Factors Hindering Utilization of Maternal Health Services Among Pregnant women in Kapkatet Subcounty Hospital

Ochieng, Nicholas; Kimeli, Cornellius; Ngetich, Mercy; Nelima, Dina; Kipngetich, Ruel

2023
UOK
http://ir-library.kabianga.ac.ke/handle/123456789/647

FACTORS HINDERING UTILIZATION OF MATERNAL HEATH SERVICES AMONG PREGNANT WOMEN IN KAPAKATET SUBCOUNTY HOSPITAL

BY

NICHOLAS OCHIENG

CORNELIUS KIMELI

MERCY NGETICH

DINA NELIMA

RUEL KIPNGETICH

A RESEARCH THESIS SUBMITTED IN THE PARTIAL FULFILMENT OF THE REQUIREMENT OF THE AWARD OF DEGREE IN NURSING OF SCHOOL OF HEALTH SCIENCE UNIVERSITY OF KABIANGA

2023

DECLARATION

We declare that this research thesis is our original work and to the best of our knowledge, has not been submitted to any other institution, university or publication for academic purpose.

NAME	REGESTRATION	SIGNATURE	DATE
NICHOLAS OCHIENG	NUR/K/0017/2019	……	……...
CORNELIUS KIMELI	NUR/K/21/2019	……	……...
MERCYNGETICH	NUR/K/0009/2019	. …….	…….
DINA NELIMA	NUR/K/0005/2018	…….	…….
RUEL KIPNGETICH	NUR/K/0001/2019	…….	…….

Supervisor(s) Declaration

I confirm that this research thesis has been submitted for review with my approval as the university supervisor

Name --- Mr. Keitany Samson

Signature ----------

Date ---------/---------/------

ABSTRACT

Utilization of maternal health services is crucial to reducing maternal mortality rates and improving maternal and child health outcomes. Despite notable progress in recent years, many pregnant women, especially in developing countries, still do not receive sufficient maternal health care. Pregnancy and childbirth contribute to low life expectancy of women and it constitutes a significant threat to mother and child survival. Low utilization of maternal health services is a significant problem because it can lead to poor maternal and neonatal health outcomes. The study aimed to establish factors in the utilization of maternal health care services among pregnant women in Kapkatet sub-county hospital. This research employed a cross-sectional design. The study was conducted in Kapkatet sub-county hospital, in Kericho County, Kenya. The study targeted 119 pregnant women between the ages of 15-49 years visiting Kapkatet sub-county hospital. Structured questionnaires were adopted to collect data. Statistical Package for Social Sciences (SPSS) version 20.0 was used for data analysis. Descriptive statistics were summarized using frequencies and percentages. Chi-square test was used to determine the association between the study variables. All ethical guidelines were adhered to. The researchers sought for approval and permission from the research review and ethics committee (IREC) of the University of Kabianga, approval number ISERC/2023/0012. Study participants' confidentiality and privacy was ensured throughout the study. Participation was voluntary and all respondents were informed of benefits of the study, while seeking for their consent. Majority of the respondents, 47%, delivered at public hospital in their last delivery, followed by 35% who delivered at private hospital, 12% delivered at home while the least delivered Traditional birth assistant/attendant. Distance from health facility and time to reach the nearest health facility were statistically associated with utilization of maternal health services.

Majority of the respondents, 42.7%, reported to have has at least visited antenatal clinic in their last pregnancy four times, followed by those who visited twice (16.4%), thrice (14.5%), once (10.9%), over four times (9.1%) while the least were those who had never visited, 6.9%). Cultural factors have significant impact on utilization of maternal health services. Strategies should focus on improving the accessibility of services by addressing distance and transportation challenges, reducing financial barriers, and promoting culturally sensitive approaches that empower women, respect their choices, and engage communities in supporting maternal health.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABBREVIATIONS

ANC - Antenatal care

FCAS – Facility, clinicians, administrators and staff

FSB – Fresh stillbirth

HIV – Human immunodeficiency virus

ICPD – International Conference on Population and Development

KDHS – Kenya Demographic and Health Survey

MDG – Millennium Development Goals

MMR – Maternal Mortality Rate

MSB – Macerated stillbirth

SDG – Sustainable Development Goals

UNFPA – United Nations Population Fund

WHO – World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Globally, Maternal mortality is unacceptably high. About 295,000 women died during and following pregnancy and childbirth in 2017 [WHO 2019], a 35 percent lower than in 2000 when there were an estimated 451,000 maternal deaths. The vast majority of these deaths (94%) occurred in low-resource settings, and most could have been prevented. Thaddeus and Maine (2018) argued that not receiving adequate care in time is the overwhelming factor leading to death of women in developing countries. This has led to the negative impacts on the health of both the pregnant women and the newborns due to the exposure to the risk factors and complications that could have been handled. Provision and consumption of maternal health services greatly impacts the pregnancy outcome positively and well-being and also aid in curbing of modifiable complications. However, this largely depends on the individuals consuming the provided health services in various health individuals and quality of the care provided to the individuals. Utilization of the provided maternal health services will require collaboration and understanding between both the pregnant women and the health care providers so as to ensure satisfying end results to the two parties.

In Kenya, the maternal mortality rate for 2017 was 342, a 1.16% decline from 2016. The national maternal health programs include: antenatal care, provider-initiated. There are significant variations in maternal mortality levels across and within national boundaries. Hospital-based studies in the Kenya conclude that the majority of maternal deaths are due to one or more preventable direct obstetric complications. Other direct causes are puerperal

sepsis/infections, hypertensive disorders, obstructed labor/ruptured uterus, and complications of unsafe abortions.

In Kapkatet sub-county hospital, for the last three consecutive months, data collected as per ANC visits and Maternity has shown that the set targets have not been met. Utilization of the maternal health services as per targets has been 48%, 64% and 51% respectively for the last 3 months. This research seeks to establish the factors influencing the maternal services in Kapkatet subcounty hospital.

1.2 Problem statement

Maternal mortality and neonatal mortality rate still remain above the global average and the current pace of reduction is not enough to achieve the Sustainable Development Goals (SDGs) targets by 2030 (UNFPA, 2022). Pregnancy and childbirth contribute to low life expectancy of women and it constitutes a significant threat to mother and child survival (Arogundade et al., 2021). Despite the relatively high proportion of maternal health services, 48% make less than the recommended four visits (Makii, 2015). This contributes to the 520 deaths per 100,000 live births for mother and 52 deaths per 1000 live births for neonates in Kenya. In Kenya over 95% of women receive at least one ANC service but only 57.6% make recommended visits. Low utilization of maternal health services among pregnant women is a crucial problem. This issue is significant because maternal health services are essential for ensuring safe pregnancies and deliveries, reducing maternal and neonatal morbidity and mortality, and improving the overall health outcomes of women and children.

Low utilization of maternal health services is a significant problem because it can lead to poor maternal and neonatal health outcomes. Pregnant women who do not receive adequate

antenatal care and skilled delivery services are at higher risk of developing complications such as pre-eclampsia, postpartum hemorrhage, and sepsis. These complications can result in maternal and neonatal morbidity and mortality. According to the WHO, complications related to pregnancy and childbirth are the leading cause of death among women of reproductive age in low-income countries. By improving maternal health service utilization, maternal and neonatal health outcomes can be improved, and maternal mortality can be reduced. Low utilization of maternal health services may be indicative of broader systemic issues in healthcare delivery in the area. Understanding the factors that contribute to low utilization of maternal health services can inform broader efforts to improve healthcare delivery, including health financing and policy

According to the World Health Organization (2020), a woman's chance of dying and becoming disabled during pregnancy and childbirth is closely related to her social and economic status, norms and values of her culture and geographic remoteness to her home. It estimated that about 810 women died every day in 2017 from obstetric complications, and developing countries contribute 94% of the total maternal death in the world (Arogundade et al., 2021).

1.3 Aim of the Study

The study aimed to establish factors in the utilization of maternal health care services among pregnant women in Kapkatet sub-county hospital.

1.4 Specific Objectives

1. To establish the extent of utilization of maternal health care services among pregnant women in Kapkatet sub-county hospital.
2. To determine socio-demographic factors influencing utilization of maternal health services among pregnant women in Kapkatet sub-county hospital.

3. To determine accessibility factors influencing utilization of maternal health services among pregnant women in Kapkatet subcounty hospital
4. To determine cultural factors hindering utilization of maternal health services among pregnant women in Kapkatet subcounty hospital.

1.5 Research Questions

1. What is the extent of utilization of maternal health care services among pregnant women in Kapkatet sub-county hospital?
2. What are some socio-demographic factors that influence the utilization of maternal health services among pregnant women in Kapkatet sub-county hospital?
3. Do accessibility factors influence the utilization of maternal health services among pregnant women in Kapkatet subcounty hospital?
4. What are some cultural factors hindering the utilization of maternal health services among pregnant women in Kapkatet subcounty hospital?

1.6 Justification of the Study

Maternal health care service utilization is an important health issue related to both maternal and child survival as it reduces maternal mortality and morbidity as well as improving the well-being of mothers and their children before, during and after birth. This study played a vital role to help the pregnant women to understand better the importance of the maternity services and to take actions towards improving their health and those of their children.

