# RELATIONSHIP BETWEEN WOMEN'S SOCIO-ECONOMIC, CULTURAL FACTORS AND ACCESS TO MATERNAL HEALTH CARE IN KITUI COUNTY, KENYA

**BY**

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## DECLARATION

I declare that this thesis is my original work and that it has not been presented in any other university/institution for consideration of any certification. This research thesis has been complemented by referenced sources duly acknowledged. Where text, data (including spoken words) graphics, pictures or tables have been borrowed from other sources, including the internet, these are specifically accredited and references cited using current APA referencing system in accordance with anti-plagiarism regulations.

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## DEDICATION

I dedicate this research to my family: first to Catherine, my wife for encouraging me to work hard to complete this work and sons; Victor, Nguma and Ivan for missing me when I was writing this thesis.

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## ABBREVIATIONS AND ACRONYMS

**AIDS:** Acquired Immune Deficiency Virus

**ANC:** Ante-natal Clinic

**CBS:** Central Bureau of Statistics

**CHO:** Clinical Health Officer

***DRC:*** Democratic Republic of Congo

**GoK:** Government of Kenya

**HIV:** Human Immunodeficiency Virus

**KDHS:** Kenya Demographic and Health Survey

**KNBS:** Kenya National Bureau of Statistics

**KNHRC:** Kenya National Human Rights Commission

**MCH:** Maternal and Child Health

**MHC:** Maternal Health Care

**MDGs:** Millennium Development Goals

**MMR:** Maternal Mortality Rate

**MoE:** Ministry of Education

**MoH:** Ministry of Health

**NCITS:** National Commission for Science, Technology and Innovation

**NCPD:** National Council for Population and Development

**OI:** Oral Interview

**PNC:** Post Natal Care

**SDGs:** Sustainable Development Goals

**SHA**: Social Health Authority

**SPSS:** Statistical Package for the Social Sciences

**STDs:** Sexually Transmitted Diseases

**UN:** United Nations

**UNFPA:** United Nations Population Funds

**UNICEF**: United Nations Children's Fund

**VVF:** Vesico Vaginal Fistula

**WHO**: World Health Organization

## DEFINITIONS OF OPERATIONAL TERMS

**Cephalopelvic disproportion**: it is a condition whereby the capacity of the pelvic is inadequate; hence, it cannot allow a foetus to negotiate the birth canal.

**Maternal health**: the well-being of an expectant mother during and after delivery.

**Maternal mortality rate**: this refers to the number of women who die during and after pregnancy over a given period of time.

**Prenatal health care**: any care given to a woman before giving birth.

**Postnatal health care**: any care or assistance provided to a mother after she gives birth and it continues for a period of six weeks.

**Obstetric services**: medical assistance or care accorded to a mother and her child.

**Obstructed labour**: an abnormal or difficult child birth.

## ABSTRACT

The aim of this research was to examine the relationship existing between women's socio-economic, cultural factors and maternal health care access in Kitui County, Kenya. The following research objectives guided the study: first, to establish the relationship between maternal age and maternal health care access in Kitui County, Kenya; second, to examine the relationship between women's education level and maternal health care access in Kitui County, Kenya; third, to determine how distance covered by women seeking maternal health care influences their access to maternal services in Kitui County, Kenya; fourth, to assess the relationship between the cost incurred when seeking maternal health care services and access to maternal health care in Kitui County, Kenya; finally, the research sought to establish if there exists a relationship between access to maternal health care and socio-cultural factors in Kitui County, Kenya. The Pathway Theory as advanced by Kroeger (1983) guided this study. The research utilized a cross sectional research design. To obtain the sample required for the research, simple random sampling and purposive sampling techniques were used. The study's respondents comprised of five clinical health officers (CHOs) who were selected from the health facilities in the study area and 150 randomly selected mothers aged between 18 to 45 years who were seeking maternal health care at the time of the research. Interview schedules and questionnaires were used for data collection. Data obtained from the field research was coded and analysed. For qualitative data, content analysis was used whereas inferential and descriptive statistics were used for quantitative data whereby Social Package for the Social Sciences (SPSS) version 20 was utilized. The findings revealed that women's age ($\chi^2$=212.18, p-value=0.0001, df=6), level of education ($\chi$2=180.67, p-value=0.0001, df=6), distance to health facilities ($\chi$2=248.53, p-value=0.0001, df=6), socio-cultural factors ($\chi$2=127.42, p-value=0.0001, df=2) and the cost of seeking maternal health care services significantly impacted maternal health care access. The Ministry of Health (MOH) working closely with the Ministry of Education (MoE) should intensify advocacy in schools and communities with the aim of sensitizing the population on dangers of not seeking maternal health care as well as retrogressive cultural practices and beliefs that inhibit women when they seek maternal health care. Moreover, the national government and county governments ought to put in place more health facilities in the sub-counties. This would significantly reduce the distance covered by mothers as they seek maternal health care. Equally, the Kenyan government ought to increase access to the Social Health Authority (SHA) and provide special maternal health care services in order to lower costs that inhibit women from accessing maternal health care. It is the hope of the researcher that the results of this research would serve as a wake-up call to both the county and national government so as to put in place measures that can scale up maternal health care access across the country.

# CHAPTER ONE

# GENERAL INTRODUCTION

## 1.0 Introduction

The chapter highlights the study's background, presenting as well, the statement of the problem, outlines the aim of the research, the objectives that guided the research, the research questions whose answers the study sought and the assumptions that the study made. Further, the chapter discusses the study's justification and significance, scope, limitations, and delimitations. It concludes with the conceptual and theoretical frameworks that grounded the research.

## 1.1 Background to the Study

Across the world, human beings face various health challenges that require medical attention. According to Gazali and Platte (2016), the search for good wholeness or health of being has been a major concern throughout the human history. The need to improve medical research, for instance, maternal health care continues to preoccupy many medical professionals across the world. Reproductive health complications have been identified among the barriers that humans are struggling with which could be economic, social, spiritual or psychological in nature. Gazali and Platte (2016) concur that proper utilization of maternal health care during pregnancy and after enhances the survival and wellbeing of both the child and mother.

