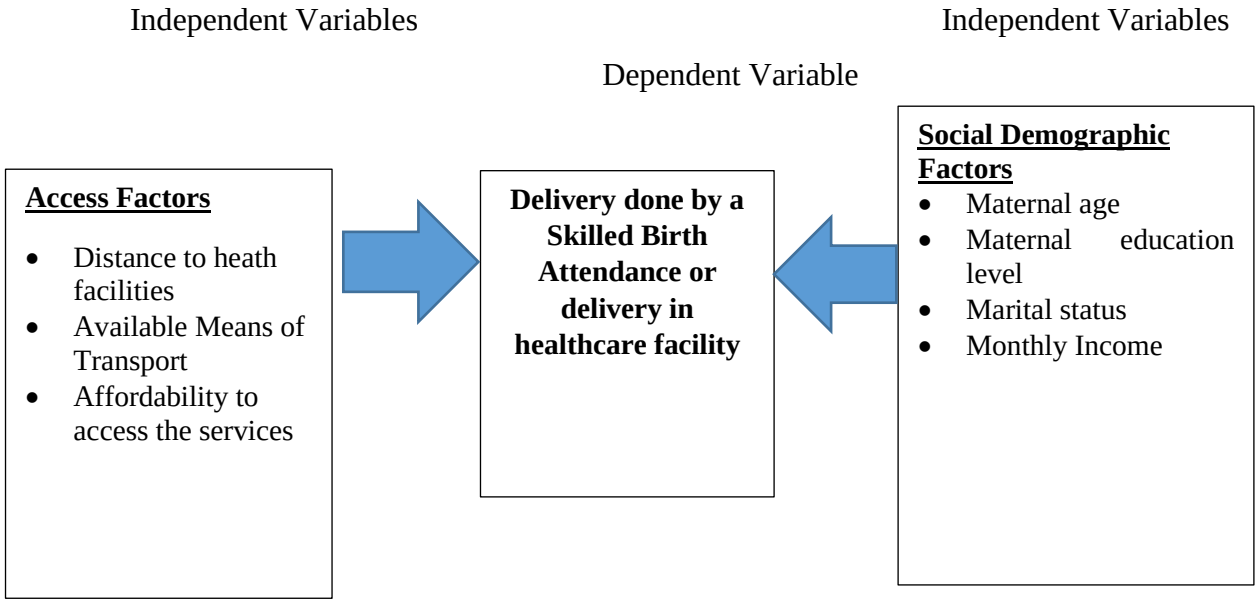

Figure 1: Conceptual Framework

CHAPTER THREE

3.0 Introduction

3.1 Materials and Methods

In this section, the experimental design, data collection methods, tools, equipment, and statistical analyses employed are described in detail, providing readers with a comprehensive understanding of how the study was executed.

3.2 Study site

The study site was in Turbi Ward, North-Horr sub-county of Marsabit County. North Horr -sub-County covers an area of 39,248 {sq. km} and is divided into five wards namely Turbi, Maikona, North-Horr, Illret, and Dukana. The wards have 13 locations and 18 -sub-locations. The projected 2020 population is 69,340 according to the 2012 population projection, North-Horr -sub-County has a population of about 95,178 of which an estimate 7356 are women of childbearing age (15-49) years (KDHS, 2014). Turbi ward covers 10,820.80 (sq. km), with an approximate population of 10,336 (“Turbi County Assembly Ward,” 2012).

There are 88 health facilities in Marsabit county, which include, The County Referral Hospital (1), sub-County Hospitals (4), Health Centres (17), Dispensaries (61), and faith-based facilities (5). The people of the Turbi Ward, North Horr -sub-County are mainly nomadic pastoralists. North Horr sub-County falls under arid and semi-arid areas. North Horr -sub-County has one sub-County referral hospital, six health centers, fifteen dispensaries, and one faith-based health facility.

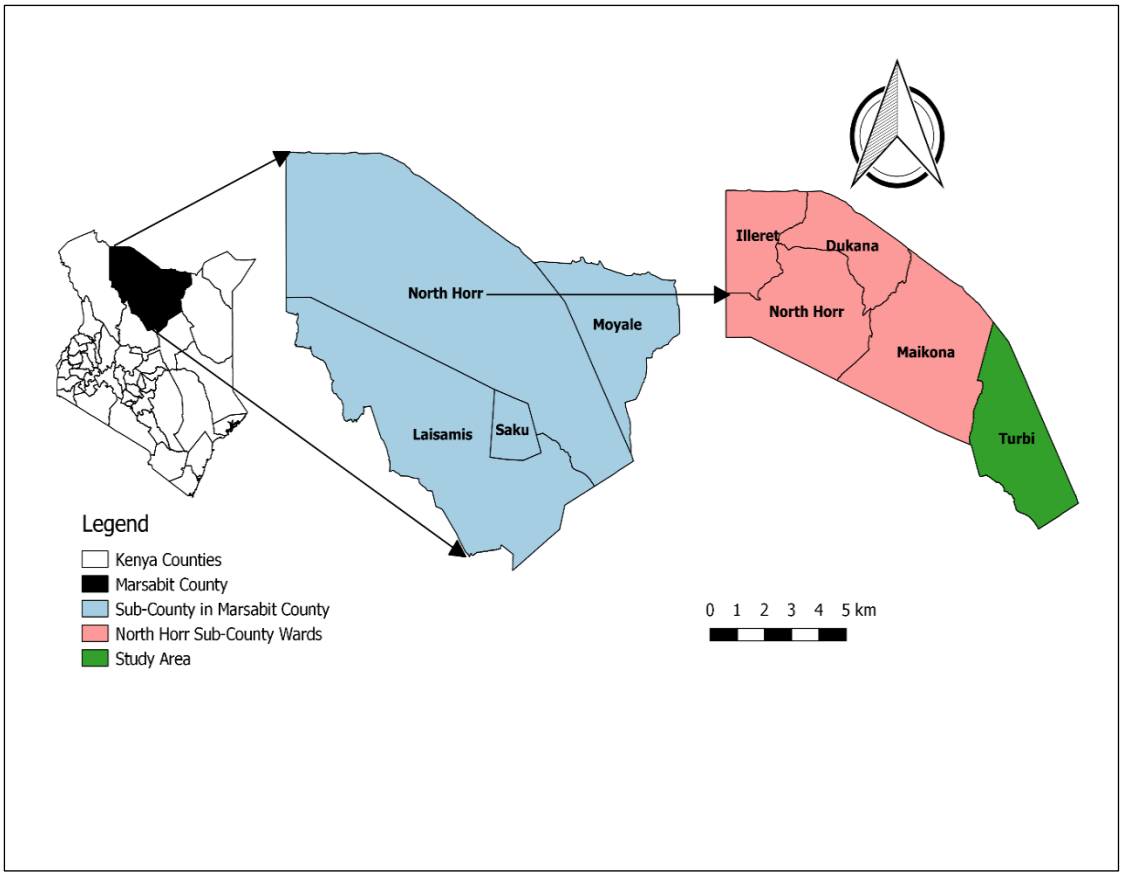

Figure 2: Map of the study area

3.3 Study population

The study population was women of reproductive age (15-49) years in Turbi Ward, North-Horr -sub-County. Key informants were nurses in charge of maternal healthcare services, Community Health Volunteers (CHVs) and women leaders in the study area. Focus Group discussions were conducted among women who met the study's inclusion criteria. Women within the age bracket of 18-49 years were reached out as the main study participants. The research included all mothers who delivered within the last five years in the sampled households of North-Horr -sub-county. The study population was only limited to the biological parent (mother) of the child upon confirmation.

3.4 Study design

This study adopted a cross-sectional mixed method for both qualitative and quantitative data which involve a one-time point in time collection of relevant data to estimate

cause-effect relationships. The design is widely known as snap shot study because there is never any form of follow-up after the initial data collection process (Henneken Ch & Buring, 1987; Setia, 2016).

3.4.1 Inclusion criteria

Any woman of childbearing age (15 – 49 years) with a child aged below five years, and has been a resident in Turbi ward, North- Horr sub-County for not less than five years before the study.

3.4.2 Exclusion criteria

Those women who declined to provide verbal or written informed consent or who were not in a position to respond.

3.5 Sample size determination

The sample size was estimated using the Fisher *et al,* 1998 formula as follows;

$$n = \frac{Z^2 \times pq}{d^2}$$

Where;

n = sample size

z = confidence interval

p= Prevalence of skilled birth attendance In Turbi Ward was at 25.8% (DHIS 2, 2021)

q= 1-p

d= degree of accuracy which is 0.05 at a 95% confidence interval

$z^2(1.96)^2 = 3.8416$

p 0.258

q (1-0.258) = 0.742

$d^2 (0.05)^2 = 0.0025$

n= 3.8416 x 0.258 x 0.742/0.0025

0.7354205376/0.0025

n= 294

3.6 Sampling Procedure

3.6.1 Description of the procedure

Multi-stage sampling technique was applied for the collection of quantitative data.

Stage one was the selection of ward; the wards were ranked based on skilled delivery coverage from the highest to lowest and Turbi Ward which had the lowest coverage of the skilled birth attendance was picked as the study area.

Stage two was the selection of villages; All the 30 villages were included in the study, using random sampling. The sampling frame of the selected ward population was obtained from the county statistical officer.

Stage three; Involved selecting households from the sampling frame obtained and assigning numbers to the households in the selected villages and then using Ms. Excel program to get random households according to the sample size. In case a selected household does not have an eligible study participant, the household was replaced. We increased the random numbers generated in MS Excel by 10% to cover any household that does not have a woman who meets the inclusion criteria.

The participants who were involved in the Focus Group Discussions (FGDs) were sampled purposively based on their willingness to take part in the study. A total of 3FGDs, one per sub-location from the three sub-locations in the ward was conducted. The sample size for the FGDs was 24 women. Each FGD had the principal investigator as a moderator, and each FGD took 45 minutes. An FDG interview guide was used to direct the discussions.

KIIs were also conducted among health care workers, lead Community Health Volunteers (CHV), and women leaders. The key informants were selected purposively based on their individual experience on maternal healthcare services. The study did have a total of 12 key informants

3.7 Data collection instruments

3.7.1 Data collection tools

A pre-tested, questionnaire was adopted to capture data on the barriers to the usage of SBA among women within reproductive age in Turbi Ward, north-horr sub County, Marsabit County. The questionnaire had several sub-sections. The contents included; socio-demographic characteristics of the mother, the prevalence of mothers who seek for skilled birth services, and the possible barriers to utilization of skilled birth attendance. The questionnaire was verified by the supervisors to ascertain the validity to the topic. The questionnaire was translated into local language and it was read out to the study participants by the research assistants.

Qualitative data was collected using focused group discussion FGD guide and KII interview guides (Appendix E and F respectively). They also collected information on the challenges faced by women when seeking delivery care services from skilled birth attendants in hospitals. The FGDs did not take more than 45 minutes. The principal investigator moderated the FGDs. Birth registry and other vital documents from the 3 main referral hospitals in each district were also examined to reveal the number of deliveries and those occurring at home but attend postnatal care at the MCH clinics.

3.7.2 Pilot Study

The study tools were tested in Shegel location, Maikona Ward using ten percent (n=29) of the study population who meet the study inclusion criteria. Maikona Ward neighbors Turbi Ward. Analysis of the tested questionnaires was done to check on the ambiguity and also to clarify on any issue with the research tool that was not understood by the respondents. Pre-test was conducted prior to the study to ascertain the reliability of the questionnaire. Those who expressed willingness were counselled about their plans for

subsequent delivery and post-partum family planning and encouraged to make an Individual Birth Plan (IBP) and updating it regularly.

3.8 Data collection procedures

In the selected households, the women were approached and the study purpose explained to them. Those who consented to take part in the study were asked to produce a baby booklet or any other relevant hospital card that was used during both ANC visits and hospital delivery, especially for those who accessed skilled delivery services.

The participants that were involved in FGDs were the women selected from different locations across the ward. Only the women that have not been interviewed before were considered to take part in the FGDs. A total of three FGDs with 8 participants each were conducted. The women who agreed to participate in the study were reimbursed to cover their lunch and transport since the Turbi Ward is vast.

Qualitative data was collected by using KII. This involved one-on-one interviews with participants from the health facilities within the study area and the women leaders as well as CHVs who were directly involved in maternal health services. In-depth interviews were carried out to each respondent after the research assistant had undergone a routine introduction by the key informant in the location. The survey instrument contained both structured and unstructured set of questions and was concentrated more on collecting qualitative data/information with regard to place of delivery in relation to the variables. This was carried out strictly by asking the questions in the questionnaire.

Content analysis/review of written material such as the ANC attendance cards and post natal care cards was done in order to ascertain and obtain quantitative data on the figures of the number of times the mother attended ANC and the approximate population of

pregnant women attending health facilities and those delivering in the hospital/ health facilities.