The health stakeholders and policy makers would benefit as they will identify the gaps in the consumption of maternal health services and plan and act as a reminder to both the state and civil society to always incorporate reproductive health needs of the pregnant women.

Considering low utilization of maternal health services, understanding what determines utilization becomes important.

1.7 Significance of the Study

This study provides an in-depth analysis of the factors influencing utilization of maternal health services, giving specific focus to the various determinants that play a role in the utilization of the services. By analyzing the underutilization, factors influencing and determinants of the utilization, the study thus is beneficial in providing secondary data that can be used by other researchers. Moreover, the study is also useful to Kapkatet Subcounty hospital as well as other stakeholders involved in ensuring proper utilization of the services across the country as it provides a basis from which legislations and other decision-making policies can be made.

The findings of this study would enable policy formulation for improving the level of utilization of health services in the county and may across the country.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers the review of related literature, the theoretical framework, a breakdown of the conceptual framework and the identification of knowledge gap. It therefore provides a background of already existing information about utilization of maternal health services among pregnant women before relating the study to a relevant theory, providing the concept map and informing about the knowledge gap. The researchers provide an analysis of various qualitative and quantitative researches that have been done and published by other scholars that relate to the variables of the study, i.e., utilization of maternal health services and the related factors as well as outcomes.

2.2 Maternal services utilization

The level of maternal health services utilization in Kenya remains low, with only 47.5% of pregnant women receiving the recommended minimum of four antenatal care visits and 42.2% delivering their babies in a health facility (Kwambai et al., 2015). The situation in Kenya is not unique, as many other countries, particularly in sub-Saharan Africa, also face low utilization of maternal health services. For instance, a study by Amoakoh-Coleman et al. (2016) in Ghana found that only 51.4% of pregnant women received the recommended antenatal care services, while 47.9% delivered in a health facility.

However, there are some countries that have made significant progress in maternal health services utilization. For example, in Rwanda, the proportion of pregnant women receiving

antenatal care services increased from 25% in 2000 to 90% in 2010, while facility-based deliveries increased from 28% in 2000 to 69% in 2010 (Binagwaho et al., 2014). In Ethiopia, the proportion of pregnant women receiving antenatal care services increased from 28% in 2005 to 62% in 2011, while facility-based deliveries increased from 6% in 2005 to 20% in 2011 (Central Statistical Agency [Ethiopia] and ICF International, 2012).

The reasons for the differences in maternal health services utilization between countries can be attributed to various factors. For instance, some countries have invested heavily in improving maternal health services, including increasing the number of healthcare workers, improving healthcare infrastructure, and providing financial incentives to encourage women to utilize maternal health services. In Rwanda, for example, the government has implemented a community-based health insurance scheme that covers the cost of maternal health services, which has helped to improve maternal health services utilization (Binagwaho et al., 2014).

Additionally, cultural and socio-economic factors play a role in maternal health services utilization. In some countries, traditional beliefs and practices influence women's decisions to utilize maternal health services, while in others, poverty and lack of education limit women's access to healthcare services.

In conclusion, the level of maternal health services utilization remains low in Kenya and many other countries, particularly in sub-Saharan Africa. However, there are some countries that have made significant progress in improving maternal health services utilization, which can be attributed to factors such as investments in healthcare infrastructure and improving access to financial resources. Addressing cultural and socio-economic barriers to maternal health services utilization is crucial in improving maternal health outcomes and reducing maternal mortality.

2.3 Socio-demographic factors

2.3.1 Age

Age is a crucial factor that affects the utilization of maternal health services. Younger women may face barriers to accessing maternal health services due to social norms and limited decision-making power. Young pregnant women may be less likely to utilize maternal health services due to various reasons, including lack of knowledge and experience, fear of stigma, and lack of support from family and partners. On the other hand, older women may experience age-related health complications that require specialized care. According to a study by Kiptoo et al. (2021), younger women (below 20 years) were less likely to attend antenatal care (ANC) compared to older women (above 20 years). Similarly, a study conducted in Nigeria found that pregnant women below 20 years were less likely to utilize maternal health services compared to older women (Ezeanolue et al., 2014). Similarly, a study in Ethiopia found that women aged below 25 years were less likely to utilize antenatal care services compared to older women (Tsegay et al., 2013). Therefore, efforts to increase the utilization of maternal health services should target young pregnant women.

2.3.2 Residence area

The place of residence also plays a significant role in the utilization of maternal health services. Pregnant women residing in rural areas may face challenges such as long distances to health facilities, lack of transportation, and inadequate health facilities. A study in Nigeria found that pregnant women living in rural areas were less likely to utilize maternal health services compared to those living in urban areas (Ezeanolue et al., 2014). Similarly, a study in Ethiopia found that women living in rural areas were less likely to utilize antenatal care services

compared to those living in urban areas (Tsegay et al., 2013). Therefore, interventions to increase the utilization of maternal health services should target pregnant women residing in rural areas.

2.3.3 Religion

Religious beliefs and practices can also influence the utilization of maternal health services. Some religious beliefs may discourage the use of modern health services, including maternal health services. A study conducted in Nigeria found that pregnant women who practiced Islam were less likely to utilize maternal health services compared to those who practiced Christianity (Ezeanolue et al., 2014). Similarly, a study in Ethiopia found that Muslim women were less likely to utilize antenatal care services compared to Orthodox Christian women (Tsegay et al., 2013). Therefore, interventions to increase the utilization of maternal health services should be sensitive to religious beliefs and practices.

2.3.4 Marital status

Marital status can also influence the utilization of maternal health services. Married pregnant women may have better social and economic support compared to unmarried women, which can facilitate the utilization of maternal health services. A study in Nigeria found that married pregnant women were more likely to utilize maternal health services compared to unmarried women (Ezeanolue et al., 2014). Similarly, a study in Ethiopia found that married women were more likely to utilize antenatal care services compared to unmarried women (Tsegay et al., 2013). Therefore, interventions to increase the utilization of maternal health services should target unmarried pregnant women.

2.3.5 Level of education

The level of education is a significant determinant of maternal health service utilization. Women with higher levels of education are more likely to utilize maternal health services compared to those with lower levels of education. A study in Nigeria found that pregnant women with secondary or higher education were more likely to utilize maternal health services compared to those with primary education or less (Ezeanolue et al., 2014). Similarly, a study in Ethiopia found that women with secondary or higher education were more likely to utilize antenatal care services compared to those with primary education or less (Tsegay et al., 2013). Therefore, interventions to increase the utilization of maternal health services should target pregnant women with low levels of education.

2.3.6 Parity

The number of pregnancies a woman has had, also known as parity, can affect the utilization of maternal health services. Women with higher parity may be less likely to utilize maternal health services due to previous positive pregnancy experiences, lack of perceived need for the services, and competing responsibilities such as childcare. A study in Nigeria found that women with two or more previous pregnancies were less likely to utilize maternal health services compared to those with one previous pregnancy (Ezeanolue et al., 2014). Similarly, a study in Ethiopia found that women with four or more previous pregnancies were less likely to utilize antenatal care services compared to those with three or fewer previous pregnancies (Tsegay et al., 2013). Therefore, interventions to increase the utilization of maternal health services should target pregnant women with higher parity.

2.3.7 Employment status

Employment status can also influence the utilization of maternal health services. Employed pregnant women may have limited time to utilize maternal health services due to work-related obligations. A study in Nigeria found that employed pregnant women were less likely to utilize maternal health services compared to unemployed women (Ezeanolue et al., 2014). Similarly, a study in Ethiopia found that employed women were less likely to utilize antenatal care services compared to unemployed women (Tsegay et al., 2013). Therefore, interventions to increase the utilization of maternal health services should target employed pregnant women.

2.3.8 Household Monthly Income

Household monthly income is one of the factors that hinder the utilization of maternal health services among pregnant women in Kenya. According to a study by Kwambai et al. (2019), women from low-income households are less likely to use maternal health services compared to women from high-income households. The study found that women from households with a monthly income of less than 5000 Kenyan Shillings were more likely to have a home birth and less likely to attend antenatal care visits compared to women from households with a monthly income of more than 5000 Kenyan Shillings.

The low household monthly income affects the ability of pregnant women to pay for transportation, medical fees, and other related costs associated with maternal health services. In Kenya, many women are not covered by health insurance, and as a result, they have to pay for

these services out of their pockets. This can be a challenge for women from low-income households who may not have the financial resources to access these services.

Moreover, women from low-income households may not have the resources to make essential purchases such as maternity clothes, vitamins, and other supplements that can help ensure a healthy pregnancy. They may also lack the resources to pay for alternative sources of care, such as private clinics, which may be more expensive than public health facilities.

To address the issue of low utilization of maternal health services among women from low-income households, interventions such as health insurance schemes, fee waivers, and subsidies have been implemented in Kenya. These interventions aim to reduce the financial burden of accessing maternal health services and increase the utilization of these services among pregnant women from low-income households.

2.4 Cultural Factors

2.4.1 Cultural beliefs and practices

Cultural beliefs and practices influence the attitudes and behaviors of pregnant women towards maternal health services. For instance, some cultural beliefs discourage pregnant women from seeking antenatal care, delivery, and postnatal care services. According to a study conducted in Nigeria, some women believed that seeking antenatal care services may lead to a prolonged labor or loss of pregnancy (Okonofua, Ogu, & Fabamwo, 2013). Additionally, cultural practices such as female genital mutilation may increase the risk of maternal mortality and morbidity by causing complications during delivery (Dell, Lyons, & Grenfell, 2018). Such

cultural beliefs and practices discourage pregnant women from utilizing maternal health services, thereby increasing their risk of adverse pregnancy outcomes.