Therefore, women's health during pregnancy entails their social, physical and emotional well-being which to a greater extent is determined by the political, biological and socio-economic factors (The Beijing Platform for Action, 1995; United Nations -UN, 1995). Generally, maternal health care greatly risks being regarded as

an unacceptable approach of viewing women primarily as mothers. Gender scholars have argued that maternal mortality is closely associated with many challenges that women face in their societies. These challenges include: the significance attached to women in the communities, women's economic power, the place of women's health in the community, their access to information and education as well as their autonomy in making decisions that concern their health. The Beijing Platform for Action (1995) pointed out clearly that there is very little which is known on how social and economic factors impact the health of girls and women across all ages (UN, 1995). The platform further suggested the need for action to be taken so as to support and fund economic, social, cultural and political research on how women's health is affected by gender-based inequalities.

Worldwide, it is estimated that 260,000 maternal deaths occurred in 2022 which resulted from childbirth related complications (UN, 2023). Additionally, yearly about half a million women die because of maternal complications and 99% of these deaths occur within the Sub-Saharan Africa (UN, 2023). In the developed countries especially Europe, the rate of maternal mortality stands at 8 for every 100,000 births while in Scandinavian countries the ratio is five per 100,000 live births (World Health Organisation -WHO, 2022). In Romania, however, rate of maternal mortality in 1989 was 169 deaths per 100,000 births, dropping drastically to 83 per 100,000 births with the revocation of abortion rules in 1989 (UN, 2022). Poland and Russia have registered higher maternal mortality rates indicative of a worsening reproductive health system (UN, 2020).

The African continent bears the blunt of high maternal mortality rates at approximately 70% (182,000) which are attributed to the dismal maternal health care

provision and access (Babalola & Fatusi, 2021). For instance, Ethiopia is one of the six countries that records a high maternal mortality rate at 50%, while the others are India, Syria, Gabon, Nigeria and the Democratic Republic of Congo (DRC) (Hogan, et al, 2015). A Demographic and Health Survey (DHS) done in 2017 on maternal mortality estimated that 680 mothers in every 100,000 births die (Mesganaw, 2019).

According to research done by Warren and Kivunanga (2019) in the Oromiya region of Ethiopia reports the experiences women face in the developing countries when trying to seek postnatal care. They are: covering long distances in their attempts to seek health care services, grappling with high fees charged for the maternal healthcare services, high cost of transportation, inadequate drugs and supplies, household burdens upon the women, lack of power to make decisions that concern them and provision of poor health services. Lashman (2016) concurs that the demand and utilization of maternal health care is impacted by factors that are beyond a woman's control. They include: access of the health care facilities, indirect and direct costs like fees or charges for medication, feeding, transportation and accommodation.

In Kenya, most areas face poor or limited access to maternal health care services. It is reported that 414 deaths occur out of 100,000 live births according to the Ministry of Health statistics (MOH, 2023). A good number of these deaths occur due to complications emanating from home births. Therefore, a significant proportion of women fail to deliver in hospitals. Even with the increased initiatives by the Kenyan government (GoK) to maternal health care access like Beyond Zero campaign and Linda Mama, access in rural areas is still low (Kenya Episcopal Conference, KEC, 2017). Many women still give birth at home. Accordingly, deaths arising from maternal complications occur under such circumstances (Magadi, Diamond &

Nyovani, 2018). Kitui County, one of the 47 counties in Kenya, witnesses' high levels of maternal mortality rates where between 400-600 deaths occur for every 100,000 births (MoH, 2022). Worse still, Kitui County has some of the lowest levels of antenatal attendance, resulting to few women seeking delivery services. For instance, in Mutito Sub-County, Kitui County, in the year 2018, the average number of antenatal visits was just 4.1 while the recommended is eight visits (MoH, 2019). The current research aimed to determine the relationship between maternal health care access and women's socio-economic, cultural factors in Kitui County, Kenya.

### 1.2 Statement of the Problem

Maternal health care provision is very vital. Consequently, there are increased awareness campaigns across the country on the need for expectant mothers to seek these services. To improve the maternal health services uptake, the GoK introduced free maternal health care services and rolled out initiatives like Linda Mama programme and the Beyond Zero Campaign. These attempts by the GoK to enhance the provision of health care services to all is in line with Vision 2030's pillar on health. Despite these efforts, fewer women seek antenatal and postnatal care especially in the Kenyan rural areas (Kenya National Commission on Human Rights-KNCHR, 2017). Reluctance to seek maternal health care has led to high home birth rates at about 60% (Magadi, et al, 2018). Such high reluctance has risked the lives of the mothers and the new born babies. The figures of woman who do not seek the services are still worrying in Kitui County despite the government efforts and Beyond Zero campaigns. The low numbers of antenatal clinics attendance at 4.1 against the recommended eight is worrying (MoH, 2020). Therefore, this research aimed to

determine the cultural and socio-economic factors that hinder women from seeking and accessing health maternal care services.

### 1.3 Purpose of the Study

This research sought to determine the relationship between women's socio-economic, cultural factors and maternal health care services access in Kitui County, Kenya.

### 1.4 Objectives of the Study

The following specific objectives guided this study:

i. To establish the relationship between maternal age and access to maternal health care in Kitui County, Kenya.
ii. To determine the relationship between women's level of education and access to maternal health care in Kitui County, Kenya.
iii. To determine whether the distance covered by women seeking maternal health care influences access to maternal services.
iv. To establish the relationship between cost of health care services and access to maternal health care in Kitui County, Kenya.
v. To establish the relationship between socio-cultural factors and maternal health care access in Kitui County, Kenya.