3.9 Data Analysis

3.9.1 Quantitative data

The quantitative data collected was exported from the electronic device into Epi-info version 7.2.3 for cleaning and analysis. Data cleaning was done by checking and correcting for duplicates and wrong entries. The data were described by calculating the mean, standard deviation, median, and range for continuous variables (Age, waiting time, and distance). The categorical variables were summarized into frequencies and proportions. We calculated prevalence odds ratios (POR), 95% confidence intervals (C.I), p-Values, and adjusted prevalence odds ratios (APOR) to identify the factors associated with uptake of skill birth attendants

3.9.2 Qualitative data

The qualitative data collected were analysed through a thematic approach. The study adopted the guidelines prescribed by Braun and Clarkes for carrying out thematic analysis to analyse the qualitative data collected (Braun & Clarke, 2006; Nowell et al., 2017). The main ideas gathered were organized into thematic areas. The qualitative data was presented in form of narrations quoting the words of the FGDs and the KII. The results have been presented and discussed alongside the quantitative data.

3.10 Dissemination strategy

The findings from the study with clear actionable recommendations were shared with all the relevant stakeholders. Dissemination was done through the Marsabit County Health Management Team, Ministry of Health, Moi University, Kenya Field Epidemiology and Laboratory Training Program (KFELTP) partners, and other

stakeholders. Further dissemination will be done at scientific conferences and through the publication of a research paper.

3.11 Ethical Issues

The principal investigator got the approval of the study protocol from the Ethical Review Committee (IREC) of Moi University/Moi Teaching and Referral Hospital, received Research Licence from NACOSTI and permission to conduct the study was sought from the County Government of Marsabit before the commencement of the research study. Before collecting data, the study respondents were briefed on the purpose and the procedures involved in the study, and their consent was obtained by them signing an informed consent form. The respondents were assured of their voluntary participation and were free to leave if they so wished at any time. Research assistants were trained on ethical issues of anonymity, confidentiality and privacy. Data confidentiality was strictly observed by not disclosing any information obtained from a third party. The personal identifiers of the participants were omitted during data analysis. Entry protocols to the study area were adhered to while approaching the concerned households and health institutions. All logistical preparations were catered for by the researcher (self) as the study is not sponsored.

CHAPTER FOUR

4.0 RESULTS

In this chapter, the detailed overview of the findings obtained from the study is presented, accompanied by relevant visual aids and explanations. The subsequent sections delve into the data interpretation and discussion, allow into draw conclusions, establish patterns, and contribute to the existing body of knowledge in the field.

4.1 Socio-demographic characteristics of respondents

A total of 294 respondents were interviewed and the response rate was 100%. The mean age of the respondents was 28.5 years (Standard Deviation±5.89 years) and the median age was 28.0 years (Range 18 – 45). Approximately 46.1% (135/294) of the respondents were aged between 18 – 27 years and 34.0% (100/294) had more than three children. On religion, half of the participants 148 (50.3%) were Muslims, 142 (48.3%) were Christians and those with no religion were only 4 (1.4%). A total of 263 (89.5%) of the participants had no education, 26 (8.8%) had a primary level of education while only 5 (1.7%) attained secondary/tertiary education. Housewife was the most common occupation at 272 (92.5%) followed by small business(shopkeeper) 19 (6.5%). More than half of the participants 173 (58.9%) earned less than 1000 Kenya shillings (Table 4-1).

Table 1: Socio demographic characteristics of the study participants

Characteristic	Frequency (n=294)	Percent (%)	95% C.I
Age (Years)			
18 – 27	135	46.08	40.26-51.97
28 – 37	131	44.71	38.93-50.60
38 – 49	27	9.22	6.16-13.12
Marital Status			
Married	284	96.6	93.83-98.36
Widowed	7	2.38	0.9-4.84
Divorced	1	0.34	0.01-1.88
Single	1	0.34	0.01-1.88
Separated	1	0.34	0.01-1.88
Parity			
One	27	9.18	6.14-13.08
Two	88	29.93	24.75-35.52
Three	79	26.87	21.89-32.32
More than three	100	34.01	28.61-39.74
Religion			
Muslim	148	50.34	44.48-56.20
Christian	142	48.3	42.46-54.17
Others	4	1.34	0.22-4.83
Maternal Level of Education			
No Formal Education	263	89.46	85.37-92.72
Primary Level	26	8.84	5.86-12.69
Secondary Level	3	1.02	0.21-2.95
Tertiary Level	2	0.68	0.08-2.44
Maternal Occupation			
House Wife	272	92.83	89.25-95.51
Business	18	6.14	3.68-9.54
Teacher	2	0.68	0.08-2.44

Police Officer	1	0.34	0.01-1.89
Monthly Income			
Less than Ksh 1,000	172	58.5	11.39-19.94
Ksh 1,000-5,000	45	15.31	11.39-19.94
Above Ksh 5,000	15	5.1	2.88-8.28
No income	62	21.09	16.57-26.20
Husband's level of education			
No education	254	89.44	85.26-92.76
Primary level	21	7.39	4.64-11.08
Madrasa	3	1.06	0.22-3.06
Secondary level	3	1.06	0.22-3.06
Tertiary level	3	1.06	0.22-3.06

4.2 Accessibility to healthcare facilities by the women

4.2.1 Place of delivery and kind of assistance at birth

The women who either delivered at home, on the way to the health facility, or at the TBA were 170 (57.8%) while 123 (41.8%) delivered in the health facility (Figure 4-1).

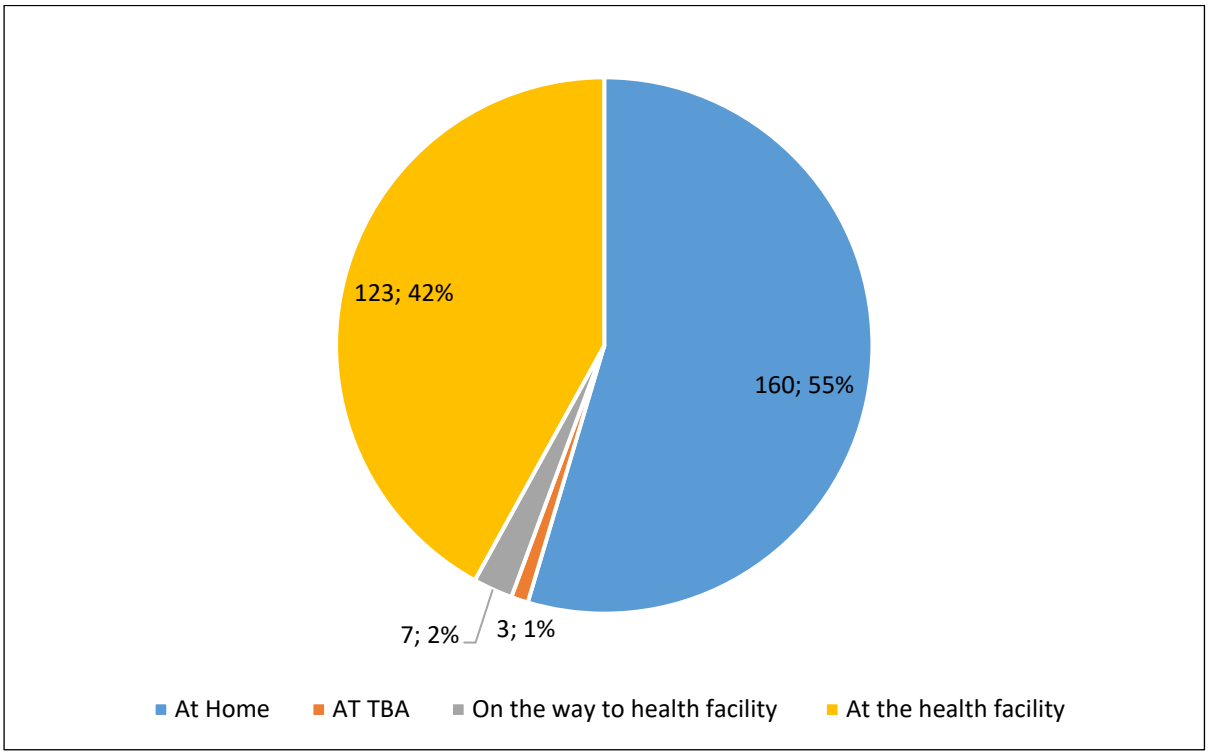

Figure 3" Place of delivery for the women in the Turbi ward

The focused group discussion and key informants' interview both showed that the parity, order of birth, and previous experience influenced where the women deliver.

> "*The first-time mothers tend to deliver at the health facility compared to those already with children. The multiparous who had no difficulties in their previous deliveries also just prefer to deliver at home" (KII, CHA)*

The percentage of births that occurred under unskilled personnel was 169 (57.5%) whereas 124 (42.2%) were skilled assisted births (Figure 4-2). Among the unskilled births, 151(89.3%) were conducted by TBAs, 14 (8.3%) by a family member, and 4 (2.4%) were completely unassisted.

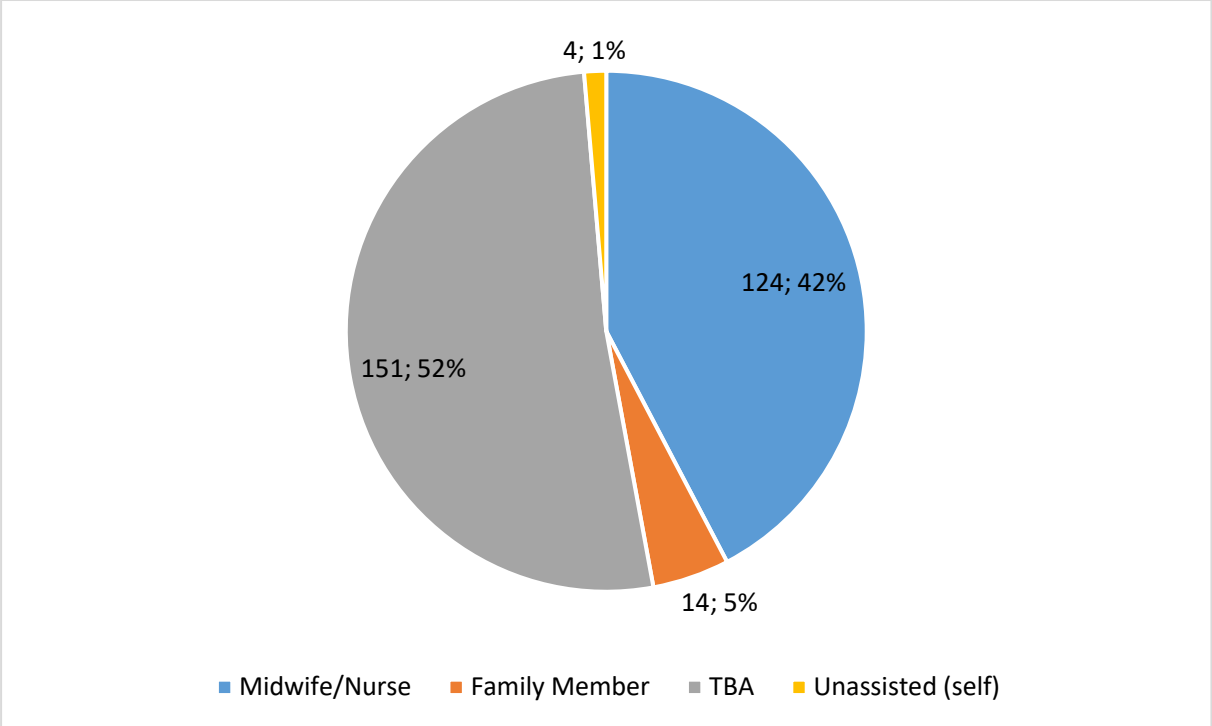

Figure 4: Kind of assistance the women received during the delivery

From the Focused Group Discussion (FGDs and Key Informant Interviews (KII) it is evident that the respondents know the importance of seeking skilled birth attendance but their health-seeking behaviour does not reflect the same. All the respondents agree that it is safe for both the mother and the baby to be at a health facility, in case of any emergencies they can get attended to.

> "*Yes it is safe to deliver in the health facility, especially for the first-time mothers so that in case they get any problem they get the help they need" (FGD Respondent age 28- 37).*

More than half (57.5%) of the respondents had unskilled deliveries, TBAs play a great role in these occurrences since all the deliveries at home are conducted by TBA.

> "*Most of the women prefer to deliver at home with the assistance of TBAs because they are easily available since every village has two or more TBAs. They usually don't ask for transport instead they are ready to come and assist any women who are in labor"* (CHV).

4.1.1 Transport to the health facility

The majority of the women 139 (47%) use motorbikes as means of transport to the health facility, 133 (45%) walk on foot to the facilities to get the services and 21 (7%) use public vehicles (Table 4-2).

Table 2: Means of transport used by women in Turbi ward to visit the health facility

Variable	**Frequency (n=294)**	**Percent (%)**
Motorbike	139	47.3
On Foot (Walking)	133	45.2
Public Vehicle	21	7.1
Private Vehicle	1	0.3

4.3 Distance to the health facility

Most respondents had to move for more than 10 Kilometres 141 (48%) to reach the health facility, followed by those living 5-10 KM from the facility 95 (32.3%), those living 1-5 KM away were 46 (15.6%) and only 12 (4.1%) respondents reported to be living less than 5KM to the facility (Figure 4-3).