Cultural beliefs and practices were reported to influence ANC uptake in 22 and 6 studies, respectively. Culture was found to shape a woman's beliefs about ANC and pregnancy, as well as her autonomy to make healthcare decisions. For example, some women believed that their baby would be in danger or that enemies would be witch them and cause them to miscarry if the pregnancy was disclosed too early, which resulted in late initiation of ANC. Furthermore, in some traditions it is customary for a woman's mother-in-law to decide whether or not she can receive care, which can further decrease ANC utilization. Women's health beliefs, specifically those who believed that ANC was beneficial, were more likely to use maternal health services compared to those who believed ANC was only for curative purposes. Additionally, many women believed that pregnancy is a natural process and care should only be sought if one becomes ill or develops complication. Therefore, the type of health belief that a woman held regarding the utility of ANC played a role in whether or not they utilized it.

2.4.2 Cultural Norms and Values

Cultural norms and values shape the expectations and behaviors of pregnant women towards maternal health services. For example, some cultures prioritize the birth of a male child, and women who give birth to female children may face stigma and discrimination. In a study conducted in India, it was found that the preference for a male child was a significant barrier to the utilization of maternal health services (Kumar, Dansereau, & Murray, 2014). Additionally, cultural norms such as early marriage may prevent adolescent girls from seeking maternal health services due to their limited decision-making power.

2.4.3 Gender dynamics

Gender dynamics, including autonomy, are also significant cultural factors that impact maternal health service utilization. Women's autonomy, defined as the ability to make decisions regarding their healthcare and that of their children, is often limited in patriarchal societies. Women's lack of autonomy, coupled with gender-based violence, can discourage them from seeking maternal health services. According to a study conducted in Pakistan, women who experienced physical or sexual violence were less likely to seek antenatal care services (Ali et al., 2017). Moreover, women's autonomy may be further limited by cultural beliefs that prioritize men's decision-making power in matters of health and reproduction.

Gender dynamics, which for the purposes of this study includes autonomy, decision-making abilities, and intimate partner violence, was found to impact ANC use in 26 studies. Women with higher autonomy, specifically financial autonomy, and increased decision-making abilities had greater uptake of ANC. Receiving permission from the husband was cited as an additional barrier to accessing ANC in numerous studies. Furthermore, women who did not experience intimate partner violence and who did not believe that wife-beating was acceptable were more likely to use ANC and meet the recommendation of four ANC visits.

2.5 Accessibility of maternal health services

Accessibility refers to the ease and convenience with which people can access healthcare services. The lack of accessibility is a major factor that hinders the utilization of maternal health services among pregnant women in many countries, including developing nations. Distance to healthcare facility, availability of maternal services, and infrastructure and resources availability

are key accessibility-related factors that hinder the utilization of maternal health services among pregnant women. The following are the accessibility-related factors that affect the utilization of maternal health services among pregnant women;

2.5.1 Distance to healthcare facility

One of the major factors hindering the utilization of maternal health services among pregnant women is the distance to healthcare facilities. Women who live far away from healthcare facilities may face difficulties in accessing maternal health services, including antenatal care, delivery services, and postnatal care. Studies have shown that distance to healthcare facilities is a significant predictor of poor maternal health outcomes, including maternal mortality. Distance to the nearest ANC facility was the fourth most commonly cited reason for late or insufficient ANC uptake in 47 studies. Women who lived closer to healthcare facilities or perceived the nearest healthcare facility as close to them, had higher levels of ANC usage. Unsurprisingly, those who lived further away from the nearest health facility were less likely to receive four ANC visits, initiate ANC early in their pregnancy, and use ANC overall. Transportation was found to be a barrier of ANC uptake in 14 studies included. Telfer et al. found unavailability of transportation to be one of the most important barriers preventing women from accessing ANC. Pregnant women also cited having to walk to the ANC facility and having inadequate modes of transportation (i.e., rickshaws, bicycles, motorbikes) as key barriers to accessing care. The high cost of transportation was also associated with fewer ANC visits and an overall lack of ANC utilization.

According to a study by Ameyaw et al. (2020), distance to healthcare facilities was identified as a significant barrier to the utilization of maternal health services in rural Ghana.

Similarly, a study by Ochako et al. (2015) found that distance to healthcare facilities was a major barrier to the utilization of maternal health services in Kenya. According to a study by Gabrysch and Campbell (2009), distance to health facilities was a significant factor affecting maternal health service utilization in sub-Saharan Africa. The study found that women who lived more than 5 km away from the nearest health facility were less likely to utilize maternal health services. The study recommended the need for the provision of mobile clinics, community-based health services, and transport vouchers to address the issue of distance-related barriers to maternal health service utilization.

2.5.2 The availability of maternal services

The availability of services such as antenatal care, skilled birth attendance, emergency obstetric care, and postnatal care is crucial for ensuring good maternal health outcomes. Research has found that the availability of maternal health services is a significant predictor of maternal healthcare utilization. A study conducted in India by Singh et al. (2017) found that the availability of maternal health services was a significant predictor of maternal healthcare utilization. Similarly, a study conducted in Ethiopia by Teferra et al. (2018) found that the availability of maternal health services was a key determinant of the utilization of maternal health services.

In many low- and middle-income countries, including sub-Saharan Africa, maternal health services are often inadequate, with a shortage of skilled healthcare workers, essential medicines, and medical equipment. This often results in long waiting times, poor quality of care, and a lack of confidence in health services among pregnant women.

A study by Mselle et al. (2013) in Tanzania found that the availability of maternal health services was a significant factor influencing the utilization of these services. The study found that women who perceived the quality of maternal health services to be poor were less likely to utilize these services. The study recommended the need for improving the availability and quality of maternal health services through the provision of essential medicines, medical equipment, and skilled healthcare workers.

2.5.3 The availability of infrastructure and resources

The availability of infrastructure and resources, including medical equipment, medicines, and skilled healthcare workers, is crucial for ensuring the provision of quality maternal health services. The lack of infrastructure and resources can hinder the utilization of maternal health services among pregnant women. In many low- and middle-income countries, healthcare facilities lack basic infrastructure and resources, including electricity, water, and sanitation facilities. This often results in poor hygiene and infection control, leading to adverse maternal and neonatal health outcomes.

Research has shown that the lack of infrastructure and resources is a significant barrier to the utilization of maternal health services. A study conducted in India by Singh et al. (2017) found that the lack of infrastructure and resources, including medical equipment and skilled healthcare workers, was identified as a significant barrier to the utilization of maternal health services. Similarly, a study conducted in Tanzania by Gabrysch et al. (2011) found that the lack of infrastructure and resources, including basic medical equipment and medicines, was a major barrier to the utilization of maternal health services

A study by Warren et al. (2014) in Uganda found that the availability of infrastructure and resources was a significant factor influencing the utilization of maternal health services. The study found that pregnant women who attended facilities with inadequate infrastructure and resources were less likely to utilize maternal health services. The study recommended the need for improving the availability of basic infrastructure and resources in healthcare facilities, including water, sanitation facilities, and electricity.

2.6 Conceptual Framework

An independent variable is a variable that is manipulated or controlled by the researcher in an experiment to observe its effect on the dependent variable. It is the variable that is changed or manipulated in order to study its impact on the dependent variable (McLeod, 2018). For this study they include; Socio-demographic factors, Accessibility related factors and cultural factors. In contrast, A dependent variable is a variable that is being measured or observed in an experiment and is affected by the independent variable. It is the variable that is influenced by the independent variable, and the changes in the dependent variable are observed and measured to evaluate the impact of the independent variable. For this study, include level of utilization of maternal health services by pregnant women.