### 1.5 Research Questions

This research sought answers to the following research questions:

i. What is the relationship between maternal age and maternal health care access in Kitui County, Kenya?

ii. What is the relationship between the education level of women and maternal health care access in Kitui County, Kenya?
iii. What is the relationship between the distance covered to the nearest health care facility by women and maternal health care access in Kitui County, Kenya?
iv. What is the relationship between cost of health care services and access to maternal health care in Kitui County, Kenya?
v. What is the relationship between socio-cultural factors and access to maternal health care in Kitui County, Kenya?

## 1.6 Premises of the Study

This research made the following assumptions:

i. That public health care facilities in Kitui County provide maternal health care services.
ii. That women in Mutito Sub-County face challenges that curtail their access to maternal health care services.
iii. That respondents are aware of possible barriers that inhibit their access to maternal health care and thus, they provided correct and uninfluenced information to the researcher.

## 1.7 Justification and Significance of the Study

For a long time, Kenya has been experiencing high death rates and maternal morbidity. Statistics indicate that the maternal death rate stands at 414 deaths for every 100,000 live births, which exceeds that envisaged in the Sustainable Development Goals (SDGs) focus of 130 for every 100,000 by 2025 (WHO, 2016). Research in Kenya indicates that for every woman who dies during labour, another

20-30 women experience inabilities or serious injuries due to difficulties encountered during pregnancy or delivery (KNCHR, 2017). These high maternal death rates have continued to occur in spite of improvements witnessed over the past decades on health indicators affecting mostly marginalised areas of the country such as the Lower Eastern (Kitui County) and the former North Eastern Province (Ministry of Public Health and Sanitation and Ministry of Medical Services, 2012). Moreover, Kitui County records one of the lowest maternal health care access at 4.1 visits out of the expected eight (MoH, 2020). Hence, there was need for this study in Mutito Sub-County, Kitui County so as to understand women's level of access to maternal health care services.

The results of this study are vital to the implementers of maternal health care policies and all women seeking maternal health care. The study established possible barriers hindering maternal health care access and further recommends ways of enhancing its accessibility in Mutito Sub-County, Kitui County. In addition, the findings of this research may be vital as they would provide the community with information about uptake, preferences and provision of maternal health care. This could help in the improvement and appropriateness of the maternal health care services offered. Moreover, the current research makes a contribution to the available literature on maternal health care provision in rural Kenya against the social and cultural determinants like faith and traditional birth beliefs.

### 1.8 Scope of the Study

This research focused on factors that impact women when accessing maternal health care services in Mutito Sub-County, Kitui County. The research established that there were factors that hindered maternal health access and these factors made most women

to opt to give birth at home instead of seeking help in the health care facilities. Clinical Health Officers (CHOs) who offered maternal health services and women who sought maternal health care services at the time of the study were the participants. The research was based on search for antenatal services and it was carried out from April-September 2021. Moreover, this study sought to determine strategies that would enhance quality maternal health care and its access in Kitui County.

### 1.9 Limitations and Delimitations of the Study

Limitations entail the research's potential weaknesses which transcend the control of the researcher (Simon, 2011). In this study, the limitations included reluctance of some of the study participants especially women to give personal information. To mitigate this limitation, the respondents were assured of confidentiality regarding the data they provided. Moreover, assurances were given to the study participants that the data they provided would only be used for academic purposes. Further, to safeguard the respondents' privacy, their real names were not used, instead pseudonyms were used in the research.

The study was also limited by bureaucracies from the health centres. This was occasioned by the need to wait for the officers in-charge of the health care facilities to clear the researcher before talking to the patients. This challenge was mitigated by highlighting researcher's expectations and the timelines. The following chapter provides the review of literature related to the research and the theoretical framework upon which the study was grounded.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.0 Introduction

This chapter undertakes a review of related literature. The review is done along the research's five objectives. The review themes include: socio-demographic factors promoting or inhibiting women's maternal health care access, the distance the women cover when seeking maternal health care, cost of accessing maternal health care services, economic-social factors influencing women's access to maternal health care and socio-cultural factors inhibiting women's access to maternal health care. The chapter finally presents the theoretical as well as the conceptual frameworks used in the study.

## 2.1 Women Seeking Maternal Health Care Services

This section reviews literature on the experiences the women face when seeking maternal health care. These include socio-demographic, socio-cultural and economic factors.

### 2.1.1 Socio-Demographic Factors

The socio-demographic factors to be discussed are maternal age and age at first birth, women's levels of education, the women, distance to health facilities and residence (locality). Erinosho (2015) argues that socio-demographic factors play a huge role whenever illness or sickness occur and this affects the pattern of utilizing health care services. This he ascertains in a study done among Nigerian medical students on attitudes affecting rural practice. Erinosho adds that although some of the experiences are institutional-based, others are individual. Individual-related factors entail an

interplay between an individual's attributes and the decision he/she makes on whether to seek health care services or not. The barriers may be caused by gender, education, ethnicity, income or occupation. Research further indicates that socio-demographic experiences impact the utilization and seeking of health care services prompted by factors like social economic status, education, maternal age and gender factors (Ryan, 2018; Erinosho, 2015 & Mckinley, 2016).

The age of women who seek maternal health care was reviewed as the next factor.

### 2.1.2 Age of Women Seeking Maternal Health Care

Adamu (2008) in a research conducted in Nigeria, Kano state establishes the determinants and causes of maternal mortality. He notes that maternal age is a significant variable when one seeks to understand maternal health care uptake. According to the study findings, the age at which a woman becomes expectant influences her search for maternal health care services. Adamu argues that a woman who becomes pregnant at a tender age risks encountering complications during pregnancy and childbearing. In addition, the age when a woman gives birth determines how safe the delivery will be. It would also determine her physical growth, self-acceptance and willingness to access medical services. Azale, Gelaw, Kifle and Melsew (2017) in research done in Eastern Ethiopia investigated factors that influence maternal health care service seeking behaviours among women. The findings indicate that the age of the woman actually determines maternal health care access. However, the study by Kifle et al. (2017) did not give empirical evidence of the relationship's nature existing between maternal age and maternal health care access. This study sought to give data on to what extent age influences maternal health services access.