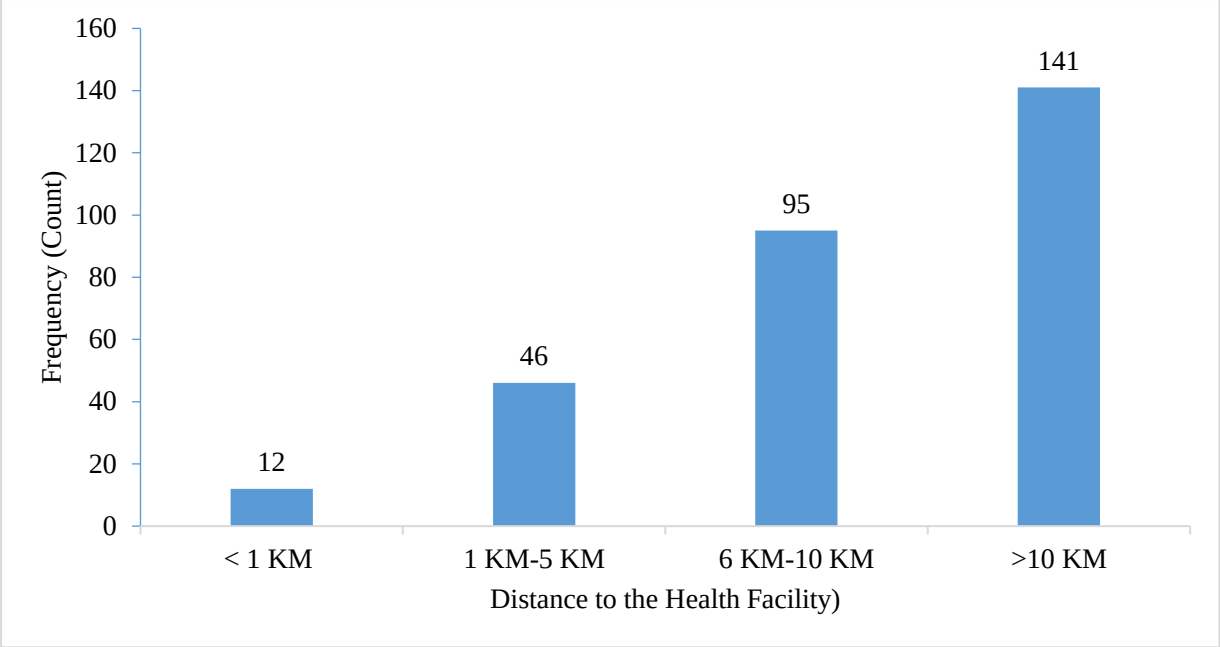

Figure 5: DIstance of health facility from the respodent's home

The majority of the respondents live above 10 kilometres away from the health facility. Motorbikes are the most used means of transport followed by walking. Long distance and lack of transport from the health facility seem to be among the barriers to women from accessing health services which include skilled delivery.

> "We usually *walk for more than two hours to a health facility which is about 15 kilometres to get health services even if we are sick. As pregnant mothers, it is really difficult for us to walk such a long distance. Motorbikes which are the most common means of transport are very expensive (Respondent,* age 38-47*).*

The insecurity in the region and the bad state of the roads are reported to be among the obstacles that make the women not seek skilled birth in the region.

> "*With Marsabit county insecurity, nobody wants to risk by waking for all those kilometres to the health facility for the fear of being attacked on the way" (KII, Women leader).*

4.4.Antenatal clinic visits

Among the respondents, 279 (96%) had visited the ANC during pregnancy and the majority of the 275 (98%) got the ANC services from a government health facility. The majority of the respondents 205 (73%) had only one ANC visit. Only 14 (5%) of the respondents said that they had to ask for permission from their husbands before starting the ANC.

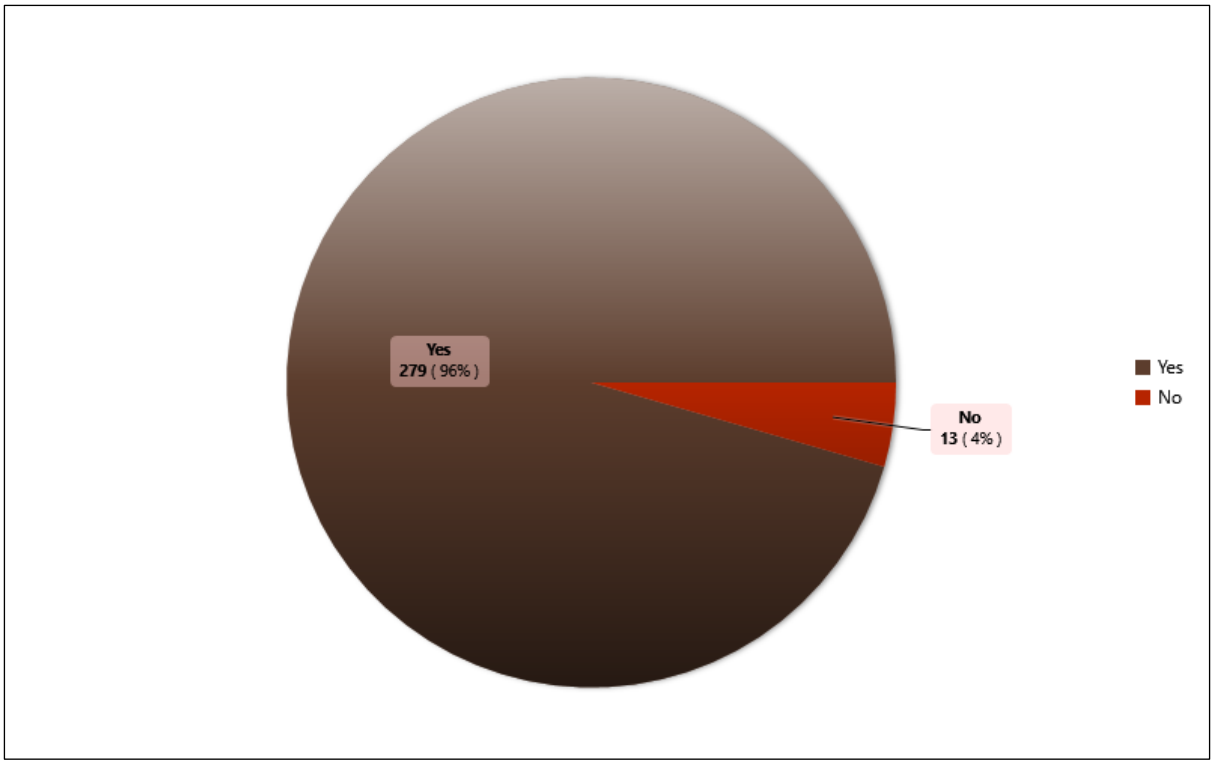

Figure 6: Respondents' ANC visits

The above data and the interviews with FCD and KII show that the respondents understood the importance of attending the antenatal clinic, but the majority of them attended the clinic while in their third trimester.

> "*Antenatal clinic is important especially when you feel sick and also the medications given said to be helping the unborn child, so we usually make an effort of going at least three times while pregnant" (respondent, age 38-47).*

Some of the women confessed that they only visit ANC when they experience the pregnancy-related risk symptoms they were told in their previous deliveries.

> "*When I was pregnant with my second child I had severe abdominal pain and had some spot of blood, I immediately rushed to the health facility for treatment and that is how I started my ANC while I was 6 months pregnant" (Respondent, age 18-27).*

4.5 Delivery with No One Present (NOP)

Among the respondents, 20 (7%) of them delivered with no one present, and the majority of the 9 (45%) said they did not know their delivery dates which are why they delivered alone. The pastoralist nature also contributed to the NOP, 7 (35%) confirmed that they delivered alone in the bush while looking after the animals.

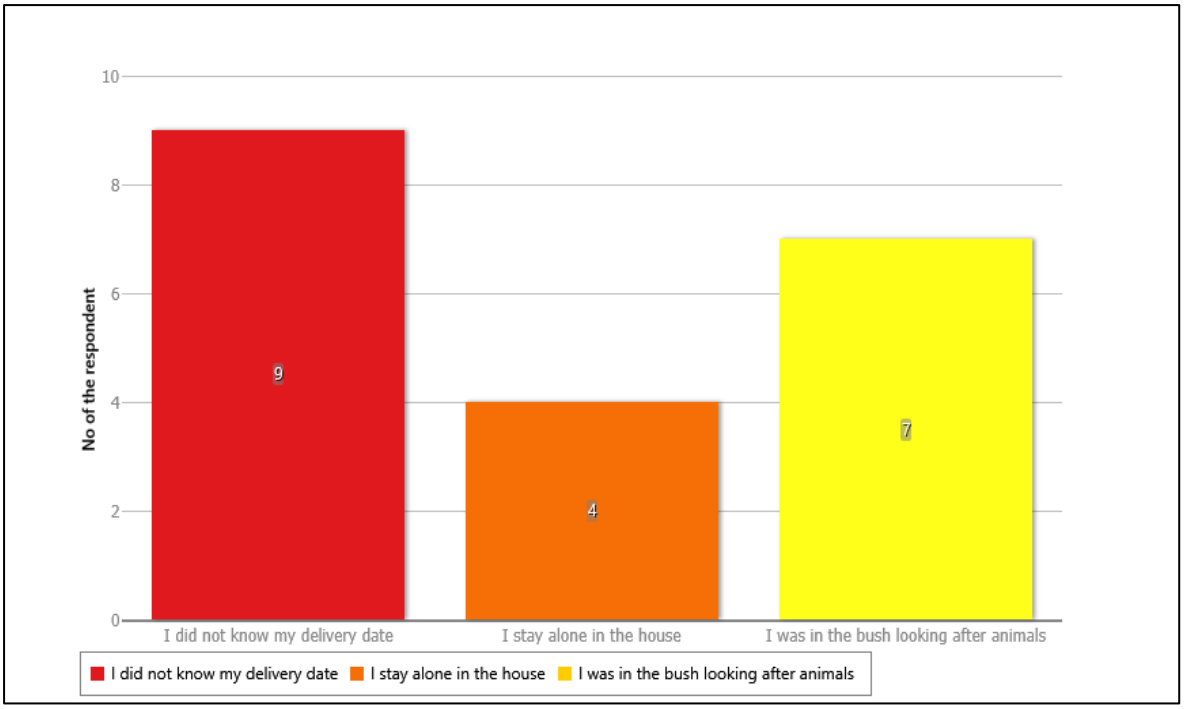

Figure 7: Reasons for delivery with No one present

4.6 Determinants of skilled birth attendance

4.6.1 Bivariate analysis

At the bivariate analysis, those caregivers who were of Muslim religion had 3.4 odds of utilizing skilled birth attendant services compared to those who were Christians (Crude odds ratio (COR)=3.47; 95% C.I 2.12 – 5.67; p<0.001). Similarly, the odds of utilizing the skilled birth attendance services were 3.7 times as high for those caregivers earning a monthly income of < Ksh 1000, compared to those who were earning a monthly income of ≥ Ksh 1000 (COR=3.71; 95% C.I 2.01 – 6.86; p<0.001). Other factors that were associated with the utilization of skilled birth attendance services at the bivariate analysis included; distance to the nearest health facility (COR=12.0; 95% C.I 5.64 – 25.58; p<0.05) and the number of ANC visit made by the respondents (COR=12.8; 95% C.I 3.77 – 43.87); p<0.05) Table 4-3.

Table 3:Factors associated with the utilization of skilled birth attendance services in Turbi Ward, North Horr Sub-County, Marsabit County, 2021

Characteristic	Skilled Birth		COR (95% C.I)	P-Value
	Yes	No		
Age (Years)				
≥30	44	61	1.03 (0.63-1.67)	0.914
< 30	80	108	Ref	
Marital Status				
Single	3	7	1.72 (0.44-6.84)	0.527
Married	121	163		
Parity				
> 3	47	53	0.74 (0.46-1.21)	0.229
≤ 3	77	117	Ref	
Religion				
Muslim	41	107	3.47 (2.12-5.67)	**0.000**
Christian	81	61	Ref	
Maternal Level of Education				
No Formal Education	17	14	1.77 (0.84-3.74)	0.131
Some education	107	156	Ref	
Maternal Occupation				
Unemployed	13	8	2.54 (0.95-5.88)	0.593
Employed	111	161	Ref	
Monthly Income				
< Ksh 1,000	52	120	3.71 (2.01-6.86)	**0.000**
None	35	27	1.24 (0.60-2.56)	0.558
≥ Ksh 1,000	37	23	Ref	
Husband's level of education				
No education	16	14	1.62 (0.76-3.47)	0.209
Some education	105	149		
Means of transport				
By foot	62	70	0.75 (0.47-1.22)	0.247
Vehicle	6	16	1.78 (0.66-4.82)	0.259
Motorbike	56	84	Ref	

Was Pregnancy planned				
No	30	44	1.09 (0.64-1.87)	0.750
Yes	93	125	Ref	
Distance to the nearest H/F				
> 10KM	37	104	12.01 (5.64-25.58)	**0.000**
5-10KM	40	55	5.87 (2.71-12.72)	**0.000**
< 5KM	47	11	Ref	
Accompanied by the husband to the clinic				
Yes	100	163	5.59 (2.32-13.45)	**0.000**
No	24	7	Ref	
Ever heard of contraceptive				
No	14	21	1.11 (0.54-2.29)	0.767
Yes	110	148	Ref	
Ever used family planning before				
No	91	137	1.46 (0.83-2.55)	0.186
Yes	31	32	Ref	`
Is this your First Pregnancy				
Yes	9	12	1.02 (0.42-2.51)	0.959
No	115	157	Ref	
Number of ANC Visits				
< 4	97	156	12.89 (3.77-43.87)	**0.000**
≥ 4	24	3	Ref	

Multivariable Logistic Regression Analysis

At the multivariate analysis, four factors; Religion (Adjusted Odds Ratio (AOR)= 3.70; 95% C.I 2.03 – 6.76; $p<0.05$); distance to the nearest the health facility (AOR= 4.8; 95% C.I 1.99 – 12.02; $p<0.001$); Monthly income (AOR= 2.8; 95% C.I 1.28-6.27;

p<0.01); and being accompanied by the husband to the clinic (AOR= 9.4; 95% C.I 1.69-53.01; p<0.05); remained factors associated with the utilization of skilled birth attendance services (Table 4-4).