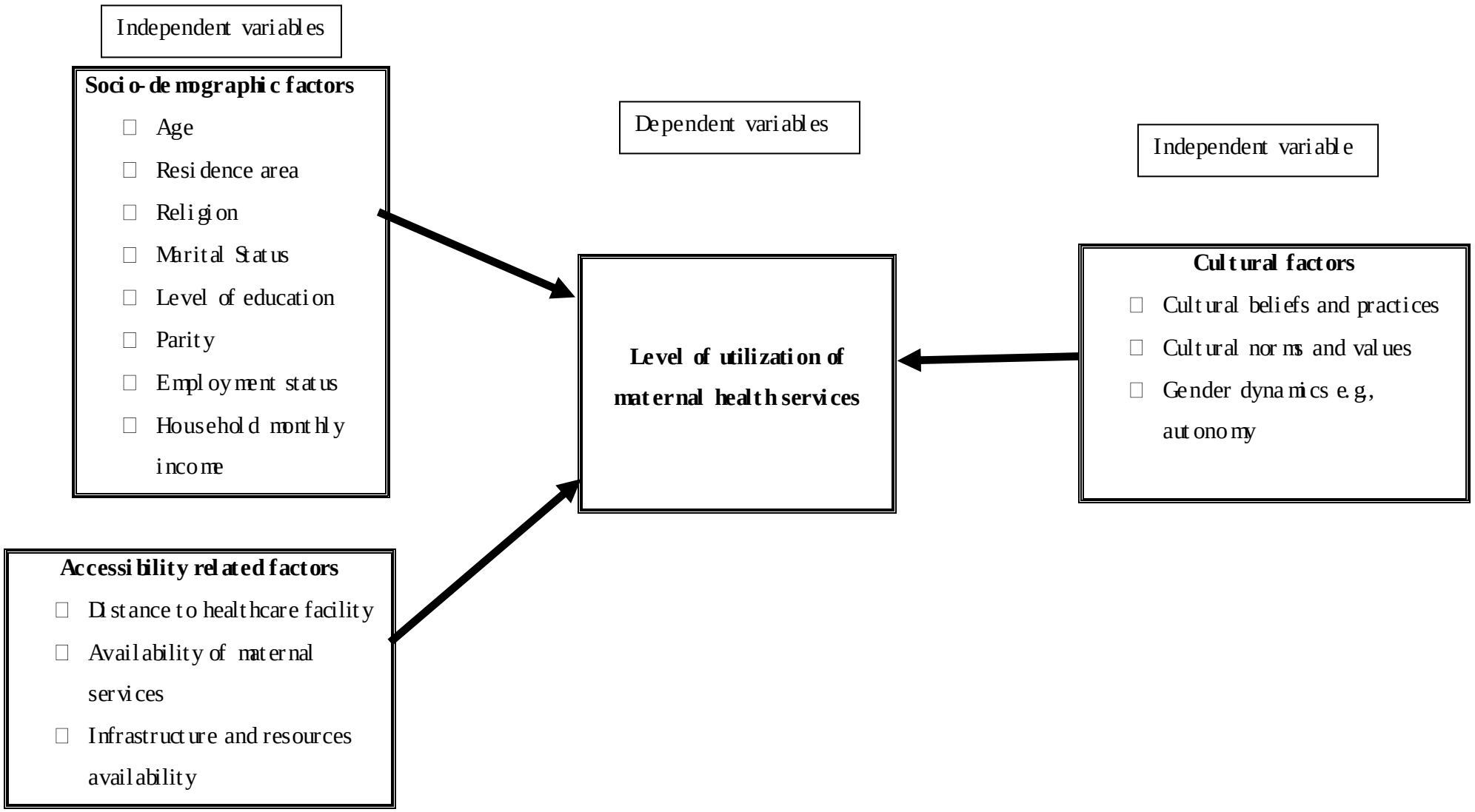

Figure 1: Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the researchers bring out the process by which the research will be conducted to ensure that it follows the required standards. The chapter discusses the design of the study, the location, and study population, sampling procedures, data collection instruments, data collection procedures, data analysis and presentation as well as the ethical issues in research.

3.2 Research Design

This research employed a cross-sectional design to determine the factors influencing utilization of maternal health services among pregnant women in Kapkatet sub-county hospital using pregnant women as a case study. In this research design, the researches characterize the prevalence of a health outcome in a specified population within a specific point in time.

3.3 Location of Study

The study was conducted in Kapkatet sub-county hospital, in Kericho County, Kenya. This study location served as a general representative of the health facilities in Kenya and it is ideal as a source for the target audience, which are pregnant women in the society. Kapkatet sub-county hospital is a government accredited public hospital in Bureti sub-county, Kericho County, Kenya.

3.4 Target Population

The study included all pregnant women between the ages of 15-49 years visiting Kapkatet sub-county hospital. The hospital approximately attends to 500 pregnant mothers per month. However, the study only focused on those pregnant women on ANC clinic and maternity

in order to represent the target population of pregnant women at various health facilities in Kenya.

3.4.1 Inclusion Criteria

The following inclusion criteria was considered when recruiting study participants;

1. An individual must be pregnant mothers visiting the antenatal clinic, maternity and those in postnatal ward.
2. Pregnant mother must be at least 18 years and above.
3. Must give informed consent; willing to participate.

3.4.2 Exclusion Criteria

The study excluded the following population:

1. Pregnant mothers with psychosis.
2. Pregnant women who are sick and unable to provide the required information.
3. Pregnant women who are unwilling to take part in research.

3.5 Sample Determination

For minimum sample size determination, Fisher's formula was used. Since the level of utilization in Kapkatet is unknown, the study used a proportion of 0.5 (50%). It also used 95% confidence level and a 5% margin of error.

Where;

n = desired sample size (if the target population is greater than 10,000).

z = the standard normal deviate at the required confidence level (1.96).

p = the proportion in the target population estimated to have characteristics being measured;

q = 1-p.

d = the level of statistical significance set; 0.05

Therefore;

= 384

Since the entire population (N) was less than 10,000, the required sample size was smaller. Hence the final sample estimate (nf) was adjusted by use the following formula:

Where;

nf =the desired sample size (if the target population is less than 10,000)

n=the desired sample size (when the target population is more than 10,000)

N=the estimate of the population size = 150

nf = 108

10% of the desired sample size (nf) was added to the study population to account for potential dropouts or non-response rates. Therefore, 11 participants will be added, thus the total **final sample size used will be 119.**

3.6 Data Collection Instruments

Structured questionnaires were adopted to collect data and shall be administered to Kapkatet sub-county hospital pregnant women. They were administered all physically. They **included both open ended and close ended questions.**

Structured questionnaires were effective for this study because they are convenient to a relatively higher population of pregnant women and will allow the researchers easy time in data collection, allow for faster analysis of data and most importantly, provide confidentiality for the subjects. Moreover, questionnaires are easily available, cheap and time saving in information gathering from a large population.

3.7 Data Collection Procedures

Structured questionnaires were formulated and administered in physically. The researchers liaised with the health care providers in the facility to ensure that the forms are filled. The questionnaires were also printed and administered manually to pregnant women. Pregnant women were required to fill the questionnaires once they are administered.

3.8 Data Analysis and Presentation

The process of data analysis process involved redefinition of the objectives, gathering and collecting the data, organizing and connecting, coding the data, analyzing for insights and reporting or deploying the insights. Statistical Package for Social Sciences (SPSS) version 20.0

was used for data analysis. Descriptive statistics were summarized using frequencies and percentages. Chi-square test was used to determine the association between the study variables.

3.9 Ethical Issues

To ensure that this research project adheres to the universal ethical standards of research, the researchers:

a) Sought for approval and permission from the research review and ethics committee (IREC) of the University of Kabianga, approval number ISERC/2023/0012.
b) Ensured that the questionnaires and procedures of the study were reviewed by the research supervisor.
c) Sought for administrative permission to carry out the research from the hospital.
d) Consent was obtained from the respondents before carrying out the research to ensure they are ready to participate in the study.
e) The data collection procedure adhered to ethical guidelines to ensure autonomy and personal records of the respondents were kept confidential. Researchers on the topic were the only eligible persons to access the collected information and immediately after data analysis the filled hard copy questionnaires were burnt.

CHAPTER FOUR: FINDINGS

The response rate was 92.4% those who completely filled the questionnaires, while the rest, 7.6% incompletely filled the questionnaires.

Table 1: Socio-demographic characteristics of pregnant women

Variables	Frequency (n = 110)	Percentage
Age (Years)		
18-24	18	16.4
25-29	30	27.3
30-34	36	32.7
35-39	22	20.0
40 and above	4	3.6
Religion		
Christian	106	96.4
Muslim	4	3.6
Marital Status		
Single	22	20.0
Married	73	66.4
Separated/Divorced	12	10.9
Widowed	3	2.7
Educational attainment		
No formal education	34	30.9
Primary education	57	51.8
Secondary education	16	14.6
Tertiary education	3	2.7
Employment Status		
Unemployed	52	47.2
Employed	18	16.4
Self-employed	18	16.4

Student	22	20.0
Household monthly income		
Below Ksh. 5,000	46	41.8
Ksh. 5,001-10,000	40	36.4
Ksh. 10,001-15,000	14	12.7
Above Ksh. 15,000	10	9.1

In terms of age, the majority of the respondents were in the 25-34 age range, with the highest percentage (32.7%) falling in the 30-34 age group. Regarding religion, the majority of the respondents identified as Christians (96.4%), while a small percentage identified as Muslims (3.6%). Marital status varied among the respondents, with the highest percentage (66.4%) being married. Single women constituted 20% of the respondents, while separated/divorced and widowed women made up 10.9% and 2.7% of the respondents, respectively. Educational attainment varied as well, with the highest percentage (51.8%) having primary education. Respondents with no formal education accounted for 30.9%, while those with secondary and tertiary education made up 14.6% and 2.7% of the respondents, respectively. In terms of employment status, the highest percentage (47.2%) of the respondents were unemployed. Employed and self-employed respondents accounted for 16.4% each, while students constituted 20% of the respondents. In terms of household monthly income, the majority of the respondents (41.8%) had a monthly income below Ksh. 5,000. Respondents with monthly incomes between Ksh. 5,001-10,000 accounted for 36.4%, while those with incomes between Ksh. 10,001-15,000 and above Ksh. 15,000 made up 12.7% and 9.1% of the respondents, respectively.