Abosse Woldie and Ololo (2010) study factors that influence antenatal utilization in Ghana. They indicate that, young expectant mothers are more likely to avoid seeking maternal health services when a comparison is made with women who are older. Therefore, there was need to determine the relationship existing between access to maternal health care and maternal age.

### 2.1.3 Education Level of Women Seeking Maternal Health Care

Agha (2008) did a study in Pakistan where he investigated the infant mortality rate determinants. In the study, Agha divided the effect of information and education to two levels. Firstly, there was the effect of elementary education upon the recipients making them demand for health care services. According to the study, education had a positive and significant correlation with good health. It revealed that the mother's schooling level determined maternal health care access. Further, the study results indicate that the level of education an individual has improves their ability to keep themselves healthy by adopting healthy and better lifestyles than simply relying on health care provision. Second, the study findings indicate that improved levels in general literacy leads to an increased desire in seeking health care services. Nonetheless, the research is silent on the extent to which education impacts maternal health care access.

Royston (2013) in research done in India on prevention of maternal mortality contend that literate women are more likely to understand the reproduction physiology; therefore, they are less vulnerable to the dangers and inconveniences occasioned by failure to attend antenatal facilities than those women who are not educated. This notwithstanding, women who are educated are less likely to acknowledge practices or rites that may be risky during pregnancy and avoid them. Uneducated ladies are more

averse to seek for the assistance of expert health providers since they are presumably less mindful of what is accessible. They are less likely to discover the way of life modern-day medicinal services offer; hence, they may distance themselves and regard the services as terrifying. Additionally, being unaware about wellbeing services may also hinder access to maternal social insurance administrations. However, the voice of the women was left out in this study. This occasioned the need for this study which granted women a platform to express themselves and highlight the various challenges they face in trying to access maternal health care services.

### 2.1.4 Distance to Health Facilities

Research shows that there is a positive and significant correlation between distance covered to the nearest health facilities and utilization of health care services by women who are pregnant. Erinosho (2015) does a study that determines the correlation between use of health facilities and spatial location. The findings indicated that patients whose residences are close to health care facilities are bound to utilize them more often than those who live in far-flung areas on account of movement, time and transportation costs. However, Rashid, Afsana and Begum (2014) establish that separation that requires individuals to make a trip to the closest health care facility in Mumbai, India among vagrants, was regarded as having significant impact upon the women who sought pre-birth care and actual delivery in a hospital.

Sauerborn, Bodart, and Essomba (2015), did a study that investigated provincial health funds in Cameroon and how respondents sought recovery of recurrent health services expenses from this fund. The findings revealed that there was much proof to propose that long separation from health facilities forced a significant expense on people and this diminished access. Transport to an extent of all out-patient costs was

observed to be at 25% in Upper East Brazil, 28% in Burkina Faso, and in the Assembled Kingdom-UK it was 27% (Terra de Souza *et al.,* 2014; Sauerborn *et al.* 2015). The foregoing facts show that one's residence may influence maternal health care access and utilization.

Various scholars (Erinosho, 2018; Adeyemi, 2020; Pearce, 2001, UNFPA, 2016; Sabitu, 2014 and Mekonnen 2022) concur that indeed there exists contrasts in the usage of health care services and maternal social wellbeing between rural and urban areas. This means that uptake and usage of health care services is by large affected by habitation. There is an unmatched usage of health facilities among urban women when compared to the ones who live in the rural areas. This may be occasioned by accessibility of these health care facilities in the urban regions contrasted with rural areas whereby the facilities are not accessible.

Nonetheless, most of these studies were only done in urban centres and the findings were co-related to the rural setting expecting the opposite to be true. The current research aimed to determine the real picture in a rural setting. An investigation done by the Kenya Episcopal Conference (KEC, 2016) in Taita Sub-region demonstrates that provincial inhabitants are hindered from accessing health care facilities. This is on the grounds that most health facilities are situated in towns. The investigation examined the degree to which women's places of residence is a challenge to accessing maternal health access.

Erinosho (2018) notes that generally, in most underdeveloped nations, most women in urban areas benefit from expanded information and maternal health care access when a comparison is made with those women living in rural areas. This results from the

way the health facilities are progressively opened in urban regions and the different initiated programs of health promotion in the urban areas as well as information regarding these programs being dispersed by the urban mass media communications outlets to the urban inhabitants or residents.

Likewise, Kenya Demographic Health Survey (KDHS) in 2016 unmistakably demonstrates clear contrasts regarding participation of women in the Antenatal Consideration Centre (ANC) by living arrangement and that women living in urban centres are significantly more prone to accessing ANC health care than their rural folks. KDHS fails to give data of how distance in varying kilometres affects mothers' accesses to maternal services which this study sought to find.

### 2.1.5 Cost of Accessing Maternal Health Services

Evidently, a population that is poor often benefits less from public spending (Makinen Waters & Rauch, 2022; Demery, 2020). Public services are often not properly utilized by the poor because of both demand and supply factors. Sachs (2001) studies the macroeconomics and health access which reinforce the need to overcome barriers that inhibit healthcare access to the poorest. Makinen *et al.* (2022) observe that whenever there are transport options other than walking, this only serves to raise the cost of medical care for the poor. Magadi (2016) avers that in Tanzania, close to 96.6% of the entire population live on $2 a day. A trip by bus to a hospital can cost as much as $60, which goes beyond the limit many can afford. The cost of the medical care itself compounds the situation. This discourages many families from seeking medical care services; hence, they settle for homecare. Magadi's study utilized interviews and classroom observations to gather data while the current study in addition used questionnaires. This reduced evaluator biasness given that similar questions were

administered to all study respondents. Moreover, respondents may be more comfortable interacting with a questionnaire than they could in an interview.