Table 4: Independent factors associated with utilization of skilled birth attendance services in Turbi Ward, North Horr Sub-County, Marsabit County, 2021

Characteristic	Skilled Birth		Crude OR (95% C.I)	P-Value	Adjusted OR (95%C.I)	P-Value
	Yes	No				
Religion						
Muslim	41	107	3.47(2.12-5.67)	**0.000**	3.70(2.03-6.76)	**0.000**
Christian	81	61	Ref		Ref	
Maternal Level of Education						
No Education	17	14	1.77(0.84-3.74)	0.131	1.59(0.71-3.55)	0.259
Some education	107	156	Ref			
Monthly Income						
< Ksh 1,000	52	120	3.71(2.01-6.86)	**0.000**	2.83(1.28-6.27)	**0.011**
None	35	27	1.24(0.60-2.56)	0.558	0.90(0.36-2.26)	0.827
≥ Ksh 1,000	37	23	Ref		Ref	
Distance to the nearest H/F						
> 10KM	37	104	12.01(5.64-25.58)	**0.000**	4.89(1.99-12.02)	**0.001**

5-10KM	40	55	5.87(2.71-12.72)	**0.000**	6.67(2.81-15.87)	**0.000**
< 5KM	47	11	Ref		Ref	
Accompanied by the husband to the clinic						
No	100	163	5.59(2.32-13.45)	**0.000**	9.45(1.69-53.01)	**0.011**
Yes	24	7	Ref			
Ever used family planning before						
No	91	137	1.46(0.83-2.55)	0.186	0.89(0.41-1.92)	0.762
Yes	31	32	Ref	`		
Number of ANC Visits						
< 4	97	156	12.89(3.77-43.87)	**0.000**	3.93(0.89-17.18)	0.069
≥ 4	24	3	Ref			

Table 5: Summary of results for qualitative data

Thematic Areas	**Responses**
1. Where women seek delivery services	"The first-time mothers tend to deliver at the health facility compared to those already with children. The multiparous who had no difficulties in their previous deliveries will just prefer to deliver at home" (KII, CHA)
2. Distance to health facilities	"We usually walk for more than two hours to a health facility which is about 15 kilometres to get health services. As pregnant mothers, it is really difficult for us to walk such a long distance." (Respondent, age 38-47).
3. Challenges faced by pregnant women when seeking services	"Poor road networks and Marsabit insecurities makes it difficult for most women to acess skilled services at birth "(KII, Women leader)
4. Men involvement in reproductive issues	"Men should take their wives to ANC clinics to understand importance of skilled delivery at birth "(FGD respondent age 18-27)
5. Role of Traditional Birth Attendance	"Most of the women prefer to deliver at home with the assistance of TBAs because they are easily available and cheap since every village has two or more TBAs. They usually don't ask for transport instead they are ready to come and assist any women who are in labor" (CHV).
6. Means of transport	"Motorbikes which are the most common means of transport to health facilities are very expensive, so women decide to deliver at home" (FGD Respondent, age 38-47).

CHAPTER FIVE

5.0 DISCUSSION

The discussion chapter of this research serves as a critical platform for interpreting and contextualizing the findings that have been presented in the preceding chapters. In this section, we delve into a comprehensive analysis of the results, comparing them with existing literature, addressing research questions and hypotheses, and drawing meaningful conclusions. By synthesizing the empirical evidence with theoretical frameworks, this chapter aims to unravel the significance of the study's outcomes and their broader implications. Moreover, we explore the limitations of our research and propose avenues for future inquiry, ultimately contributing to a deeper understanding of the subject matter and its relevance within the larger academic and practical contexts.

5.1The proportion of participants utilizing skilled birth attendance

Among the study participants, more than half delivered assisted by unskilled personnel. For the unskilled deliveries performed at home, TBAs make 52%, while those assisted by family members or the respondents that delivered on their own make 6%. The study results show that only a few women, especially those that live around the health facility and those with complicated labor seek skilled birth attendance. The proportion of women utilizing skilled birth attendance was estimated at 42% .This result is similar to another study done in Ethiopia (Fantu et al., 2012) that indicated, that the distance from health facilities and the experiences in previous deliveries were factors that affect women's health-seeking behaviours. The nomadic pastoralist women prefer to deliver at home compared to the health facilities, they usually believe that only those women with complicated labour should seek skilled care. This belief also agrees with a finding in a study done in India (Baral et al., 2015). Among those that didn’t get skilled delivery services, 7% reported that they delivered with No One Present (NOP) and the majority of them gave the reasons for delivering with no one present that they were in the bush

looking after animals. On contrary, the findings of a study done in Nigeria showed that the major reason for NOP among women of reproductive age was that the women didn't know their due dates (Austin et al., 2015). For instance, only 44% of births are delivered by a skilled birth attendant in Kenya, usually a nurse or midwife (KDHS, 2014). This represents a slight increase from 42% in 2003 (KNBS & ICF Macro, 2010). Marsabit County in Kenya is among the bottom three counties reporting the minimal number of skilled deliveries with North Horr sub-county reporting the lowest with only 26% of pregnant women utilizing the skilled birth attendance.

The level of utilization of health facilities for delivery services found in the current study was similar to the KDHS findings that in Kenya majority of mothers deliver their babies at home often without medical supervision with only 44% by skilled a skilled health provider (KDHS 2008-09). This figure however varies from around 89.4% in Nairobi, 44.4% in Coast to17.3% in North Eastern region.

5.2 Factors associated with utilization of Skilled Birth Attendance

The study findings show that some factors contribute to the underutilization of the skilled services during delivery in the Turbi ward of North Horr sub-county, Marsabit County. These factors include; Distance to health facility from the respondents' home, Monthly income, Religion, Number of ANC visits, and Husband accompanying the women to the ANC clinics. The study findings were similar to studies done in another part of the country that indicated living far from the health facility encouraged the use of unskilled services from the TBAs who are available in their neighbourhoods (Kitui et al., 2013). Due to their nomadic nature, most of the participants were living far from the town where health facilities are situated. The readily available means of transport in the area are motorbikes which are usually expensive for women to afford. Most

women living near the health facilities are likely to get skilled services compared to those living more than 10 kilometres from the facility.

About 45% of the respondents reported that they usually walk to the health facilities to get services, and since the majority of them live more than ten kilometres from the facilities, only a few could make it. The harsh weather conditions and poor states of the roads limit women from accessing skilled services on time.

Pregnant woman's knowledge on safe motherhood practices is an important factor in enabling them attend ANC, knowing the signs of pregnancy complications before, during and after delivery, preparing for a clean delivery, knowing where to go in case of emergency and generally, preparing an individual birth plan. Findings from a study on Birth preparedness among ANC clients in Kenyatta National Hospital, Nairobi, Kenya by Mutiso et al 2008, indicated that 99% of the respondents were not having any clear plan on what actually to do in the event that there is an obstetric emergency.

In many cases, the husband's decision on health matters of the family members' rules. Husband's decisions on health seeking behaviours are largely influenced by his education level as a result of information exposure. In this study, 67.7% of the women whose husbands/partners had attained primary education, delivered at home compared to only 31.3% whose husbands attained secondary/A level.

Religion was found to be a factor that determines the utilization of skilled birth attendance, Muslim women are more likely to seek unskilled services compared to Christians. The finding was comparable to other studies like (Moindi et al., 2016) that documented, that Muslim women value their privacy, especially during delivery. They are less likely to seek skilled deliveries to avoid an encounter with male nurses in the labour ward.

The monthly income of the participants played a major role in their health-seeking behaviours, the women with a monthly income of less than Ksh 1000 are more likely to seek unskilled care compared to those with higher monthly income. Similar reports were given in the FGDs and the KIIs that transport to the health facilities is usually costly and these women couldn't afford to visit the ANC clinics more than once and also deliver at the health facility. Unlike when pregnant, after delivery, the woman and the newborn baby need to be transported home in a car for safety and the respondents reported not afford that. This result was comparable to other studies (Mwinyikione et al, 2017). This finding gave justification as to why most women preferred home delivery assisted by TBAs because they are available in their localities and they demand no money from the women instead of just some small token.

Another positive factor that determined the use of skilled birth attendance was the husband accompanying the women to the ANC clinics. The results showed that those women that were accompanied to the health facilities by their husbands are more likely to seek skilled services during delivery. From the FGD it was also evident that men's involvement in the ANC clinic has influenced the women when it comes to seeking skilled birth attendance since they provide the financial support for transportation to and from the facility.

The cultural beliefs that only women with complicated labour should seek specialized care still exist among the respondents. It is believed that birth is a natural process and there is no need to seek medical attention. The traditional birth attendants usually advise the pregnant women that they need to get some abdominal massage throughout the pregnancy as that will ease the delivery process. This kind of assurance gives these women more reasons to deliver at home and not at the health facility. This is similar to another study in Ethiopia (Fantu et al., 2012).

5.3 Challenges experienced by women seeking Skilled Birth Attendance

Barriers limiting women to access health facility deliveries continue to exist, thus, the low skilled birth attendance. Barriers to skilled birth attendance include health service, cultural and socio-economic factors. The literature review found that health service barriers in Turbi Ward of North Horr Sub-County include long distance due to uneven distribution of health centres, lack of transport hence long walking hours to the health centres. There is shortage of skilled birth attendants resulting in unqualified staff providing technically poor quality care, inadequate drugs, medical supplies, inadequate midwifery skilled supportive supervisory visits to health centres and lack of staff accountability to women delivering in the facilities.

The study found that in Turbi Ward of North Horr Sub-County there is poor organisation quality and lack of responsiveness to maternity facility delivery user needs. These include impolite staff, inadequate space in some centres, lack of privacy and uncomfortable delivery rooms, long waiting hours before the women are attend too and inefficient referral services. There is poor timing and continuity of service delivery such as ANC postnatal clinic and immunisation schedules. There is lack of relevant services such as BEmOC in the health centres. These discourage women from using the health facilities for delivery.

Literature review shows that in Turbi Ward of North Horr sub-County most women of low status are not empowered to make a decision on where to deliver. Further the perception of pregnancy influenced by traditional beliefs and lack of awareness of danger signs during pregnancy and labour prevent women from using the facilities for delivery.Best practices such as maternity waiting homes in other regions around the country is evidence that with careful planning maternity waiting homes are likely to increase use of health facilities for delivery. Post and community strategies is evidence

skilled birth attendance can be increased by training health workers and supervisors in midwifery skills and Emergency obstetric care. CHWs, TTBAs and other community workers are valuable when trained in recognising danger signs in pregnancy labour and post natal. Essential drugs, medical supplies and equipment for basic emergency obstetric cares at health centres are important inputs in improving quality of care. Community loans/insurance schemes and emergency obstetric transport managed by the community have proved to increase health centre deliveries. Similar results were also reported elsewhere (Shah et al., 2010; Titaley et al., 2010).

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The proportion of women utilizing skilled birth attendance was estimated at 42% which is low despite the delivery service being free in government health facilities. The distance was found to be among the major factors that hinder women from accessing skilled services during birth. Therefore, the County Government should build more health facilities, especially in the vast area of North Horr sub-county for pregnant women to have access to skilled delivery.

Long distance to the hospitals, Religion, Monthly income, and Husbands accompanying women to Clinics are some of the factors that influence usage of SBA.

Long distance, poor road networks, expensive means of transport, poverty, and cultural/religious beliefs are among the challenges that hinder women from utilizing skilled birth attendance in Turbi ward, North Horr sub-county. Antenatal visits and the use of family planning was also a factor that determined the utilization of skilled services. The nomadic nature of moving from one place to another with livestock in search of pasture and water was also reported to be a significant factor that hinders the women from accessing skilled delivery services.

6.2 Recommendations

The women in the current study were aware of the need for utilization of health facility services and assistance during delivery. Improving level of utilization of facility delivery services is extremely important for successful birth outcomes.

Provision of maternity shelter in all the locations and vast villages to help the pregnant women have conducive everoinment to stay in as they wait for labour and delivery at the health facilities.

Though delivering at the health facility in resource limited settings is challenging given the cost of living standards, with the help of effective interventions, it is not an impossible goal to achieve. This was even proposed by majority of the participants during the focused group discussions; sensitization will awaken the low knowledgeable on safe motherhood practices and strengthen the community's health education awareness in general.

Despite the efforts by the government to provide free maternal healthcare services in Kenya, cultural factors, long distance to the nearest health facility are main factors that make mothers to deliver at home. There is need for the county government to invest in ways through which pregnant women can easily access health facility by building more health facilities in the area that the pastoralist pregnant women can access on foot without getting into expenses of motorbikes or vehicles that they don't afford.