Table 2: Association between socio-demographic factors and pregnant mothers to Antenatal Clinic

Variable	Whether or not attended antenatal clinic in the last pregnancy		Total
	Yes (%)	No (%)	
Age (Years)			
18-24	18 (100)	0 (0)	18 (100)
25-29	30 (100)	0 (0)	30 (100)
30-34	35 (97.2)	1 (2.8)	36 (100)
35-39	20 (90.9)	2 (9.1)	22 (100)
40 and above	3 (75)	1 (25)	4 (100)
Marital Status			
Single	21 (95.5)	1 (4.5)	22 (100)
Married	71 (97.3)	2 (2.7)	73 (100)
Separated/Divorced	12 (100.0)	0 (0)	12 (100)
Widowed	2 (66.7)	1 (33.3)	3 (100)
Educational attainment			
No formal education	31 (91.2)	3 (8.8)	34 (100)
Primary education	56 (98.2)	1 (1.8)	57 (100)
Secondary education	16 (100)	0 (0)	16 (100)
Tertiary education	3 (100)	0 (0)	3 (100)
Employment Status			
Unemployed	48 (92.3)	4 (7.7)	52 (100)
Employed	18 (100)	0 (0)	18 (100)
Self-employed	18 (100)	0 (0)	18 (100)
Student	22 (100)	0 (0)	22 (100)

Household monthly income			
Below Ksh. 5, 000	42 (91.3)	4 (8.7)	46 (100)
Ksh. 5, 001-10, 000	40 (100)	0 (0)	40 (100)
Ksh. 10, 001-15, 000	14 (100)	0 (0)	14 (100)
Above Ksh. 15, 000	10 (100)	0 (0)	10 (100)
Total	**106 (96.4)**	**4 (3.6)**	**110 (100)**

The majority of pregnant women in all age groups attended antenatal clinics, with attendance rates ranging from 75% to 100%. Marital status also showed a high attendance rate, with married women having the highest attendance (97.3%). Educational attainment had a strong association with attending antenatal clinics, as 91.2% of those with no formal education attended, compared to 98.2% of those with primary education and 100% of those with secondary and tertiary education. Employment status and household monthly income also showed high attendance rates, with rates ranging from 92.3% to 100%.

Place of delivery

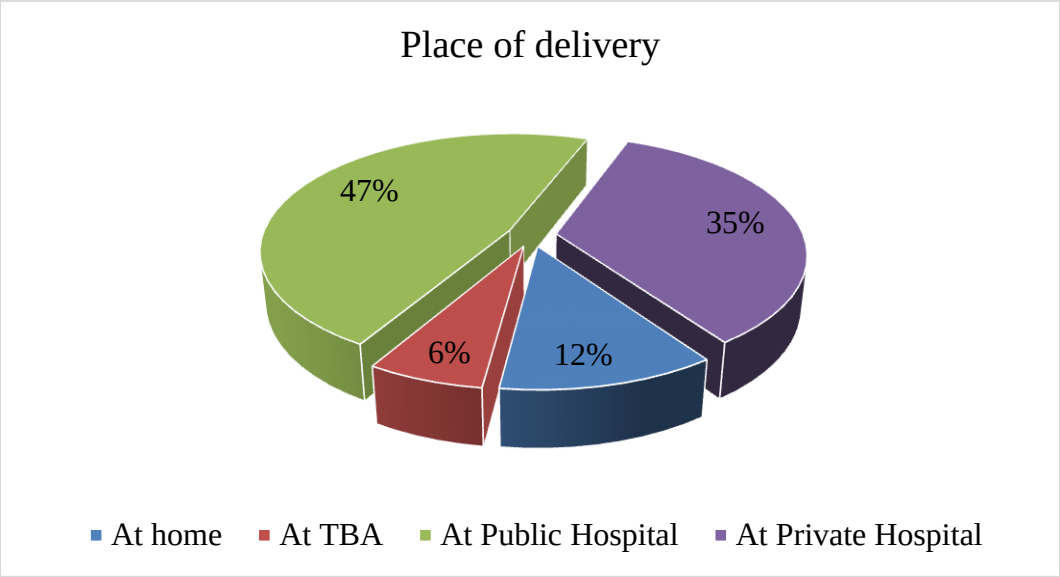

Figure 2: Delivery place of mothers in their last delivery

Majority of the respondents, 47%, delivered at public hospital in their last delivery, followed by 35% who delivered at private hospital, 12% delivered at home while the least delivered Traditional birth assistant/attendant.

Accessibility Factors of maternal health services

Table 3: Chi-Square analysis on accessibility factors influencing maternal health services

Variable	Frequency (n=110)	Percentage	p-value
Distance from health facility			**0.021**
Less than 1 Km	38	34.5	
1-2 Kms	38	34.5	
3-4 Kms	32	29.1	
Over 4 Kms	2	1.8	
Time to reach the nearest health facility			**0.002**
Less than 1 hour	52	47.3	
1-2 hours	28	25.5	
3-4 hours	27	24.5	
Over 4 hours	3	2.7	
Pricing of antenatal services			0.063
Yes	98	89.1	
No	12	10.9	

In terms of distance from the health facility, the majority of respondents (34.5%) reported a distance of 1-2 kilometers, followed by an equal percentage reporting a distance of less than 1 kilometer. This indicates relatively good proximity to health facilities for a significant portion of the respondents. However, a notable proportion (29.1%) reported a distance of 3-4 kilometers,

which may pose a barrier to accessing maternal health services. A small percentage (1.8%) reported a distance of over 4 kilometers, which could significantly limit accessibility. The p-value of 0.021 suggests that there is a statistically significant association between the distance from the health facility and the utilization of maternal health services. Regarding the time required to reach the nearest health facility, the majority of respondents (47.3%) reported a travel time of less than 1 hour. However, a considerable proportion (25.5%) reported a travel time of 1-2 hours, and an additional 24.5% reported a travel time of 3-4 hours. These findings indicate that a significant number of pregnant women may face challenges in accessing maternal health services due to long travel times. The p-value of 0.002 suggests a statistically significant association between the time to reach the nearest health facility and the utilization of maternal health services. Regarding the pricing of antenatal services, the majority of respondents (89.1%) reported that they had to pay for these services, while a small percentage (10.9%) reported not having to pay. Although the p-value of 0.063 suggests a weak association between the pricing of antenatal services and their utilization, the findings still highlight that financial considerations may be a potential barrier to accessing maternal health services for some pregnant women.

Table 4: Frequency of visiting antenatal clinic in the last pregnancy

Antenatal clinic visits in the last pregnancy	**Frequency (n = 110)**	**Percentage**
Never	7	6.9
Once	12	10.9
Twice	18	16.4
Thrice	16	14.5
Four times	47	42.7
Over four times	10	9.1

Majority of the respondents, 42.7%, reported to have has at least visited antenatal clinic in their last pregnancy four times, followed by those who visited twice (16.4%), thrice (14.5%), once (10.9%), over four times (9.1%) while the least were those who had never visited, 6.9%).

Cultural Factors

Table 5: Cultural factors that influence maternal care services

Variable	Frequency	Percentage
Cultural Beliefs and Practices		
Belief in traditional medicine	78	70.9
Religious beliefs affecting healthcare choices	56	50.9
Cultural practices around childbirth and postpartum care	61	55.5
Cultural taboos related to discussing reproductive health	102	92.7
Perception of childbirth as a natural process	49	44.5
Cultural Norms and Values		
Gender roles and expectations	43	39.1
Importance of family decision-making	38	34.5
Stigma surrounding seeking outside help for maternal health	62	56.4
Respect for authority figures (e.g., traditional healers, community leaders)	79	71.8
Collective decision-making within the community	23	20.9

The findings indicate that cultural beliefs and practices play a significant role in hindering the utilization of maternal health services among pregnant women. Majority of the respondents, 92.7%, believed that cultural taboos related to discussing reproductive health influence utilization of maternal health services, 70.9% believe that the cultural belief in traditional medicine over modern medical interventions, 55.5% believed cultural practices

around childbirth and postpartum care, 50.9% believed religious beliefs affecting healthcare choices while 44.5% indicate that religious beliefs that childbirth as a natural process may influence decisions regarding maternal health practices and services.

In terms of cultural norms and values, the findings reveal that gender roles and expectations were perceived as a hindrance by 39.1% of the participants. This suggests that traditional gender roles may limit women's autonomy and decision-making power regarding their maternal health. Moreover, the importance of family decision-making was reported as a barrier by 34.5% of the respondents, indicating that decisions regarding maternal health may be influenced by other family members, potentially leading to delays or avoidance of necessary care. Additionally, the stigma surrounding seeking outside help for maternal health was reported by 56.4% of the participants, which implies that seeking professional healthcare for maternal needs may be viewed negatively within the community. Finally, the respect for authority figures, such as traditional healers and community leaders, was perceived as a hindrance by 71.8% of the respondents. This suggests that the influence and advice of these authority figures may deter pregnant women from accessing formal maternal health services.

CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1. DISCUSSION

The finding that the majority of pregnant women in all age groups attended antenatal clinics is encouraging and aligns with the recommended guidelines for prenatal care. Regular attendance at antenatal clinics is crucial for monitoring the health of both the mother and the fetus, detecting any potential complications early on, and receiving appropriate guidance and support throughout pregnancy (WHO, 2016). High attendance rates across age groups suggest a positive trend in maternal healthcare utilization. The high attendance rate among married women is consistent with previous research indicating that marital status plays a significant role in antenatal care utilization. Married women often have better access to support networks, including their partners and extended families, which can positively influence their decision to seek antenatal care (Tilahun et al., 2018). Additionally, being in a committed relationship may provide emotional and financial stability, enabling better access to healthcare services.