### 2.1.6 Socio-cultural Experiences Inhibiting Access to Maternal Health Care

Socio-cultural experiences entail peoples' norms, traditions, beliefs and values that impact the way in which medical help is sought and how health-related challenges are addressed. Mesganaw (2010) argues that, health and culture are closely related to the extent that culture controls decisions made concerning health. In most African societies, one seeks medical interventions on the basis of their cultural expectations. In the Western societies, ill-health is often effectively diagnosed using advanced clinical and scientific techniques. Thus, this forms a cultural base which determines access to medical care.

#### 2.1.6.1 Community Role in Maternal Health Care

In most communities, men are given more preference when accessing health care services than women (Mckinley, 2016). A study by Hitesh (2016) in Tunisia in rural Rajasthan on constraints and perceptions of pregnancy-related referrals established that Traditional Birth Attendants (TBA) greatly influenced women's decisions to take referrals. It was reported that 90% of the women refused to take referrals simply because they were advised against them by the TBAs. Mairiga (2016) in a research on reproductive health in Borno State in Nigeria found that some communities prevented expectant mothers from seeking maternal health care help. According to the research, women seem to be more controlled by the male gender in decision making. The study fails to show the extent to which community and household experiences affect women's access to maternal health care. Thus, this research established the role of gender in decision making which affects women's health.

Adam (2008) in a survey on challenges to women's reproductive health argues that the surest route to women's economic and social security in some areas of the world is to give birth to as many children as possible, preferably sons. Thus, this pressure to give birth to many children affects their social and economic stability as well as their gender empowerment; hence, exposing them to many health challenges such as obstructed labour, Vesico Vaginal Fistulae (VVF) and cephalopelvic disproportion. Studies by Gazali (2016) and Waziri (2011) establish that in many African societies the number of children born by a woman determines her self-worth and importance; in fact, a large family occasioned by a high birth rate is a cultural practice that is cherished. A community's traditions related to pregnancy and childbirth were said to influence access to health care access. This research aimed to determine how the community's cherished traditions affected decision making with regards to maternal health care access. Therefore, women's position as far as making crucial decisions regarding their well-being was investigated.

#### 2.1.6.2 Traditions Related to Pregnancy and Childbirth

Heida (2016) carries out a study on utilization of child and maternal care health services in developing nations and reveals the reason behind sicknesses as being related to the universe of customs, supernatural and enchantment. Regarding medicine in modern technology, the cause of sickness lies in the manipulative laws of nature and the non-individual noticeable characteristics. Conventional healers, along these lines, agree with this view through the channel of a mutual conviction framework which is unequivocally established in their way of life and it determines the perspective of both the patient and the healer (Heida, 2016).

As for Erinosho (2018) for instance, the Ile-Ife of rural Yoruba, practically treat all ailments customarily before they are presented to modern day medical treatment. Erinosho (2018) notes that in most African communities, childbirth complication cases are usually referred to health care facilities only when they are beyond the handling of the traditional birth attendants (TBAs). More often, you would find by this time it is always too late which results to death of the mother or the baby or in some instances, both. Besides, other delivery related complications may occur. Therefore, this study established the extent to which traditions influence access to maternal health, a gap the other studies did not fill.

#### 2.1.6.3 Religious Factors and Access to Maternal Health Care

Modern health care uptake is frequently affected by peoples' impressions regarding the adequacy of health services provided and the religious convictions held by such people (Hitesh, 2016). In a study done in Ethiopia, Addai, (2001) and Mekonnon (2022) established that religion is a significant indicator of maternal usage consideration in Ethiopia's rural areas. Among the Muslim ethnic groups in Bono estate in Nigeria, it is normal for religious customs to be held for a woman who is in labour. Thus, you will find Mallams and Almarjirais (adult students) reading the Sacred Quran to a mother in labour so as to guard against harmful power which may arise from the pregnancy and labour. A beverage of Quranic stanzas especially Aya-tul Kursiyu are composed on plate, washed then the woman is given to drink in the belief that she will have safe delivery (Waziri, 2011).

In Nakuru County, followers of the Church of God (CoG) did not seek maternal health care services; this was against their faith (Kivunaga, 2019). This church can be

related to "*Kavonokya church*" meaning "to save" or "to redeem" in the Kamba language, and this church's teachings centre around strong faith in divine healing and prayer without reliance on modern medicine or hospital. Members believe that healing comes solely through prayer and faith, rejecting conventional medical treatments such as vaccinations and hospital care. The sick are prayed for and they believe a healing miracle will happen. This poses a great challenge to the achievement of Kenya's Vision 2030. Notwithstanding the challenges posed by these religious practices in curtailing access to maternal health, majority of the people still practice them because they are deeply entrenched in their minds. The reviewed literature fails to give data on the women who are affected by religious attachments that impact their maternal health care access. The current research aimed to fill this research gap.

## 2.2 Theoretical Framework

The Pathway Theory advanced by Kroeger (1983) provided the foundation upon which the study was based. The theory argues that information access enhances the utilisation of social services. The theory uses the qualitative methods of investigation whereby there is identification of a sequence of steps from recognizing complications to using health care facilities as well as cultural and social aspects that may impact the sequence. According to the theory, there is an assumption that when women have access to information, they generally become enlightened and this increases the health care utilization and uptake. Thus, cultural, social-economic and demographic factors have an effect on the uptake and usage of health care services.

The Pathway Theory also argues that maternal healthcare is more likely to be sought by people who are educated than those who are not. Hence, information that is

acquired through formal education and social learning influences fewer women since there are low levels of women literacy. The theory further states that the women's socio-economic conditions impact their values and attitudes. Consequently, people whose socio-economic status is low tend to be apathetic or ignorant about the availability of health care services even when the services are free. Besides, social interventions to improve uptake of health care services across different socio-economic groups are very limited in the rural areas.

This theory was found to be suitable for the current study since maternal health access is impacted by awareness levels among women and socio-economic conditions that put women at a disadvantage. Moreover, age of the women, their education level, distance to the closest health care facility, cost incurred and cultural practices are all related to information and access to maternal as the theory expounds.