The religious and community leaders should be actively involved in the training about the importance of skilled birth attendance so that the cultural norms shouldn't hinder the women from seeking skilled services.

The majority of the women are housewives with no income, therefore they couldn't afford the transport costs to the health facilities. Apart from the pastoralism nature, the women should engage in other income-generating activities so that they can be able to afford transport costs during deliveries.

Husbands accompanying the women during antenatal visits were found to be a positive factor that encourages women to deliver in the health facilities. This practice should be encouraged among the nomadic communities where husbands rarely get involved in the pregnancy journey or the delivery processes.

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Appendices

Appendix I: Informed Consent Form - Quantitative Study

TITLE: Factors associated with utilization of skilled birth attendance among women of reproductive age in Turbi ward, North-Horr sub county, Marsabit County.

Principal investigator: **Anna Qabale Duba**

Introduction:

Good morning/afternoon?

My name is Qabale Duba. I am a postgraduate student of Field Epidemiology and Laboratory Training Program (FELTP) at Moi University, school of Public Health. The study has been authorized by the MU/MTRH Ethical Review Committee and the protocol number will be given. I will be here with my research team to conduct the study on Barriers to utilization of skilled birth attendance among the women of reproductive age in Turbi ward, North-Horr sub county, Marsabit County. I would like to seek your permission and I would be very grateful if you will assist me by agreeing to be a participant in this study.

The purpose of the study

The aim of this study is to understand factors that are associated with barriers to utilization of Skilled Birth Attendance in this community. These are services that have been introduced to pregnant women to ensure that medical attention is provided to them during delivery. Skilled care at birth promotes the management of pregnancy related complications such as haemorrhage (heavy bleeding), difficult labour among others.

The information you provide will therefore be used to assess the utilization of skilled attendance at birth in Turbi ward, North Horr sub county, Marsabit county and the findings will be communicated to the local health departments for the purpose of improving the poor maternal outcomes in the county.

Risks, benefits and adverse events

a. Nature and degree of risk

This study will be using a structured questionnaire to collect information from you and the process is entirely safe since verbal responses will be required for each question and therefore no health risks will be encountered. There may be questions that might appear

uncomfortable and invade your privacy but it is necessary for you to answer them with honesty.

b. Minimization of risk

Participation in the study is voluntary and the questionnaire will only be administered to those women who wish to take part in the study. In case of illiteracy among some respondents, more time will be provided in explaining the study purpose before enrolling them to the study.

c. Unknown conditions

The study will use interview administered questionnaire which is a non-invasive method. Hence no health problems are anticipated to arise due to any study procedures during the data collection period.

d. Benefits

This study has no direct benefit to the study participants but the study results will be used to improve on the use of Skilled Birth Attendants, which is an important intervention in ensuring reduced maternal deaths, co-infections during birth and birth injuries.

e. Adverse events treatment

Non-invasive methods will be employed during the study procedures and therefore there is no adverse events that will be anticipated.

f. Adverse events facilities

This study will not collect any human specimens and therefore no facilities will be required to deal with any adverse events arising from study procedures.

g. Financial responsibilities

The principal investigator will be responsible for any eventualities that arise during the data collection process.

Confidentiality of research data;

a. Direct identifiers

Participant's names will not be used during the data collection process but instead they will be identified by specific numbers assigned to them by the principal investigator. Their telephone numbers and locator information will be retained to assist in the planning of Focus Group Discussions.

b. Data protection

Questionnaires will be coded and keyed in password protected databases in order to prevent unauthorized access. This is to ensure that the data collected is used only for the intended purposes.

c. Data location

Signed consent forms and the filled questionnaires will be filed and locked in cabinets after data entry.

d. Data uses

The research data from this study will not be used in other studies in the future.

Additional information

i. Private records

The mother and baby card or any other hospital card with details on ANC interventions acquired during the period of pregnancy will be used to confirm verbal responses from the participants.

ii. Contact information

For any enquiries in the event of any research related questions, comments or complaints, the following persons will be available for contact:

Principal Investigator: **Anna Qabale Duba**

Telephone: **0728844356**

Email: **dubaqabale@gmail.com**

At this point, do you want to ask me anything about the study?

Appendix II: Consent Form

Please tick as appropriate

By signing this form, I agree that:	**YES**	**NO**
The study has been explained to me		
All my questions were answered		
Possible harm and discomforts and possible benefits (if any) of this study have been explained to me		
I understand that I have the right not to participate and the right to stop at any time		
I understand that I may refuse to participate without consequence		
I have a choice of not answering any specific questions		
I have been told that my personal information will be kept confidential		
I understand that no information that would identify me will be released or printed without my consent		
I understand that I will receive a signed copy of this consent form		

I hereby consent to participate in this study:

Initials of Participant: _____

Signature: _____Date: _____

Name of Researcher: _____

Signature: _____Date: _____

Appendix III: Informed Consent Form - Qualitative Study

TITLE: **Factors associated with utilization of skilled birth attendance among women of reproductive age in Turbi ward, North-Horr sub county, Marsabit County**

Principal investigator: **Anna Qabale Duba**

Introduction:

Good morning/afternoon?

My name is Qabale Duba. I am a postgraduate student of Field Epidemiology and Laboratory Training Program (FELTP) at Moi University, school of Public Health. The study will be authorized by the MU/MTRH Ethical Review Committee and the protocol number will be given. I will be here with my research team to conduct the study on Barriers to utilization of skilled birth attendance among the women of reproductive age in Turbi ward, North-Horr sub county, Marsabit County. I would like to seek your permission and I would be very grateful if you will assist me by agreeing to be a participant in this study.

The purpose of the study

The aim of this study is to understand factors that are associated with barriers to utilization of Skilled Birth Attendance in Turbi ward, North Horr sub county, Marsabit county. These are services that have been introduced to pregnant women to ensure that medical attention is provided to them during delivery. Skilled care at birth promotes the management of pregnancy related complications such as hemorrhage (heavy bleeding), difficult labour among others.

The information you provide will therefore be used to design public health messages intended to encourage pregnant women in seeking delivery care services from skilled health workers in the health facilities.

Risks, benefits and adverse events

a. Nature and degree of risk

This study will be using either an FGD or KII guide to collect information from you and the process is entirely safe since verbal responses will be required in the discussion or in the interviews and therefore no health risks will be encountered. There may be questions that might appear uncomfortable and invade your privacy but it is necessary for you to answer them with honesty.

b. Minimization of risk

Participation in the study is voluntary and the discussion will only take place after the participants give their consent. In case of illiteracy among some respondents, more time will be provided in explaining the study purpose before enrolling them to the study.

c. Unknown conditions

The study will use KII and FGD guides which are non-invasive data collecting methods. Hence no health problems are anticipated to arise due to any study procedures during the data collection period.

d. Benefits

This study has no direct benefit to the study participants but the study results will be used to improve on the use of Skilled Birth Attendants, which is an important intervention in ensuring reduced maternal deaths, co-infections during birth and birth injuries.

e. Adverse events treatment

Non-invasive methods will be employed during the study procedures and therefore no adverse events will be anticipated.

f. Adverse events facilities

This study will not collect any human specimens and therefore no facilities will be required to deal with any adverse events arising from study procedures.

g. Financial responsibilities

The principal investigator will be responsible for any eventualities that arise during the data collection process.

Confidentiality of research data

a. Direct identifiers

Participant's names will not be used during the data collection process but instead they will be identified by specific numbers assigned to them by the principal investigator.

b. Data protection

The KII and the FGD guides will be coded and keyed in password protected Ms. Word documents in order to prevent unauthorized access. This is to ensure that the data collected is used only for the intended purposes.

c. Data location

Signed consent forms and the filled guides will be filed and locked in cabinets after data entry.

d. Data uses

The research data from this study will not be used in other studies in the future.

Additional information

i. Audio-visual recordings

Tape recorders may be used during the interviews and the discussions after consent is provided. Responses will remain anonymous and no names will be mentioned in the report. The recorders will assist the researcher in note making after the discussions to ensure that all relevant points discussed are captured. Strict measures will be observed in securing the data in the tape recorders and only the researcher and the assistants will be allowed to interact with the data. After data transcription the tapes will be stored in locked cabinets.

ii. Contact information

For any enquiries in the event of any research related questions, comments or complaints, the following persons will be available for contact:

Principal Investigator: **Anna Qabale Duba**

Telephone:**0728844356**

Email: **dubaqabale@gmail.com**

Appendix IV: Questionnaire

Factors associated with utilization of skilled birth attendance among women of reproductive age in Turbi ward, North-Horr sub county, Marsabit County

PART A: IDENTIFYING INFORMATION

Questionnaire No: .....

Date: .....

Household no……...

Initials of interviewer: .....

GPS Coordinates……

I**NSTRUCTIONS**

a) Explain the purpose of the interview to the mother.

b) Ask for consent before proceeding with the interview.

c) Make sure all questions that apply to the participant are answered.

d) Do not read the answers to the participant but tick on the responses given.

PART B: RESPONDENTS SOCIO- DEMOGRAHIC CHARACTERISTICS

1. How old are you? ----------

2. What is your highest level of education?

- ☐ Primary level
- ☐ Secondary level
- ☐ Tertiary level
- ☐ No education at all

3. What is your religion?

- ☐ Christian
- ☐ Muslim
- ☐ No religion
- ☐ Others specify

4. What is your marital status?

- ☐ Married
- ☐ Single
- ☐ Divorced /Separated
- ☐ Widowed

5. If marital status is married, how many years are you in marriage? ……..

6. Are you in a polygamous marriage?

- ☐ Yes
- ☐ No

7. If married, what is your husband's level of education?
   - ☐ Primary level
   - ☐ Secondary level
   - ☐ Tertiary level
   - ☐ No education at all
8. What is your occupation? ……
9. What is your husband's/your monthly income (Ksh)?
   - ☐ None
   - ☐ Less than 1000
   - ☐ 1000 - 5000
   - ☐ Above 5000
10. How many deliveries have you ever had?
    - ☐ One
    - ☐ Two
    - ☐ three
    - ☐ Above three

PART B- Factors associated with utilization of Skilled Birth Attendance

11. How far is the nearest health facility from your home?
    - ☐ Less than 1Km
    - ☐ 1KM- 5KM
    - ☐ 5KM-10KM
    - ☐ Above 10KM
12. Which means of transport do you use when visiting a health facility?
    - ☐ Walking on foot
    - ☐ Motorbikes
    - ☐ Vehicles
    - ☐ Others specify…….
13. How long would it take you to reach the nearest health facility from your home?
    - ☐ Less than 30mins
    - ☐ Within one hour
    - ☐ Within two hours
    - ☐ More than two hours

14. Where did you give birth during your last pregnancy?
    - ☐ In a health facility
    - ☐ On the way to health facility
    - ☐ At home
    - ☐ Others specify ……
15. If the birth was in a health facility, were you charged for the services?
    - ☐ Yes
    - ☐ No
16. If yes in question 15 above how much were you charged?.....
17. Is this your first delivery?
    - ☐ Yes
    - ☐ No
18. If no in the above, in your earlier deliveries, did you experience prolonged/difficult labour?
    - ☐ Yes
    - ☐ no
19. Who assisted you during your last delivery?
    - ☐ Self
    - ☐ Nurse/midwife
    - ☐ TBA
    - ☐ Family member
    - ☐ Others specify……
20. In your previous pregnancies have you ever delivered with No One Present(NOP)
    - ☐ Yes
    - ☐ No
21. If yes in the question above, what was the reason of NOP
    - ☐ I stay alone in the house
    - ☐ I did not know my delivery date
    - ☐ I was in the bush looking after animals
    - ☐ Other specify…….
22. Are there any cultural practices that hinder women in this community from delivering in a hospital with the care of a skilled professional?
    - ☐ Yes
    - ☐ No

23. If yes above, list the cultural beliefs that hinder women from utilizing skilled professional during delivery?

……

……

……..

24. Did you seek Ante-natal care services during the pregnancy?

- ☐ Yes
- ☐ No

25. If yes, where did you seek the services from?

- ☐ Government facilities
- ☐ private clinics
- ☐ Faith based clinics
- ☐ Others specify…….

26. Before you started ante-natal care, was it necessary for you to get permission from anyone to attend the ante-natal care?

- ☐ Yes
- ☐ No

27. If yes, whom did you ask for permission?

- ☐ Husband
- ☐ Mother
- ☐ Mother-in-law
- ☐ Other specify……

28. How many antenatal care visits is a pregnant woman supposed to make during the whole pregnancy period?

- ☐ 1 - 3
- ☐ 3 - 5
- ☐ 5 - 7
- ☐ Above 7

29. How many ANC visits did you make during your last pregnancy?

- ☐ 1 - 3
- ☐ 3 - 5
- ☐ 5 - 7
- ☐ Above 7

30. Did your husband accompany you to the ANC visits at any time and during the delivery?

- ☐ Yes
- ☐ No

31. If he did not accompany you did he provide financial support to cater for ANC/ delivery services

- ☐ Yes
- ☐ No

32. Have you ever heard of contraception?

- ☐ Yes
- ☐ No

33. If yes name three types of contraceptives?

……..

…….

…….