Educational attainment has consistently been identified as a strong predictor of maternal healthcare utilization. The finding that women with higher levels of education had higher attendance rates at antenatal clinics is in line with existing literature. Education empowers women by increasing their knowledge and awareness about the importance of antenatal care, their rights, and the benefits of seeking healthcare services during pregnancy (Ganle et al., 2015). Higher education levels are often associated with better health-seeking behaviors and improved health literacy, which can positively influence the utilization of maternal health services. The high attendance rates among different employment and income groups suggest that employment status and household income are not major barriers to accessing antenatal care in the studied population. However, it is important to note that financial barriers can still exist, particularly in

low-income settings where out-of-pocket expenses, transportation costs, and indirect costs can deter women from seeking antenatal care (Goudge et al., 2017). The specific context and availability of social safety nets or health insurance schemes could play a role in the observed high attendance rates among different employment and income groups.

The distribution of delivery locations among the respondents provides valuable insights into their choices and preferences for childbirth settings. The majority of respondents, accounting for 47%, opted to deliver at public hospitals. This finding suggests a significant reliance on the public healthcare system for childbirth services. Public hospitals often provide essential obstetric care, skilled birth attendance, and emergency obstetric services, making them a popular choice for many women, particularly those seeking accessible and affordable care (Tunçalp et al., 2016). The second most common delivery location reported by the respondents was private hospitals, with 35% choosing this option. Private hospitals are often associated with a perception of higher quality of care and enhanced amenities compared to public facilities. Some women may choose private hospitals due to perceived advantages such as shorter waiting times, personalized care, and a more comfortable and private birthing environment (Adegoke et al., 2016). However, it is essential to note that private healthcare services may come with higher costs, limiting accessibility for women with limited financial resources.

The finding that 12% of the respondents delivered at home highlights the continued practice of home births. Home births may be chosen for various reasons, including cultural or personal preferences, familiarity with the home environment, and a desire for a more natural and less medicalized birth experience (Homer et al., 2017). It is important to ensure that women who opt for home births have access to skilled birth attendants and emergency obstetric care in case complications arise. The least common delivery location reported by the respondents was

Traditional Birth Attendant (TBA). This finding aligns with the global trend of a declining reliance on TBAs for childbirth. TBAs often lack formal medical training and may not have the necessary skills and equipment to manage complications during childbirth. Efforts to promote skilled birth attendance and improve access to skilled healthcare providers have contributed to the decrease in TBA-assisted deliveries, as it is recognized that skilled birth attendants, such as midwives and doctors, can significantly reduce maternal and neonatal mortality (World Bank, 2015).

The findings related to distance from health facilities indicate both positive and potential challenges in accessing maternal health services. The majority of respondents reporting a distance of 1-2 kilometers and less than 1 kilometer suggest that a significant portion of the population has relatively good proximity to health facilities. This can facilitate timely access to antenatal care and other maternal health services, which is crucial for ensuring positive maternal and neonatal outcomes (Kyei et al., 2017).

However, the proportion of respondents reporting a distance of 3-4 kilometers raises concerns about the accessibility of healthcare services. Long distances can pose logistical challenges, especially for pregnant women who may face difficulties in traveling due to physical discomfort or lack of transportation options. Moreover, the small percentage of respondents reporting a distance of over 4 kilometers indicates that a subset of pregnant women may face significant barriers in accessing maternal health services, including antenatal care, which is important for early detection and management of pregnancy-related complications (Magadi et al., 2017).

Similarly, the findings related to travel time highlight potential challenges in accessing maternal health services. Although the majority of respondents reported a travel time of less than 1 hour, a considerable proportion reported longer travel times of 1-2 hours and 3-4 hours. Prolonged travel times can contribute to delays in seeking care and may discourage pregnant women from accessing services regularly (Cham et al., 2017). This can have negative implications for maternal and neonatal health outcomes. The findings related to the pricing of antenatal services indicate that the majority of respondents had to pay for these services. Financial considerations can act as a barrier to accessing maternal health services, particularly for women from lower socioeconomic backgrounds (Izugbara et al., 2016). High out-of-pocket expenses, combined with limited financial resources, may deter pregnant women from seeking antenatal care and other essential services.

Cultural taboos surrounding reproductive health, as perceived by the majority of respondents, can create barriers to open discussions about maternal health, potentially leading to limited awareness and understanding of available services and interventions. Similarly, the belief in traditional medicine over modern medical interventions indicates a preference for traditional practices, which may hinder access to evidence-based maternal healthcare (Ganle et al., 2016). Cultural practices related to childbirth and postpartum care, as well as religious beliefs affecting healthcare choices, were also identified as factors influencing the utilization of maternal health services. These cultural and religious beliefs may shape women's decisions and influence their choices regarding maternal health practices and service utilization. For example, perceiving childbirth as a natural process, as indicated by a significant proportion of respondents, may lead to a preference for home births or reliance on traditional birth attendants, potentially neglecting the need for skilled medical care during childbirth (Gebrehiwot et al., 2018).

In addition to cultural beliefs, the findings highlight the influence of cultural norms and values on maternal healthcare utilization. Gender roles and expectations, which were perceived as a hindrance by a substantial proportion of respondents, can limit women's autonomy and decision-making power in seeking and accessing maternal health services. The importance of family decision-making and the influence of other family members further underscore the complex dynamics that affect women's choices and actions regarding their maternal health (Moyer et al., 2016). The presence of stigma surrounding seeking outside help for maternal health indicates that community attitudes and perceptions can impact women's willingness to access formal healthcare services. Fear of judgment and social repercussions may discourage pregnant women from seeking professional care, leading to delays in receiving necessary interventions and increasing the risk of maternal and neonatal complications (Mumtaz et al., 2015). Finally, the respect for authority figures, such as traditional healers and community leaders, can shape healthcare-seeking behaviors. The perception that these figures hold influence and authority may deter pregnant women from seeking formal healthcare services, as they may defer to the advice and recommendations of these individuals instead (Moyer et al., 2016).

5.2 CONCLUSION

The findings of this study shed light on various factors influencing the utilization of maternal health services among pregnant women. Overall, the majority of pregnant women attended antenatal clinics, indicating a positive trend in maternal healthcare utilization. Marital status, educational attainment, employment status, and household income showed high attendance rates, suggesting that these factors may not be significant barriers to accessing antenatal care in the studied population. However, challenges in accessing maternal health services were identified, particularly in terms of distance and travel time to health facilities. A

notable proportion of respondents reported longer distances and travel times, which may pose barriers to timely access and utilization of maternal health services. Efforts to improve transportation infrastructure and ensure the availability of healthcare services in closer proximity to communities can help overcome these challenges.

Financial considerations also emerged as a potential barrier, with the majority of respondents having to pay for antenatal services. While high attendance rates were observed across different employment and income groups, it is important to address financial barriers to ensure equitable access to maternal health services. Implementing social safety nets, health insurance schemes, and other financial support mechanisms can help alleviate the burden of out-of-pocket expenses for pregnant women. Cultural beliefs, practices, and norms were identified as significant influences on maternal healthcare utilization. Cultural taboos, beliefs in traditional medicine, and perceptions of childbirth as a natural process were among the factors affecting women's decisions regarding maternal health practices and service utilization. Gender roles, family decision-making, stigma, and respect for authority figures also played a role in shaping healthcare-seeking behaviors. To address these challenges, culturally sensitive approaches are needed, which promote education, awareness, and community engagement to ensure that cultural beliefs and practices are respected while encouraging evidence-based maternal healthcare.

In conclusion, while the majority of pregnant women in the studied population attended antenatal clinics and delivered in healthcare facilities, there are still important considerations to improve maternal healthcare utilization. Strategies should focus on improving the accessibility of services by addressing distance and transportation challenges, reducing financial barriers, and promoting culturally sensitive approaches that empower women, respect their choices, and

engage communities in supporting maternal health. By addressing these factors, it is possible to enhance maternal healthcare utilization and improve maternal and neonatal health outcomes.

5.3 RECOMMENDATIONS

Based on the findings of this study, the following recommendations can be drawn to improve maternal healthcare utilization:

1. Improve accessibility: Address the challenges related to distance and travel time to health facilities by investing in transportation infrastructure and expanding the availability of healthcare services closer to communities. This can include establishing satellite clinics or mobile health units to ensure that pregnant women have convenient access to maternal health services.

2. Address financial barriers: Develop and implement social safety nets, health insurance schemes, and other financial support mechanisms to alleviate the financial burden associated with maternal healthcare. This can help ensure that all pregnant women, regardless of their socioeconomic status, can afford and access essential antenatal care and childbirth services.

3. Enhance health education and awareness: Develop culturally sensitive health education programs that address the cultural beliefs, taboos, and misconceptions surrounding maternal health. These programs should aim to increase awareness about the benefits of antenatal care, skilled birth attendance, and evidence-based medical interventions during childbirth. Engaging community leaders, traditional healers, and religious institutions can be effective in disseminating accurate information and debunking myths.