### 2.3 Conceptual Framework

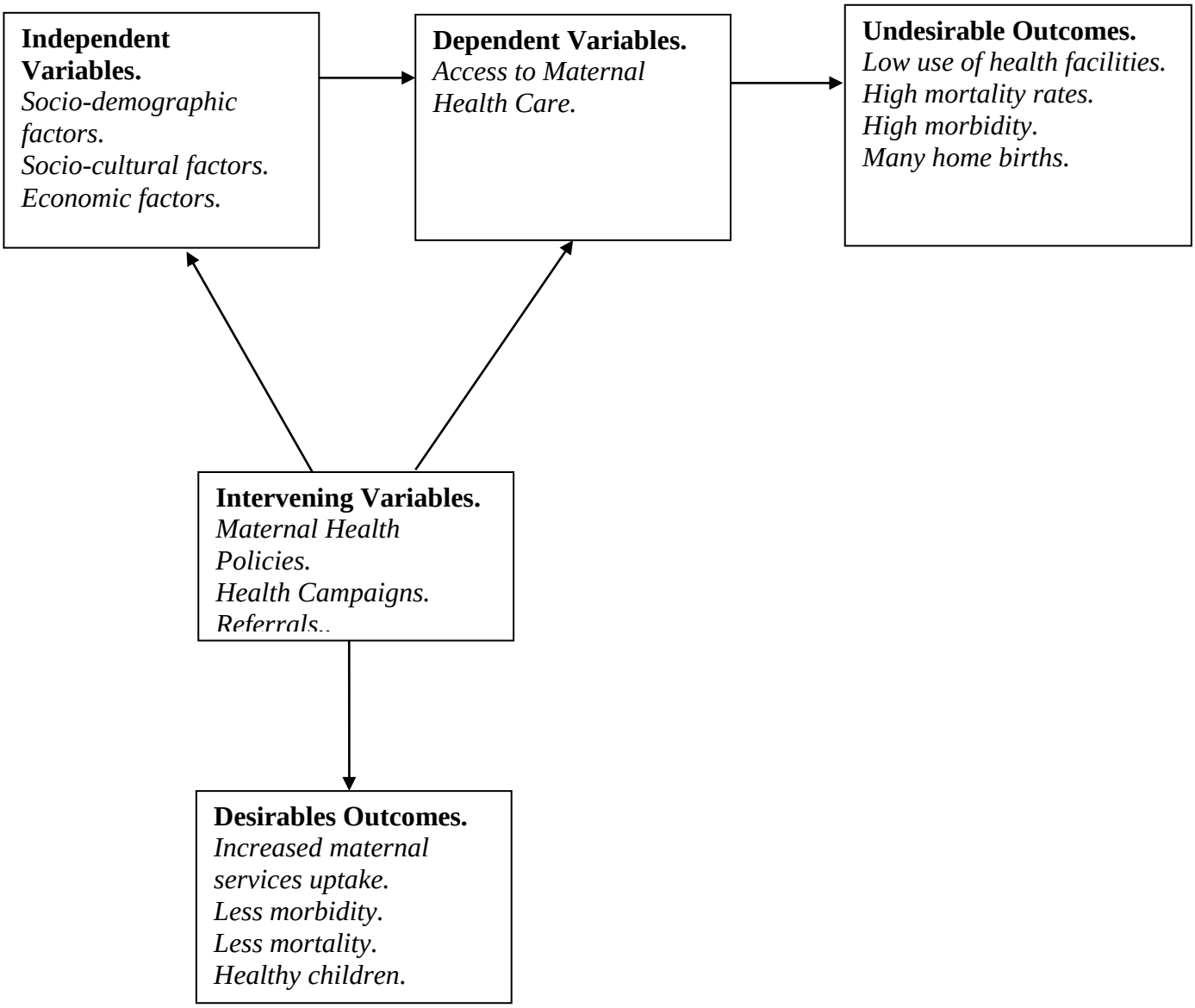


**Figure 2.1 Conceptual Framework on the Utilization of Maternal Health Care in Mutito Sub-County**

(Supervisors, Researcher & Musyoki, 2021).

The conceptual framework indicates factors that may inhibit mothers from accessing maternal health care. They include socio-demographic factors like women's education levels, age at first marriage and birth, distance covered to the health facility and residence (locality). Socio-cultural factors include community and household barriers, early marriage and pregnancy, polygamy, large family size, religion and rituals during labour and traditional medicine. Economic experiences are transport costs, cost of medication, consultation fees, admissions fees and other expenses. These experiences may hinder women when trying to access maternal health care in their hour of need.

Moreover, the conceptual framework shows undesirable outcomes when access is low. These includes low utilization of health facilities, high mortality rates, high morbidity and many home births. The intervening variables like; maternal health policies, health campaigns and referrals when applied lead to desirable outcomes. These desirable outcomes include; increased maternal uptake, low mortality rates, less morbidity and healthy children.

The present study was necessary since it examined factors that may inhibit maternal health care access and women were the major respondents. Previous research (Sauerborn et al., 2015 & Terra, 2014) relied on document reviews which meant that certain information may be inapplicable, disorganised, unavailable or out of date. Further, the present study utilized interviews and questionnaires to fill this knowledge gap. Some studies (Addai, 2001 & Erinosho, 2018) have mainly relied on the views of community health workers on maternal health while the current study specifically sought the views of mothers seeking maternal health care services.

## 2.4 Summary

A number of gaps were identified and this study sought to give details where they were missing. Previous studies failed to establish the relation between maternal health care access and maternal age. The study gave detailed explanation on this relationship. On education, previous studies have gaps on the voice of women on education. Studies did not give details on influence of education on maternal health. On distance, studies did not give how varying distance in kilometres affect access which this study sought to explain. Moreover, on cost of access in rural areas, previous studies did not show the extent to which cost of services affected maternal health care access. Finally, on socio-cultural practices' effect on maternal health care access, the reviewed studies failed to give the extent of influence in details as given in this study.