34. Do you think use of contraception is a good method for family planning?

- ☐ Yes
- ☐ No

35. Have you ever used family planning before?

- ☐ Yes
- ☐ No

36. Was the last pregnancy planned?

- ☐ Yes
- ☐ No

37. If the pregnancy was not planned, give reasons for having the pregnancy?

- ☐ Husband forced me
- ☐ It was accidentally conceived
- ☐ The family planning failed
- ☐ Others specify ----------

38. Do you remember having any pregnancy related problems with previous pregnancies?

- ☐ Yes
- ☐ No

39. List any pregnancy related problems that you know? (Do not read for them, let the interviewee mention and you tick where necessary).

- ☐ Vaginal bleeding
- ☐ Severe headache
- ☐ Difficulty in breathing
- ☐ Baby is moving less or not moving at all
- ☐ Painful urination
- ☐ Genital ulcers
- ☐ Feeling very weak or tired
- ☐ Others……...

Appendix V: Focus Group Discussion Interview Guide

TITLE: **Factors associated with utilization of skilled birth attendance among women of reproductive age in Turbi ward, North-Horr sub county, Marsabit County**

Principal investigator: **Anna Qabale Duba**

Introduction:

Good morning/afternoon?

My name is Qabale Duba. I am a postgraduate student of Field Epidemiology and Laboratory Training Program (FELTP) at Moi University, school of Public Health. The study will be authorized by the MU/MTRH Ethical Review Committee and the protocol number will be given. I will be here with my research team to conduct the study on Barriers to utilization of skilled birth attendance among the women of reproductive age in Turbi ward, North-Horr sub county, Marsabit County. I would like to seek your permission and I would be very grateful if you will assist me by agreeing to be a participant in this study.

Group no & age----------

---Date----------

Name of moderator----------

INSTRUCTIONS

a) Explain the purpose of the discussion to the group of women

b) Ask for permission to record the discussion proceedings

c) Use the guide to stay within the subject matter

d) The group members should introduce themselves

e) There is no wrong or right answer in this discussion and everyone is free to share their opinion, experience regarding the issues to be discussed.

Questions

1. Where do women in this community seek care when pregnant?
    - If TBAs ask for reasons and what services are offered by the TBAs.
    - If it's the health facility or mobile clinics, the services offered should also be mentioned.
2. Where do pregnant women seek delivery services

3. Is there any importance in utilizing Health services during delivery

4. Are there any traditional beliefs and or practices in this community Regarding pregnancy and Delivery?

5. What are the challenges experienced by pregnant women when seeking health services?

How can these challenges be addressed?

7. How does the community get information on health issues?

- Channels of communication

8. How do men of this community support their wives during the period of pregnancy until delivery?

9. Are there any other issues that the community is currently facing?

Appendix VI: Key Informant Interview Guide

TITLE: Factors associated with utilization of skilled birth attendance among women of reproductive age in Turbi ward, North-Horr sub county, Marsabit County.

Principal investigator: Anna Qabale Duba

Introduction:

Good morning/afternoon?

My name is Qabale Duba. I am a postgraduate student of Field Epidemiology and Laboratory Training Program (FELTP) at Moi University, school of Public Health. The study will be authorized by the MU/MTRH Ethical Review Committee and the protocol number will be given. I will be here with my research team to conduct the study on Barriers to utilization of skilled birth attendance among the women of reproductive age in Turbi ward, North-Horr sub county, Marsabit County. I would like to seek your permission and I would be very grateful if you will assist me by agreeing to be a participant in this study.

Participant no----------

Date----------

Name of interviewer----------

INSTRUCTIONS

a. Explain the purpose of the interview to the key informant

b. Ask for permission to record the discussion proceedings

c. Use the guide to stay within the subject matter

d. There is no wrong or right answer in this discussion

General Questions

1. In this community how is the health seeking behaviour of women
   - In relation to ANC
   - Delivery care

2. What are your comments on the utilization of these services; ANC and skilled birth attendance by the women in Turbi ward?

---

3. What hinders or facilitates utilization of skilled attendance at birth?

- Are there any traditional beliefs or customs that hinders women from utilizing care during pregnancy and during deliveries?
- Are the accessibility and availability of health facilities in the community an issue?
- Other factors specify

4. What kind of community support do you have for facilitating any pregnancy related emergencies

5. How common are these conditions in this community?

- Pregnancy emergencies -home deliveries, obstructed labour, deliveries on the way)
- Maternal deaths
- Neonatal deaths

6. What measures can be taken to prevent the above stated conditions in the community?

7. Are the traditional birth attendants referring women during deliveries and if not why?

8. How do the women leaders support maternal health care in the community?

What challenges do maternal and child health program face in the county?

How can this challenge be addressed?

Dabalata A: Unka Hayyama Odeeffannoo Qabu

Dabalata A: Unka Hayyama Odeeffannoon - Qo'annoo Baay'inaan MADUREESSA: Qabxiilee itti fayyadama ogummaa da'umsaa dubartoota umuriin isaanii walhormaataa ta'e kutaa Turbi, North-Horr sub county, Marsabit County keessatti argaman waliin walqabatan.

Qorataa ijoo: **Anna Qabale Duba**

Seensa:

Nagaa ganama/waaree?

Maqaan koo Qabale Duba jedhama. Ani Yunivarsiitii Moi, mana barumsaa Fayyaa Hawaasaa keessatti barattuu digirii lammaffaa Sagantaa Leenjii Epidemiology fi Laaboraatoorii Dirree (FELTP) ti. Qorannoon kun koree gamaaggama naamusaa MU/MTRH irraa hayyamamee lakkoofsi pirootokoolii ni kennama. Garee qorannoo koo waliin qorannoo Gufuulee itti fayyadama ogummaa da'umsaa dubartoota umuriin isaanii walhormaataa ta'e kutaa Turbi, North-Horr sub county, Marsabit County keessatti gaggeessuuf as nan argama. Hayyama keessan gaafachuun barbaada, qorannoo kana irratti hirmaataa ta'uuf walii galtee yoo na gargaartan baay'een galateeffadha.

Kaayyoon qorannichaa

Kaayyoon qorannoo kanaa wantoota danqaalee waliin walqabatan hubachuudha itti fayyadama Skilled Birth Attendance hawaasa kana keessatti. Kunis tajaajiloota dubartoota ulfaaf yeroo dahumsaa yaaluun fayyaa akka isaaniif kennamu mirkaneessuuf dhiyaateedha. Kunuunsi ogummaa yeroo da'umsaa rakkoolee ulfaan walqabatan kanneen akka dhiiguu (dhiiguu ulfaataa), ciniinsuu rakkisaa fi kanneen biroo bulchuuf ni jajjabeessa.

Kanaaf odeeffannoon isin kennitan itti fayyadama ogummaan yeroo da'umsaa kutaa Turbi, North Horr sub county keessatti argamu madaaluuf ni gargaara , Marsabit county fi argannoowwan kun bu'aa haadholii gadhee kaawuntii keessatti mul'atan fooyyessuuf kutaalee fayyaa naannootti ni beeksifama.

Balaa, faayidaa fi taateewwan gadhee

a. Maalummaa fi sadarkaa balaa

Qorannoon kun gaaffilee caaseffama qabu fayyadamuun odeeffannoo isin irraa walitti qabuu fi adeemsichi guutummaatti nageenya kan qabu ta'a sababiin isaas tokkoon

tokkoon gaaffiif deebii afaaniin kennamu waan barbaachisuuf balaan fayyaa hin mudatu. Gaaffiiwwan mijataa hin taane fakkaachuu danda'anii fi iccitii kee weeraruu danda'an jiraachuu danda'u garuu amanamummaadhaan deebisuun kee barbaachisaa dha.

b. Balaa xiqqeessuu

Qorannoo kana keessatti hirmaannaan fedhii ofiitiin kan kennamu yoo ta'u, gaaffileen dubartoota qorannicha irratti hirmaachuu barbaadan qofaaf kan kennamu ta'a. Deebii kennitoota tokko tokko biratti dubbisuu fi barreessuu dhabuun yoo jiraate, qorannootti galmeessuun dura kaayyoo qorannichaa ibsuuf yeroon dabalataa ni kennama.

c. Haala hin beekamne

Qorannoon kun gaaffilee af-gaaffiin bulfamu kan fayyadamu yoo ta'u kunis mala weerara hin qabneedha. Kanarraa ka’uun yeroo odeeffannoo walitti qabuu keessatti hojimaata qorannoo kamiinuu rakkoon fayyaa akka uumamu hin eegamu.

d. Faayidaa

Qorannoon kun hirmaattota qorannichaaf bu'aa kallatti kan hin qabne ta'us bu'aan qorannichaa itti fayyadama Ogeessota Da'umsaa irratti fooyya'iinsa kan taasisu yoo ta'u, kunis du'a haadholii, yeroo da'umsaa waliin qabamuu fi miidhaan da'umsaa hir'isuu keessatti giddu-galeessa barbaachisaa dha.

e. Wal’aansa taateewwan gadhee

Yeroo adeemsa qorannichaa mala weerara hin taane kan qacaramu waan ta’eef taateewwan gadhee tilmaamaman hin jiran.

f. Dhaabbilee taateewwan gadhee

Qorannoon kun saamuda namaa kamiyyuu waan hin sassaabneef taateewwan gadhee hojimaata qorannoo irraa maddan kamiyyuu ilaaluuf mijaa'inni kamiyyuu hin barbaachisu.

g. Itti gaafatamummaa maallaqaa

Adeemsa odeeffannoo walitti qabuu keessatti taateewwan uumaman kamiifuu qorataan muummichaa itti gaafatamummaa ni qabaata.

Iccitii ragaa qorannoo;

a. Adda baastoota kallatti

Adeemsa odeeffannoo walitti qabuu keessatti maqaan hirmaattotaa kan hin fayyadamne ta'us inumaayyuu lakkoofsa addaa qorataan muummichaan kennameefiin adda baafama. Lakkoofsi bilbilaa fi odeeffannoon bakka barbaadan karoora Marii Garee Xiyyeeffannoo gargaaruuf ni qabama.

b. Eegumsa deetaa

Gaaffileen hayyama malee akka hin seennef jecha kuusaawwan deetaa jecha darbiitiin eegaman keessatti koodii fi furtuu ta'a. Kunis odeeffannoon walitti qabame kaayyoo yaadame qofaaf akka oolu mirkaneessuuf.

c. Bakka daataa

Unka hayyamaa mallattaa'ee fi gaaffilee guutaman erga daataa galfamee booda galmaa'ee kaabinee keessatti ni cufama.

d. Fayyadama ragaa

Daataan qorannoo qorannoo kanarraa argame gara fuulduraatti qorannoowwan biroo keessatti hin oolu.

Odeeffannoo dabalataa

i. Galmee dhuunfaa

Kaardii haadhaa fi daa'imaa ykn kaardii hospitaalaa biroo kamiyyuu kan yeroo ulfaa keessatti argaman gidduu seenummaa ANC irratti ibsa bal'aa qabu deebii afaaniin hirmaattota irraa kennamu mirkaneessuuf ni fayyadama.

ii. Odeeffannoo quunnamtii

Gaaffii qorannoon walqabatu, yaada ykn komii yoo jiraate namoota armaan gadii quunnamuuf ni dhiyaatu:

Qorataa Muummee: **Anna Qabale Duba**

Bilbila: **0728844356**

Email: **dubaqabale@gmail.com**

Kana irratti qabxii, waa'ee qorannichaa waan tokko na gaafachuu barbaadduu?

Dabalata B: Unka Hayyamaa

Maaloo akka barbaachisummaa isaatti mallattoo kaa'i

Unka Kana mallatteessuudhaan,akkas irratti walii gala:	**Eeyyee**	**Lakki**
Qorannichi naaf ibsamee jira		
Gaaffiin koo hundi deebii argateera		
Miidhaa fi miira namaa hin tolle ta'uu danda'uu fi faayidaan (yoo jiraate) qorannoo kanaa naaf ibsamee jira		
mirga hirmaachuu dhiisuu fi mirga irratti dhaabbachuu akkan qabu nan hubadha yeroo kamiyyuu		
bu'aa malee hirmaachuu diduu akkan danda'u nan hubadha		
gaaffii addaa kamiif iyyuu deebii kennuu dhiisuu filannoo qaba		
odeeffannoon dhuunfaa koo iccitii akka ta'u natti himameera		
Odeeffannoon adda na baasu tokkollee akka hin gadhiifamne nan hubadha ykn hayyama koo malee maxxanfame		
Koppii unka hayyamaa kanaa kan mallattaa’e akkan argadhu nan hubadha		

Qorannoo kana irratti akkan hirmaadhuuf hayyama kanaan kenna:

Jalqaba Hirmaataa: _____

Mallattoo: _____Guyyaa: _____

Maqaa Qorataa: _____ Guyyaa: _____

Dabalata C: Unka Hayyama Odeeffannoo: Qo’annoo Qulqullinaa

MADUREESSA: Qabxiilee itti fayyadama ogummaa da’umsaa dubartoota umuriin isaanii walhormaataa ta’e kutaa Turbi, North-Horr sub county, Marsabit County

Mallattoo; qorataa: **Anna Qabale Duba**

Seensa:

Nagaan ganama/waaree?