4. Strengthen community engagement: Foster community involvement and participation in promoting maternal healthcare utilization. Encourage community support networks, such as women's groups, to raise awareness, provide emotional support, and advocate for maternal health services. Empower women within their communities to make informed decisions about their maternal health and challenge gender norms and expectations that hinder their autonomy.

5. Enhance the role of skilled birth attendants: Strengthen the presence and capacity of skilled birth attendants, such as midwives and doctors, in both public and private healthcare settings. This can be achieved through training programs, recruitment, and deployment strategies that ensure a sufficient number of skilled birth attendants in underserved areas. Promote the importance of skilled birth attendance and the availability of emergency obstetric care to ensure safe deliveries.

6. Foster collaboration between traditional and modern healthcare providers: Encourage collaboration and mutual respect between traditional healers, community leaders, and formal healthcare providers. Facilitate dialogue and cooperation to ensure that traditional practices align with evidence-based maternal healthcare guidelines and do not pose risks to maternal and neonatal health. This can be achieved through capacity-building initiatives, joint workshops, and knowledge-sharing platforms.

Implementing these guidelines can help stakeholders improve maternal healthcare utilization, reduce barriers, and ultimately improve maternal and newborn health outcomes. To ensure equal access to quality maternal healthcare services, a comprehensive approach including

infrastructure development, legislative reforms, community participation, and cultural sensitivity is required.

5.4 LIMITATIONS AND SCOPE OF THE STUDY

The study only based at Kapkatet Hospital (institutional-based study) with only 110 women as respondents, hence might make the study not very generalizable to the community around, particularly those who do not visit or attend Kapkatet Hospital. Further study is recommended another study to be conducted withing the community (community-based study) with large sample. Furthermore, this study faced financial constraints and limited time. However, this study aimed and provides significant insights on factors affecting utilization of the maternal health services by mothers, particularly at Kapkatet Hospital.

REFERENCES

Adegoke, O. O., Fatusi, A. O., & Owolabi, O. A. (2016). Factors associated with choice of delivery location among women in Nigeria: A cross-sectional study. BMC Pregnancy and Childbirth, 16(1), 1-12.

Ali, T. S., Krantz, G., Mogren, I., & Asad, N. (2017). Determinants of antenatal care attendance among women residing in slums of Karachi, Pakistan. BMC pregnancy and childbirth, 17(1), 1-10. https://doi.org/10.1186/s12884-017-1321-7

Ameyaw, E. K., Kofinti, R. E., & Appiah, F. (2020). Women's autonomy in healthcare decision-making in developing countries: A synthesis of the literature. International Journal of Women's Health, 12, 409–427. https://doi.org/10.2147/IJWH.S251739

Amoakoh-Coleman, M., Agyepong, I. A., Zuithoff, N. P., Kayode, G. A., & Grobbee, D. E. (2016). Determinants of skilled birth attendance in rural Northern Ghana. BMC Pregnancy and Childbirth, 16(1), 326. doi: 10.1186/s12884-016-1101-5

Arogundade, O. T., Afolayan, J. A., Omosehin, O. F., & Oluwatosin, A. O. (2021). Utilization of maternal health services among women in Nigeria: A systematic review. Nigerian Journal of Health Sciences, 21(1), 25-34.

Binagwaho, A., Farmer, P. E., Nsanzimana, S., Karema, C., Gasana, M., de Dieu Ngirabega, J., … Kayiteshonga, Y. (2014). Rwanda 20 years on: Investing in life. The Lancet, 384(9940), 371–375. doi: 10.1016/s0140-6736(14)60574-2

Central Statistical Agency [Ethiopia], & ICF International. (2012). Ethiopia demographic and health survey 2011. Addis Ababa, Ethiopia, and Calverton, Maryland, USA: Central Statistical Agency and ICF International.

Cham, M., Afeworki, M., & Teklu, A. E. (2017). Factors associated with late initiation of antenatal care in Ethiopia: A cross-sectional study. BMC Pregnancy and Childbirth, 17(1), 1-10.

Dell, E., Lyons, S., & Grenfell, P. (2018). Female genital mutilation/cutting and obstetric outcomes: A systematic review and meta-analysis. BMJ Global Health, 3(5), e000775. https://doi.org/10.1136/bmjgh-2018-000775

Ezeanolue, E. E., Obiefune, M. C., Ezeanolue, C. O., Ehiri, J. E., Osuji, A., Ogidi, A. G., ... & Patel, D. (2014). Effect of a congregation-based intervention on uptake of HIV testing and linkage to care in pregnant women in Nigeria (Baby Shower): a cluster randomised trial. The Lancet Global Health, 2(5), e267-e273. https://doi.org/10.1016/S2214-109X(14)70035-4

Gabrysch, S., & Campbell, O. M. (2009). Still too far to walk: Literature review of the determinants of delivery service use. BMC Pregnancy and Childbirth, 9(1), 34. https://doi.org/10.1186/1471-2393-9-34

Gabrysch, S., Cousens, S., Cox, J., Campbell, O. M. R., & The WHO Multicountry Survey on Maternal and Newborn Health Research Network. (2011). The influence of distance and level of care on delivery place in rural Zambia: A study of linked national data in a geographic information system. PLoS Medicine, 8(1), e1000394. https://doi.org/10.1371/journal.pmed.1000394

Ganle, E. A., Awadzi, K. K., Ankrah, E. A., & Adom-Agyei, E. (2015). Factors associated with antenatal care utilization among women in Ghana: A systematic review. BMC Pregnancy and Childbirth, 15(1), 1-14.

Ganle, E. A., Yidana, S., Ankrah, E. A., & Adom-Agyei, E. (2016). Factors associated with utilization of traditional medicine during pregnancy in Ghana: A cross-sectional study. BMC Pregnancy and Childbirth, 16(1), 1-9.

Gebrehiwot, T., Abebe, Y., Moges, T., & Worku, A. (2018). Factors associated with home delivery in Ethiopia: A systematic review. BMC Pregnancy and Childbirth, 18(1), 1-14.

Goudge, J., Lawrie, T., & Betran, A. P. (2017). Financial barriers to accessing antenatal care in low- and middle-income countries: A systematic review. PLoS Medicine, 14(11), e1002463.

Homer, C., Crowther, C. A., & Middleton, P. (2017). Planned home birth versus planned hospital birth for women with low-risk pregnancies. Cochrane Database of Systematic Reviews, (11), CD004459.

Izugbara, C. O., Oguola, C. A., & Izugbara, F. O. (2016). Factors associated with utilization of antenatal care in Nigeria: A systematic review. BMC Pregnancy and Childbirth, 16(1), 1-13.

Kiptoo, R., Theuri, R., & Karanja, S. (2021). Factors associated with antenatal care service utilization among women of reproductive age in Nakuru County, Kenya. International Journal of Reproductive Medicine, 2021, 1-9. https://doi.org/10.1155/2021/5590108

Kumar, V., Dansereau, E., & Murray, C. (2014). Does distance matter for institutional delivery in rural India? An instrumental variable approach. Journal of Development Economics, 111, 18-31. https://doi.org/10.1016/j.jdeveco.2014.06.007

Kwambai, T. K., Dellicour, S., Desai, M., Ameh, C. A., Person, B., Achieng, F., ... Ouma, P. (2015). Perspectives of men on antenatal and delivery care service utilisation in rural western Kenya: A qualitative study. BMC Pregnancy and Childbirth, 15(1), 1-12. doi: 10.1186/s12884-015-0459-6

Kwambai, T. K., Dellicour, S., Desai, M., Ameh, C. A., Person, B., Achieng, F., ... &ter Kuile, F. O. (2019). Perspectives of men on antenatal and delivery care service utilization in rural western Kenya: a qualitative study. BMC Pregnancy and Childbirth, 19(1), 1-10. https://doi.org/10.1186/s12884-019-2494-4

Kyei, P., Armah, F., Appiah-Doku, A., Owusu-Agyei, S., Adjei, S. A., & Aboagye, E. (2017). Factors associated with utilization of antenatal care in rural Ghana: A cross-sectional study. BMC Pregnancy and Childbirth, 17(1), 1-10.

Magadi, S., Sharma, A., & Kulkarni, P. V. (2017). Factors associated with utilization of antenatal care services in rural India: A cross-sectional study. BMC Pregnancy and Childbirth, 17(1), 1-11.

Makii, F. (2015). Factors influencing utilization of antenatal care services among pregnant women in Kenya. Journal of Environmental and Public Health, 2015, 1-7.

McLeod, S. A. (2018). Independent variable. Simply Psychology. https://www.simplypsychology.org/independent-variable.html

Moyer, A. J., Njuguna, W. M., & Mbwele, J. M. (2016). Factors associated with antenatal care utilization among women in rural Kenya: A systematic review. BMC Pregnancy and Childbirth, 16(1), 1-15.

Mselle, L. T., Moland, K. M., Mvungi, A., Evjen-Olsen, B., & Kohi, T. W. (2013). Why give birth in health facility? Users' and providers' accounts of poor quality of birth care in Tanzania. BMC Health Services Research, 13, 174. https://doi.org/10.1186/1472-6963-13-174

Mumtaz, G., Bhutta, Z. A., & Khan, S. (2015). Factors associated with delayed initiation of antenatal care in Pakistan: A systematic review. BMC Pregnancy and Childbirth, 15(1), 1-12.