The following chapter delves into the study's research methodology which entails; the research design, study location, target population, sampling techniques among other issues.

# CHAPTER THREE

# RESEACH METHODOLOGY

## 3.0 Introduction

This chapter discusses the research methodology that the researcher employed. The research design is presented, the study location, the targeted population for the research, sampling techniques and the sample size. Moreover, the instruments of the research are highlighted as well as their reliability and validity. Further, the chapter presents data collection procedures, data analysis techniques, data management as well as ethical and logistical considerations of the research.

## 3.1 Research Design

This research employed a cross sectional research design. This kind of a research design considers a set of data obtained from a select population at a given point in time (Bowden, 2011). In a cross-sectional research design, the respondents are chosen on the basis that they possess specific variables (Villar et al., 2014). This research design uses the available research data to answer questions in respect to variables or conditions in the study. The researcher used both qualitative and quantitative research methods in order to comprehend the research problem. Quantitative methods involved collection of numerical data that was subjected to statistical analysis.

## 3.2 The Site of Study

The research was done in Mutito Sub-County, Kitui County which is located in Kenyan's former Eastern Province. Mutito has a land area comprising 5,359.8 square kilometre and its population density is 10 per square kilometre (KNBS, 2019).

Kitui County neighbours Machakos and Makueni counties to the West, Garissa County to the North, Taita Taveta County to the South and Tana River County to the East. Mutito Sub-County receives long and short rains referred to as bimodal rainfall. The two seasons fall between May and June for the long rains while the short rains fall between November and December. The two rainy seasons are separated by a distinct dry season. The annual mean rainfall is between 750 and 1150 mm. The sub-county lies in Lower Midland 4 agro-ecological zone with an elevation of about 400m and 1830m above sea level. The average annual temperatures range between 18° and 30°C (Meteorological Department of Kenya, 2021).

Mutito Sub-County has an estimated population of 55,287 (KNBS, 2019). Out of the total population 26,388 are male while 28,896 are female. Furthermore, the sub-county has a total of 11,521 households with a mean household size of 4.8 people (KNBS, 2019). Mutito Sub-County is predominately occupied by the Akamba who are a part of the larger Bantu ethnic group. This group of people live in Lower Eastern, Shimba Hills and some other parts of Kenya. Tanzania and Paraguy are other countries where the Kamba people are found. Families are organised in a way that make young mothers voiceless. Matriarchy on the side of the husband is so strong that it controls most of the family decisions. This definitely affects how young mothers express themselves, more so in health matters.

In Mutito Sub-County, agriculture is the major economic activity. The primary agricultural system is an agro-pastoralism system. Residents keep livestock (sheep, cattle and goats). Their land cultivation is majorly subsistence, characterized by low yields due to erratic rainfall, prolonged dry spells and crop failure.

In terms of infrastructure, the county has two tarmacked roads; Machakos-Kitui Road and Mwingi-Garrissa Road. The Kibwezi-Kitui-Mwingi Road tarmacking is in progress. Though the other roads are weather roads, they facilitate accessibility to all parts of the county. Further, the County has one airstrip; Ithookwe. There are two national schools; Kitui High School and Muthale Girls High School. Moreover, there are extra-county schools including; Matinyani Boys, St. Angela's Girls, Mwingi Boys, among others. There are also county and sub-county secondary schools spread throughout the County. These secondary schools are complemented by many primary schools in all the sub-counties (MoE, 2020).

The county has two major public-funded hospitals; Kitui County Referral Hospital, Level Five and Mwingi Level Four Hospital, with several public and private health centres and dispensaries (MoH, 2017). The area faces high maternal mortality and records 4.1 health care visits as opposed to the recommended eight antenatal visits (MoH, 2019). Therefore, it was necessary to conduct the current research in the area to determine women's access to maternal health care.

### 3.3 Study Population

All individuals or groups that a researcher is interested in so as to conduct a research form the study population (Bowden, 2011). Moreover, the entire sample which the researcher studies and is able to make deductions from can also be referred as the targeted population. Therefore, a target population outlines the research units upon which generalizations of the research findings can be made (Cresswell, 2005).

The study targeted eight health facilities. These were Mutito, Kaliku, Manyoeni, Zombe, Mwitika, Endau, Malalani and Kyamatu with a total of 21 CHOs. Three

hundred women aged between 18 and 45 years and who sought maternal health care in Mutito Sub-County health facilities were the target population. Mothers aged 18 years and below were excluded from the research due to the complexity of seeking consent from parents or guardians yet time was a constraint in this study.

### 3.4 Sample Size and Sampling Techniques

The research employed simple random sampling to choose five health facilities; Mutito, Kaliku, Zombe, Mwitika, Endau and Kyamatu from a list of eight. The five were selected from the eight since they offered maternal care and they were representative of the whole of Mutito Sub-County. The selected health facilities had a total of 21 CHOs. As such, 5 CHOs were randomly selected from the list of 21 CHOs. This was done so as to ensure that every health centre targeted was represented in the sample. The study included the CHOs due to the critical roles they play in the provision of maternal health care in Mutito Sub-County.

A sample size comprising of 150 women from the study area who had sought maternal health care were randomly chosen from a target population of 300 then interviewed. The sample size was determined by age of the respondents, resources constrain and the desired accuracy. Using purposive sampling the sample of 150 was selected as tabulated in table 4.1.1 in page 34. To arrive at the appropriate sample size for the research, the Computerized Reservation System (CRS) software was used and it is presented as follows (Wonnacot & Wonnacot, 1977);

$$S = \frac{Z^2 \times P \times (1-p)}{C^2}$$

Where:

S = Sample size, Z = Z value (1.96 for 95% confidence level), P = percentage picking a choice, expressed as decimal (50%) and C = confidence interval, expressed as decimal (0.08)

$$\mathbf{S} = \frac{1.96^2 \times 0.5 \times (1-0.5)}{(0.08)^2}$$

$$\mathbf{S} = \frac{3.8416 \times 0.5 \times 0.5}{0.0064}$$

$$\mathbf{S} = \frac{0.9604}{0.0064}$$

$$\mathbf{S} = \frac{9604}{64}$$

S = 150.0625

To the nearest whole number

S = 150

### 3.5. Research Instruments

Lashman (2016) notes that research instruments are tools of measurement utilized by the researcher when collecting data from respondents. In this research, interview schedules and questionnaires were adopted as the main instruments of data collection. Creswell (2012) and Orodho's (2012) suggest that for descriptive data, questionnaires and interview schedules are important in answering research questions. Questionnaires were utilized to collect data from CHOs while interview schedules enabled the collection of data from the women seeking maternal health care.