Maqaan koo Qabale Duba jedhama. Ani Yunivarsiitii Moi, mana barumsaa Fayyaa Hawaasaa keessatti barattuu digirii lammaffaa Sagantaa Leenjii Epidemiology fi Laaboraatoorii Dirree (FELTP) ti. Qorannoon kun koree gamaaggama naamusaa MU/MTRH irraa hayyamamee lakkoofsi pirootokoolii ni kennama. Garee qorannoo koo waliin qorannoo Gufuulee itti fayyadama ogummaa da’umsaa dubartoota umuriin isaanii walhormaataa ta’e kutaa Turbi, North-Horr sub county, Marsabit County keessatti gaggeessuuf as nan argama. Hayyama keessan gaafachuun barbaada, qorannoo kana irratti hirmaataa ta'uuf walii galtee yoo na gargaartan baay'een galateeffadha.

Kaayyoon qorannichaa

Kaayyoon qorannoo kanaa wantoota danqaalee waliin walqabatan hubachuudha itti fayyadama Ogummaa Dhalootaa kutaa Turbi, North Horr sub county, Marsabit county. Kunis tajaajiloota dubartoota ulfaaf yeroo dahumsaa yaaluun fayyaa akka isaaniif kennamu mirkaneessuuf dhiyaateedha. Kunuunsi ogummaa yeroo dahumsaa godhamu rakkoolee ulfaan walqabatan kanneen akka dhiiguu (dhiiguu ulfaataa), ciniinsuu rakkisaa fi kanneen biroo bulchuuf ni jajjabeessa.

Kanaaf odeeffannoon isin kennitan ergaa fayyaa hawaasaa dubartoota ulfaa tajaajila kunuunsa da'umsaa ogummaa qaban irraa barbaaduu keessatti jajjabeessuuf yaadame dizaayinii gochuuf kan oolu ta'a hojjettoota fayyaa dhaabbilee fayyaa keessa jiran.

Balaa, faayidaa fi taateewwan gadhee

a. Maalummaa fi sadarkaa balaa

Qorannoon kun qajeelfama FGD ykn KII fayyadamuun odeeffannoo isin irraa walitti qabuu fi adeemsichi guutummaatti nageenya kan qabu ta'a sababiin isaas marii keessatti ykn af-gaaffii keessatti deebii afaaniin kennamu waan barbaachisuuf balaan

fayyaa hin mudatu. Gaaffiiwwan mijataa hin taane fakkaachuu danda'anii fi iccitii kee weeraruu danda'an jiraachuu danda'u garuu amanamummaadhaan deebisuun kee barbaachisaa dha.

b. Balaa xiqqeessuu

Qorannoo kana keessatti hirmaannaan fedhii ofiitiin kan raawwatamu yoo ta'u, mariin kan raawwatamu erga hirmaattonni hayyama isaanii kennanii booda qofa. Deebii kennitoota tokko tokko biratti dubbisuu fi barreessuu dhabuun yoo jiraate, qorannootti galmeessuun dura kaayyoo qorannichaa ibsuuf yeroon dabalataa ni kennama.

c. Haala hin beekamne

Qorannoon kun qajeelfama KII fi FGD kanneen mala odeeffannoo walitti qabuu weerara hin qabne fayyadama. Kanarraa ka’uun yeroo odeeffannoo walitti qabuu keessatti hojimaata qorannoo kamiinuu rakkoon fayyaa akka uumamu hin eegamu.

d. Faayidaa

Qorannoon kun hirmaattota qorannichaaf bu'aa kallatti kan hin qabne ta'us bu'aan qorannichaa itti fayyadama Ogeessota Da'umsaa irratti fooyya'iinsa kan taasisu yoo ta'u, kunis du'a haadholii, yeroo da'umsaa waliin qabamuu fi miidhaan da'umsaa hir'isuu keessatti giddu-galeessa barbaachisaa dha.

e. Wal’aansa taateewwan gadhee

Yeroo adeemsa qorannichaa mala weerara hin qabne ni qacarama kanaaf taateewwan gadhee tokkollee hin eegamu.

f. Dhaabbilee taateewwan gadhee

Qorannoon kun saamuda namaa kamiyyuu waan hin sassaabneef taateewwan gadhee hojimaata qorannoo irraa maddan kamiyyuu ilaaluuf mijaa'inni kamiyyuu hin barbaachisu.

g. Itti gaafatamummaa maallaqaa

Adeemsa odeeffannoo walitti qabuu keessatti taateewwan uumaman kamiifuu qorataan muummichaa itti gaafatamummaa ni qabaata.

Iccitii ragaa qorannoo

a. Adda baastoota kallatti

Adeemsa odeeffannoo walitti qabuu keessatti maqaan hirmaattotaa kan hin fayyadamne ta'us inumaayyuu lakkoofsa addaa qorataan muummichaan kennameefiin adda baafama.

b. Eegumsa daataa

Qajeelfamni KII fi FGD hayyama malee akka hin seenne gochuuf jecha sanadoota password protected Ms. Word keessatti koodii fi furtuu ta'a. Kunis odeeffannoon walitti qabame kaayyoo yaadame qofaaf akka oolu mirkaneessuuf.

c. Bakka daataa

Unka hayyamaa mallattaa'ee fi qajeelfamni guutame erga daataa galfamee booda galmaa'ee kaabinee keessatti ni cufama.

d. Fayyadama ragaa

Daataan qorannoo qorannoo kanarraa argame gara fuulduraatti qorannoowwan biroo keessatti hin oolu.

Odeeffannoo dabalataa

i. Warraaqsa sagalee fi mul'ataa

Yeroo af-gaaffii fi marii erga hayyamni kennamee booda meeshaan teeppii waraabu fayyadamuun ni danda'ama. Deebiin kennamu maqaan isaa kan hin ibsamne yoo ta’u, gabaasa kana keessatti maqaan hin kaafamu. Galmeessitoonni qorataan marii booda yaadannoo galmeessuun qabxiileen barbaachisoo irratti mari’ataman hundi akka qabaman ni gargaaru. Daataa teeppii waraabbii keessatti argamu eeguu keessatti tarkaanfiiwwan ciccimoon kan fudhataman yoo ta’u, qorataa fi gargaartota qofatu daataa waliin akka walqunnaman ni hayyamamaaf. Erga daataa tiraanskriipshinii booda teeppiiwwan kaabinoota cufaman keessatti ni kuufamu.

ii. Odeeffannoo quunnamtii

Gaaffii qorannoon walqabatu, yaada ykn komii yoo jiraate namoota armaan gadii quunnamuuf ni dhiyaatu:

Qorataa Muummee: **Anna Qabale Duba**
Bilbila: **0728844356**
Email: **dubaqabale@gmail.com**

Dabala D: Gaaffii

Dubattoota umuriin isaanii walhormaataa ta'e kutaa Turbi, North-Horr sub county, Marsabit County keessatti argamuun da'umsa ogummaatti fayyadamuu wajjin walqabatan

KUTAA A: ODEEFFANNOO ADDA BAAFACHUU

Gaaffilee Lakk: ……

Guyyaa: ..... ……

Mana lakk. …… ....

Qindeessitoota GPS .....

QAJEELFAMA

a) Kaayyoo af-gaaffii sanaaf ibsi haadha.

b) Af-gaaffii itti fufuun dura hayyama gaafachuu.

c) Gaaffiiwwan hirmaataa ilaallatan hundi deebii akka argatan mirkaneessuu.

d) Deebii hirmaataaf hin dubbisin deebii kenname irratti mallattoo kaa'uu malee.

KUTAA B: AMALOOTA HAWAASOO- DIMOGRAAHIIKAA DEEBII DARBOOTA

1. Umuriin kee meeqa? ----------

2. Sadarkaan barnootaa ol aanaan kee maali?

- ☐ Sadarkaa tokkoffaa
- ☐ Sadarkaa lammaffaa
- ☐ Sadarkaa sadaffaa
- ☐ Barumsa tasumaa hin qabu

3. Amantiin keessan maali?

- ☐ Kiristaana
- ☐ Muslim
- ☐ Amantii hin qabu
- ☐ Kaan

4 ibsu. Haalli gaa'ela keessanii maali?

- ☐ Heerumte
- ☐ Qofa hin qabne
- ☐ Hiikkate /Agar bahe
- ☐ Dubartii abbaan manaa irraa du'e

5. Haalli gaa’elaa kan fuudhan yoo ta’e, gaa’ela keessa waggaa meeqa? .....

6. Gaa'ila haadha manaa hedduu keessa jirtuu?

- ☐ Eeyyee
- ☐ Lakki

7. Yoo heerumte ta'e sadarkaan barnootaa abbaan manaa kee maali?

- ☐ Sadarkaa tokkoffaa
- ☐ Sadarkaa lammaffaa
- ☐ Sadarkaa sadaffaa
- ☐ Barumsa tasumaa hin qabu

8. Hojiin keessan maali? .....

9. Galiin abbaa manaa keetii/kee ji'a ji'aan (Ksh) maali?

- ☐ Hin jiru
- ☐ 1000 gadi
- ☐ 1000 - 5000
- ☐ 5000 ol

10. Geejjibaa meeqa gootanii beektu?

- ☐ Tokko
- ☐ Lama
- ☐ sadii
- ☐ Sadii ol

KUTAA B- Qabxiilee itti fayyadama Ogummaa Da’umsaa wajjin walqabatan

11. Dhaabbanni fayyaa isinitti dhihoo jiru mana keessan irraa hangam fagaata?

- ☐ 1Km gadi
- ☐ 1KM- 5KM
- ☐ 5KM-10KM
- ☐ 10KM ol

12. Yeroo dhaabbata fayyaa daawwattan meeshaa geejjibaa kam fayyadamtu?

- ☐ Miillaan deemuu
- ☐ Mootar saayikilii
- ☐ Konkolaataa
- ☐ Kaan immoo.....

13. Mana keessan irraa dhaabbata fayyaa isinitti dhihoo jiru bira ga'uuf yeroo hangamii isinitti fudhata?

- ☐ Daqiiqaa 30 gadi

- ☐ Sa'aatii tokko keessatti
- ☐ Sa'aatii lama keessatti
- ☐ Sa'aatii lamaa ol

14. Yeroo ulfaa dhumaa eessatti deesse?
    - ☐ Dhaabbata fayyaa keessatti
    - ☐ Karaa gara dhaabbata fayyaa geessu
    - ☐ Mana keessatti
    - ☐ Kaan .....

15. Yoo da'umsi dhaabbata fayyaa keessatti ta'e tajaajila kanaaf kaffaltiin isin irraa kaffalamaa turee?
    - ☐ Eeyyee
    - ☐ Lakki

16. Yoo eeyyee ta’e gaaffii 15 armaan olii irratti meeqa si irraa kaffalame?.....

17. Kun da'umsa keessan isa jalqabaadhaa?
    - ☐ Eeyyee
    - ☐ Lakki

18. Yoo kan armaan olii keessatti lakki ta’e, da’umsa kee duraanii keessatti, da’umsa yeroo dheeraa/rakkisaa si mudatee?
    - ☐ Eeyyee
    - ☐ lakki

19. Yeroo da'umsa kee isa dhumaa eenyutu si gargaare?
    - ☐ Ofii
    - ☐ Narsii/deessiftuu
    - ☐ TBA
    - ☐ Miseensa maatii
    - ☐ Kaan ibsu.....

20. Ulfa kee duraanii keessatti No One Present(NOP)
    - ☐ Eeyyee
    - ☐ Lakki

21 waliin deessee beektaa. Gaaffii armaan olii keessatti eeyyee yoo ta'e sababni NOP maali ture
    - ☐ Mana keessa kophaa koo nan tura
    - ☐ Guyyaa da'umsa koo hin beeku
    - ☐ Bosona keessa ture bineensota kunuunsaa ture

☐ Other specify..... .....

22. Gochoonni aadaa dubartoonni hawaasa kana keessa jiran kunuunsa ogeessa ogummaa qabuun hospitaala keessatti akka hin dahaneef gufachiisan jiruu?

☐ Eeyyee

☐ Lakki

23. Yoo eeyyee ta’e armaan olitti, amantaa aadaa dubartoonni yeroo da’umsaa ogeessa ogummaa qabu akka hin fayyadamne gufachiisan tarreessi?

.....
.....

24. Yeroo ulfaa tajaajila kunuunsa dahumsa duraa barbaaddee?

☐ Eeyyee

☐ Lakki

25. Yoo eeyyee ta'e tajaajila eessaa barbaadde?

☐ Dhaabbilee mootummaa

☐ kilinika dhuunfaa

☐ Kilinikoota amantii irratti hundaa'an

☐ Kaan ammoo.....

26. Kunuunsa dahumsa duraa osoo hin jalqabin dura, kunuunsa dahumsa duraa irratti akka argamtu nama kamirraayyuu hayyama argachuun barbaachisaa turee?

☐ Eeyyee

☐ Lakki

27. Yoo eeyyee ta'e eenyuun hayyama gaafatte?

☐ Abbaa warraa

☐ Haadha

☐ Haadha warraa

☐ Kan biroo ibsi.....

28. Dubartiin ulfaa tokko yeroo ulfaa guutuu daawwannaa kunuunsa dahumsa duraa meeqa gochuu qabdi?

☐ 1 - 3

☐ - 5

☐ - 7

☐ ol

29. Yeroo ulfa kee isa dhumaa daawwannaa ANC meeqa goote?

☐ 1 - 3

- ☐ - 5
- ☐ - 7
- ☐ ol

30. Abbaan manaa kee yeroo kamiyyuu fi yeroo da'umsaa daawwannaa ANC si waliin turee?

- ☐ Eeyyee
- ☐ Lakki

31. Yoo si waliin hin deemne ta'e ANC/ tajaajila geejjibaa guutuuf deeggarsa maallaqaa kenneera

- ☐ Eeyyee
- ☐ Lakki

32. Waa'ee ulfa ittisuu dhageessanii beektuu?

- ☐ Eeyyee
- ☐ Lakki

33. Yoo eeyyee ta’e gosoota ittisa ulfaa sadii maqaa dhahaa?

.....