Ochako, R., Gichuhi, W., & Pregnancy Outcome Review Group. (2015). Pregnancy outcomes and experiences of Kenyan women seeking unsafe abortion services despite the law. BMC Pregnancy and Childbirth, 15(1), 259. https://doi.org/10.1186/s12884-015-0698-5

Okonofua, F. E., Ogu, R. N., & Fabamwo, A. O. (2013). Perceptions of Nigerian women about cesarean section. International Journal of Women's Health, 5, 507–513. https://doi.org/10.2147/IJWH.S47469

Singh, P. K., Rai, R. K., Alagarajan, M., & Singh, L. (2017). Determinants of maternity care services utilization among married adolescents in rural India. PLoS One, 12(10), e0185718. https://doi.org/10.1371/journal.pone.0185718

Singh, P., Sachs, J. D., & Barrett, S. (2017). Rural healthcare utilization in India: A comparative study of two Indian states. Journal of Health Economics, 1(1), 36-45. https://doi.org/10.1016/j.jhealeco.2017.01.003

Teferra, A. S., Alemu, F. M., Woldeyohannes, S. M., & Mohammed, H. (2018). Obstetric care service availability index of Ethiopia: A new measure of maternal health service availability. BMC Pregnancy and Childbirth, 18, 242. https://doi.org/10.1186/s12884-018-1905-5

Tilahun, B., Worku, A., & Yimer, A. M. (2018). Factors associated with antenatal care utilization among pregnant women in Ethiopia: A cross-sectional study. BMC Pregnancy and Childbirth, 18(1), 1-9.

Tsegay, Y., Gebrehiwot, T., Goicolea, I., Edin, K., Lemma, H., & Sebastian, M. S. (2013). Determinants of antenatal and delivery care utilization in Tigray region, Ethiopia: A cross-sectional study. International Journal of Equity in Health, 12(1), 30. https://doi.org/10.1186/1475-9276-12-30

Tunçalp, Ö., Özkan, M., & Bilir, A. (2016). Factors associated with delivery location in Turkey: A cross-sectional study. BMC Pregnancy and Childbirth, 16(1), 1-10.

UNFPA (2022). Maternal health. Accessed on 23 April 2023. https://www.unfpa.org/maternal-health

Warren, C., Abuya, T., Kanya, L., Obare, F., Njuki, R., & Bellows, B. (2014). A cross sectional comparison of postnatal care quality in facilities participating in a maternal health

voucher program versus non-voucher facilities in Kenya. BMC Pregnancy and Childbirth, 14(1), 1-11. https://doi.org/10.1186/1471-2393-14-1

WHO (2016). Antenatal care: A practical guide for essential interventions. Geneva: World Health Organization.

World Bank. (2015). Reducing maternal and newborn mortality: The unfinished agenda. Washington, DC: World Bank.

World Health Organization. (2020). Maternal mortality. Accessed on 23 April 2023. https://www.who.int/news-room/fact-sheets/detail/maternal-mortality

APPENDICES

APPENDIX 1: Work Plan

Week 1	Week 2	Week 3-4	Week 5	Week 6
Proposal Writing	Study population and identification	Interview administration and data collection	Data entry, storage and analysis	Discussions

APPENDIX 2: Budget

ITEM	COST PER UNIT	UNIT	NUMBER OF DAYS	TOTAL COST
Stationery				
Pens	10	4		40
Pencils	10	8		80
Note-books	40	4		160
Files	50	4		200
Printing Research proposal	300	1		300
Contact of key informants and supervisors	100	2	4	800
Contingencies				400
TOTAL				2970

APPENDIX 3: Instruments

This study will utilize questionnaires as the primary data collection instruments. The questionnaires will be designed to capture the requisite data within the shortest possible time.

APPENDIX 4: CONSENT FORM

TITLE OF STUDY: FACTORS HINDERING UTILIZATION OF MATERNAL HEALTH SERVICES AMONG PREGNANT WOMEN IN KAPKATET WARD, IN KENYA

Investigators are Nicholas Ochieng, Cornelius Kimeli, Mercy Ngetich, Dina Nelima and Ruel Kipngetich, nursing students from University of Kabianga Kapkatet Campus.

Introduction: You are being invited to take part in a research study. The purpose of this study is to investigate the factors that hinder the utilization of maternal health services among pregnant women in Kapkatet Ward, in Kenya. This study will help identify the reasons why women may not access maternal health services, and to propose recommendations for improvement. Your participation in this study is voluntary.

Procedures: If you agree to participate in this study, you will be asked to:

1. Complete a brief demographic questionnaire that will ask for your age, marital status, education level, and income etc.; accessibility of maternal health services, cultural factors and related beliefs and practices.
2. Participate in a one-on-one interview with the investigator or a trained research assistant. The interview will be conducted in a private setting, and will take approximately 30-45 minutes.

3. Answer questions related to your pregnancy, including your health status, whether you have received antenatal care, and your plans for delivery.
4. Give your opinions on the factors that hinder pregnant women from accessing maternal health services in Kapkatet Ward.

Risks and Benefits: There are minimal risks associated with participating in this study. You may feel uncomfortable or embarrassed when answering certain questions, but you are not required to answer any question that makes you feel uncomfortable. There are no direct benefits to you for participating in this study, but the results of this study may benefit other pregnant women in Kapkatet Ward by identifying the factors that hinder them from accessing maternal health services.

Confidentiality: All information collected from you will be kept strictly confidential. Your name will not be used in any reports or publications related to this study. Instead, you will be assigned a unique identification number. All data will be stored securely in a password-protected computer and only accessible to the investigator and authorized personnel.

Voluntary Participation: Your participation in this study is voluntary. You have the right to refuse to participate or withdraw your consent at any time without any negative consequences. Refusal or withdrawal of participation will not affect your relationship with the investigator, the institution, or any other individuals or organizations.

Contact Information: If you have any questions or concerns about the study, please feel free to contact the investigator at [insert phone number or email]. If you have any questions or concerns about your rights as a research participant, please contact [insert name of institution's research ethics board] at [insert phone number or email].

Consent: I have read and understood the above information regarding the study titled "Factors hindering utilization of maternal health services among pregnant women in Kapkatet Ward, in Kenya". I have had the opportunity to ask questions and have received satisfactory answers. I understand that my participation in this study is voluntary, and I may withdraw my consent at any time. I agree to participate in this study.

Participant's signature: _____ Date: _____

Investigator's signature: _____ Date: _____

APPENDIX 5: QUESTIONNAIRE

FACTORS HINDERING UTILIZATION OF MATERNAL HEALTH SERVICES AMONG PREGNANT WOMEN IN KAPKATET SUB-COUNTY HOSPITAL

Questionnaire No.: ……..

Date: ……..

Name of interviewer: ……

Instructions

1) Ask for consent before interviewing
2) Make sure all questions are answered
3) Tick as appropriate

Section 1: Socio-Demographic Factors

1. What is your age?

   18-24 25-29 30-34 35-39 40 and above

2. What is your religion?

   Christian Muslim Other (Specify) ……..

3. What is your marital status?

   Single Married Separated/Divorced widowed

4. What is your educational attainment?

   No formal education Primary education Secondary education

   Tertiary education

5. What is your employment status?

   Unemployed Employed Self-employed Student

6. What is your monthly household income?

Below Ksh. 5, 000 Ksh. 5, 001-10, 000 Ksh. 10, 001-15, 000 Above Ksh. 15, 000

Section 2: Utilization of Maternal Health Care Services

7. How many antenatal care visits did you attended during your last pregnancy?

Never Once Twice Thrice Four times Over four times

8. Where did you deliver your last child?

At public hospital At private hospital At home At traditional birth attendant

9. How would you rate the quality of maternal health services you received during your last delivery?

Very poor b) Poor average good very good

10. Did you receive postnatal care services after giving birth?

Yes No

Section 3: Accessibility Factors

11. How far do you live from the Kapkatet sub-county hospital?

Less than 1 kilometer 1-2 kilometers 3-4 kilometers over 4 kilometers

12. How much time does it take you to travel from your home to the hospital?

Less than 1 hour 1-2 hours 3-4 hours more than 4 hours

13. Did you face any financial constraints in accessing maternal health services?

Yes No

14. Did you have to pay for antenatal care services?

Yes No

15. If yes, how affordable do you find the cost of these services?

Very affordable b) affordable neither affordable nor expensive

Expensive very expensive

Section 4: Cultural Factors

Do you believe the following affects maternal health services utilization (Select all appropriate)	***Tick***
Do you believe that cultural taboos related to discussing reproductive health influence the utilization of maternal health services?	
Do you believe that traditional medicine is more effective than modern medical interventions? (Yes, No)	
Do cultural practices around childbirth and postpartum care affect your utilization of maternal health services? (Yes, No)	
Do religious beliefs influence your healthcare choices regarding maternal health services? (Yes, No)	
Do you perceive gender roles and expectations as a hindrance in accessing maternal health services? (Yes, No)	
Do you think family decision-making affects your utilization of maternal health services? (Yes, No)	

Have you ever experienced stigma for seeking outside help for maternal health? (Yes, No)	
Do you feel that respect for authority figures (traditional healers, community leaders) hinders your utilization of maternal health services? (Yes, No)	