.....

.....

34. Fayyadamni ittisa ulfaa karoora maatiidhaaf mala gaarii ta’a jettanii yaaddu?

- ☐ Eeyyee
- ☐ Lakki

35. Kana dura karoora maatii fayyadamtee beektaa?

- ☐ Eeyyee
- ☐ Lakki

36. Ulfi dhumaa karoorfamee turee?

- ☐ Eeyyee
- ☐ Lakki

37. Yoo ulfi sun karoorfamee hin turre ta'e, sababa ulfi itti godhaniif ibsaa?

- ☐ Abbaan manaa na dirqisiise
- ☐ Akka tasaa ulfaa'e
- ☐ Karoorri maatii fashalaa'e
- ☐ Warri kaan ibsu ----------

38. Ulfa kanaan duraa irratti rakkoo ulfaa wajjin walqabatu qabaachuu ni yaadattu?

- ☐ Eeyyee

- ☐ Lakki

39. Rakkoo ulfaan walqabatee jiru kan beektu tarreessi? (Isaaniif hin dubbisinaa, namni gaaffii fi deebii godhame haa kaasu bakka barbaachisaa ta’etti immoo mallattoo kaa’aa).

- ☐ Dhiigni qaama saalaa
- ☐ Dhukkubbii mataa cimaa
- ☐ Hafuura baafachuu irratti rakkina
- ☐ Daa'imni sochii xiqqaa qaba ykn tasuma socho'uu dhabuu
- ☐ Fincaan dhukkubbii
- ☐ Madaa qaama saalaa
- ☐ Baay'ee dadhabuu ykn dadhabbiin itti dhaga'amuu
- ☐ Kaan.....

Dabalata E: Qajeelfama Af-gaaffii Marii Garee Xiyyeeffannoo

MADUREESSA: Qabxiilee itti fayyadama ogummaa da'umsaa dubartoota umuriin isaanii walhormaataa ta'e kutaa Turbi, North-Horr sub county, Marsabit County

Qorataa muummee: **Aanaa Qabale Dubaa**

Seensa:

Nagaa ganama/waaree?

Maqaan koo Qabale Duba jedhama. Ani Yunivarsiitii Moi, mana barumsaa Fayyaa Hawaasaa keessatti barattuu digirii lammaffaa Sagantaa Leenjii Epidemiology fi Laaboraatoorii Dirree (FELTP) ti. Qorannoon kun koree gamaaggama naamusaa MU/MTRH irraa hayyamamee lakkoofsi pirootokoolii ni kennama. Garee qorannoo koo waliin qorannoo Gufuulee itti fayyadama ogummaa da'umsaa dubartoota umuriin isaanii walhormaataa ta'e kutaa Turbi, North-Horr sub county, Marsabit County keessatti gaggeessuuf as nan argama. Hayyama keessan gaafachuun barbaada, qorannoo kana irratti hirmaataa ta'uuf walii galtee yoo na gargaartan baay'een galateeffadha.

Murti gummitif gan---------- ----------

---------**Guyyaa**---------- ----------

Maqaa geggeessaa---------- ----------

QAJEELFAMA

a) Kaayyoo marii garee dubartootaaf ibsi

b) Gaafadhu adeemsa marii galmeessuuf hayyama argachuuf

c) Dhimma keessa turuuf qajeelfamaatti fayyadamuu

d) Miseensonni garee of beeksisuu qabu

e) Marii kana keessatti deebii dogoggoraa ykn sirrii ta'e waan hin jirreef namni hundi yaada isaa waliif qooduuf bilisa, dhimmoota irratti mari'atamu ilaalchisee muuxannoo qaban.

Gaaffilee

1. Dubartoonni hawaasa kana keessa jiran yeroo ulfaa eessatti kunuunsa barbaadu?
    - TBAn sababa fi tajaajilli maal akka TBAn kennamu yoo gaafatan.

- Dhaabbata fayyaa ykn kilinika socho'aa yoo ta'e tajaajilli kennamus kaafamuu qaba.

2. Dubartoonni ulfaa tajaajila da'umsaa eessa barbaadu

3. Yeroo da'umsaa tajaajila Fayyaa fayyadamuu keessatti barbaachisummaan jiraa

4. Ulfaa fi Da'umsa ilaalchisee amantaa fi ykn gocha aadaa hawaasa kana keessa jiraa?

5. Dubartoonni ulfaa tajaajila fayyaa yeroo barbaadan rakkoon isaan mudatu maali? Qormaata kana akkamitti furuun ni danda'ama?

7. Hawaasni dhimma fayyaa irratti odeeffannoo akkamiin argata?

- Chaanaalii qunnamtii

8. Dhiironni hawaasa kanaa yeroo ulfaa hanga da’umsaatti haadha manaa isaanii akkamitti deeggaru?

9. Dhimmoonni biroo hawaasni yeroo ammaa mudachaa jiru jiraa?

Dabalata F: Qajeelfama Af-gaaffii Odeeffannoo Furtuu

Mata duree: Qabxiilee itti fayyadama dhaloota ogummaa dubartoota umurii walhormaataa gidduutti Turbi Ward keessatti walqabatan, North-Horr sub county, Marsabit County.

Qorataa muummee: **Anna Qabale Duba**

Seensa:

Nagaa ganama/waaree?

Maqaan koo Qabale Duba jedhama. Ani Yunivarsiitii Moi, mana barumsaa Fayyaa Hawaasaa keessatti barattuu digirii lammaffaa Sagantaa Leenjii Epidemiology fi Laaboraatoorii Dirree (FELTP) ti. Qorannoon kun koree gamaaggama naamusaa MU/MTRH irraa hayyamamee lakkoofsi pirootokoolii ni kennama. Garee qorannoo koo waliin qorannoo Gufuulee itti fayyadama ogummaa da'umsaa dubartoota umuriin isaanii walhormaataa ta'e kutaa Turbi, North-Horr sub county, Marsabit County keessatti gaggeessuuf as nan argama. Hayyama keessan gaafachuun barbaada, qorannoo kana irratti hirmaataa ta'uuf walii galtee yoo na gargaartan baay'een galateeffadha.

Hirmaataa lakk---------- ----------

Guyyaa---------- ----------

Maqaa gaafataa---------- ----------

QAJEELFAMA

a. Kaayyoo af-gaaffii odeeffataa ijoof ni ibsi

b. Adeemsa marii galmeessisuuf hayyama gaafachuu

c. Dhimma keessa turuuf qajeelfamaatti fayyadami

d. Marii kana keessatti deebii dogoggoraa ykn sirrii hin jiru

Gaaffilee Waliigalaa

1. Hawaasa kana keessatti amala fayyaa barbaaduu dubartootaa akkam
    - ANC waliin walqabatee
    - Kunuunsa da'umsaa

2. Itti fayyadama tajaajiloota kanaa irratti yaadni keessan maali; ANC fi ogummaa dahumsaa dubartoota kutaa Turbii keessa jiraniin?

3. Yeroo da'umsaatti argamuun ogummaan akka hin fayyadamne maaltu gufachiisa ykn haala mijeessa?

- Dubartoonni yeroo ulfaa fi yeroo da'umsaa kunuunsa akka hin fayyadamne amantaa ykn aadaan aadaa danqu jiraa?
- Dhaqqabummaa fi argamuun dhaabbilee fayyaa hawaasa keessatti dhimma ta'aa?
- Qabxiileen biroo ibsu

4. Haala hatattamaa ulfaan walqabatee dhufu kamiyyuu haala mijeessuuf deeggarsa hawaasaa akkamii qabda

5. Haalli kun hawaasa kana keessatti hammam kan mul'atu?

- Haala ulfaa hatattamaa -da'umsa manaa, da'umsa danqame, da'umsa karaa irratti)
- Du'a haadholii
- Du'a daa'imman reefuu

6. Haala armaan olitti ibsame hawaasa keessatti akka hin uumamneef tarkaanfiiwwan akkamii fudhatamuu danda'u?

7. Hojjettoonni da'umsaa aadaa yeroo da'umsaa dubartoota erguu fi yoo hin taane maaliif?

8. Hoggantoonni dubartootaa kunuunsa fayyaa haadholii hawaasa keessatti akkamitti deeggaru?

Sagantaan fayyaa haadholii fi daa'immanii koonyaa keessatti qormaata akkamii mudata?

Qormaanni kun akkamitti furmaata argachuu danda'a?

Appendix VII: IREC Approval Letter

INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE (IREC)

MOI TEACHING AND REFERRAL HOSPITAL
P.O. BOX 3
ELDORET
Tel: 33471//2/3

MOI UNIVERSITY
COLLEGE OF HEALTH SCIENCES
P.O. BOX 4606
ELDORET
Tel: 33471/2/3

Reference: IREC/2020/121
Approval Number: 0003658

27th August, 2020

INSTITUTIONAL RESEARCH & ETHICS COMMITTEE
27 AUG 2020
APPROVED
P. O. Box 4606 - 30100 ELDORET

Anna Qabale Duba,
Moi University,
School of Public Health,
P.O. Box 4606-30100,
ELDORET- KENYA.

Dear Ms. Duba,

BARRIERS TO UTILIZATION OF SKILLED BIRTH ATTENDANCE AMONG WOMEN OF REPRODUCTIVE AGE IN TURBI WARD, NORTH-HORR SUB-COUNTY, MARSABIT

This is to inform you that ***MU/MTRH-IREC*** has reviewed and approved your above research proposal. Your application approval number is ***FAN: 0003658.*** The approval period is **27th August, *2020 – 26th August, 2021.***

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by ***MU/MTRH-IREC***.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to ***MU/MTRH-IREC*** within 72 hours of notification.
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to ***MU/MTRH-IREC*** within 72 hours.
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to ***MU/MTRH-IREC.***

Prior to commencing your study; you will be required to obtain a research license from the National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and other relevant clearances. Further, a written approval from the CEO-MTRH is mandatory for studies to be undertaken within the jurisdiction of Moi Teaching & Referral Hospital (MTRH), which includes 22 Counties in the Western half of Kenya.

Sincerely,

DR. S. NYABERA
DEPUTY-CHAIRMAN
INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE

cc CEO - MTRH Dean - SOP Dean - SOM
Principal - CHS Dean - SON Dean - SOD

Appendix VIII: NACOSTI Research License

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **359357**

Date of Issue: **23/September/2020**

RESEARCH LICENSE

This is to Certify that Ms.. Qabale Anna Duba of Moi University, has been licensed to conduct research in Marsabit on the topic: Barriers to Utilization of Skilled Birth Attendance Among Women of Reproductive Age in Turbi Ward, North-Horr Sub County, Marsabit County for the period ending : 23/September/2021.

License No: **NACOSTI/P/20/6780**

359357

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix IX: Letter from the County

REPUBLIC OF KENYA
COUNTY GOVERNMENT OF MARSABIT

DEPARTMENT OF HEALTH

REF/CGM/HEALTH/TR/6/12/2020

20th November 2020

Anna Qabale Duba
P.O BOX 10-60500
MARSABIT
dubaqabale@gmail.com

Dear Madam

RE: Authorization to carry out a study in Turbi ward, North Horr Sub county, Marsabit County

The Research Committee of the Department of Health, Marsabit County has received your request to carry out a study entitled **"BARRIERS TO UTILIZATION OF SKILLED BIRTH ATTENDANCE AMONG WOMEN OF REPRODUCTIVE AGE IN TURBI WARD, NORTH-HORR SUB COUNTY, MARSABIT COUNTY"**

After going through the proposal, the committee grant you approval to proceed with your study. This should not exceed a time period of three months or equivalent to 90 days. Please note that you can always ask for extension if need be.

Upon completion of the study, you will be required to share the result findings with the county department of health.

All the best,

COUNTY DIRECTOR OF HEALTH
MARSABIT COUNTY
P. O. Box 5 MARSABIT
Date.....

Dr Adano Kochi
Director Health Services
Marsabit County

Appendix X: Anti Plagiarism Certificate

SR227

ISO 9001:2019 Certified Institution

EDU 999 THESIS WRITING COURSE

PLAGIARISM AWARENESS CERTIFICATE

This certificate is awarded to

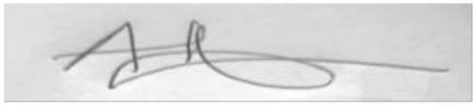
ANNA QABALE DUBA

SPH/PGH/FE/05/18

In recognition for passing the University's plagiarism

Awareness test for thesis: FACTORS ASSOCIATED WITH UTILIZATION OF SKILLED BIRTH ATTENDANCE AMONG WOMEN OF REPRODUCTIVE AGE IN TURBI WARD, NORTH-HORR SUB COUNTY, MARSABIT COUNTY with a similarity index of 5% and striving to maintain academic integrity.

Awarded by:



Prof. Anne Syomwene Kisilu
CERM-ESA Project Leader Date: 19/07/2023