### 3.5.1 Questionnaires

The questionnaire that the CHOs respondents filled had two sections; A and B. Section A sought the demographic information of the respondents while section B collected information on the hurdles women face when seeking maternal health care services. Questionnaires for CHOs were preferred because they enabled the respondents to answer question items at their time of convenience.

The questionnaire was selected for this research since it gave an even stimulus, enabled the researcher to collect data from a large number of respondents which yielded large amounts of data easily (Nisar & White, 2013). The questionnaires had two forms. One form had Yes/No or rating scale (To what extent) giving quantitative data. The second form had qualitative questions where respondents wrote in their responses; thus, producing qualitative data.

### 3.5.2 Interview Schedules

The researcher carried out interviews with mothers seeking maternal health care services from the health facilities. The research used the interview schedules to inquire from the respondents their experiences as they sought maternal health care. Each respondent was interviewed in seclusion to ensure that confidentiality was maintained. As respondents answered the questions, their responses were recorded for analysis.

The interviews were preferred because, according to seminal work by Royston and Armstrong (2013), they constitute items that help the researcher to understand in depths, the research's objectives through probing consistently. Using the interview schedule, the researcher obtained information on the respondents' demographic

information, cost associated with maternal health care, the distance covered by the women so as to access a maternal health care facility close to them and the role culture played during maternal health care access. The interview schedules yielded both quantitative and qualitative data.

The research used both the questionnaires and interviews since they complemented each other to give detailed data on access to maternal health care.

### 3.6 Pre-testing of Research Instruments for Validity and Reliability

A pre-testing of the instruments of the research was carried out in a medical health facility in Katulani Sub-County, Kitui County where one CHO and five women respondents seeking maternal health care participated to ascertain the research instruments' reliability and validity. The CHO was the one in charge of maternal health care in that facility. This placed her at a better position of understanding the issue under study. The five women respondents were the first five to report at the facility where they sought maternal health services. This was informed by the fact that the reporting of the women was widely staggered throughout the day.

Katulani Sub-County was selected for the pre-test because it has similar characteristics with Mutitu Sub-County. During pre-testing, a questionnaire was administered to a CHO and interviews conducted with the mothers. Through pre-testing, the researcher determined any ambiguities in the research items and corrected them to ensure that the data elicited was in line with the questions the research sought to answer. Modification was done to some items to ensure they measured the intended variables while others were discarded.

A pre-test was used to determine the validity of the instruments. Content validity was carried out and the relation between the test and what it was meant to measure compared. This was to ensure that the research instruments obtained the relevant data. Equally, expert judgement was sought from the university supervisors. This was followed by modifications of the instruments to enhance their validity.

Using the test items administered during the pilot, the reliability of the research instruments was determined. Sachs (2001) notes that to ensure reliability the half-split method is used. This involves dividing the test items into halves (even and odd items) then working out the Correlation Coefficient (r) between the halves. The researcher used the correlation coefficient (r) to work out the whole test reliability using Spearman Brown Prophesy formula (Re= 2r/1+r). The correlation coefficient obtained was +0.8971 which tends towards +1; hence, the instruments were declared reliable and deemed good to use in the research. The reliability and validity of the instruments of the research was proven during the pre-testing in Katulani Sub-County; thus, ready to be used in the study site.

### 3.7. Data Collection Procedures

First, the researcher obtained a letter of introduction letter and an ethical approval from Kenyatta University's Graduate School which the researcher presented to the National Commission for Science, Technology and Innovation (NACOSTI) so as to be granted a research permit. Thereafter, permission was sought from County Commissioner office, County Director of Education, County Health office and Sub-County Health Officer (SHO) of Mutito Sub-County who were presented with copies of the research permit. Upon getting permission to do study, the researcher visited the health facilities sampled for formal introduction by the SHO. Then he made

arrangements on the specific dates to visit the facilities. On the date agreed with the study participants, the questionnaires were administered to the CHOs. The researcher then conducted face-to-face interviews with the mothers seeking maternal health care. Each respondent was given a chance to participate in the interview. All the questionnaires that were filled were collected after a period of one week. The researcher considered this timeframe as appropriate given that it accorded the study participants sufficient time to respond to the questionnaire items. The researcher then analysed the data from the CHOs.

### 3.8 Data Analysis and Presentation

To analyse data means packaging the data collected to a form that is understood by the researcher. Primary data which was obtained from the mothers was analysed both quantitatively and qualitatively. Secondary data that was collected from CHOs was qualitatively analysed into themes according to the research objectives. Quantitative data was broken down to frequencies and percentiles using descriptive statistics. Further, Chi-square with the help of SPSS version 20.0 was used to analyse inferential statistics. Both quantitative and qualitative data analyses were used to ensure the limitations of one data source were balanced by the strengths of the other.

### 3.9 Ethical Considerations

The researcher ensured that this research was done following morally acceptable ethical principles. First, the researcher sought informed consent. The respondents agreed to take part in the research voluntarily. That is, they had the right to participate or withdraw from the study at any time. They were accorded the right of informed consent and assurance of confidentiality by ensuring that their names were concealed.

Pseudonyms and codes were assigned to ensure the identity of the respondents was not revealed. Further, the researcher acknowledged all the information used in the study whereby it was appropriately cited according to the anti-plagiarism regulations.

This chapter has outlined the general research methodology which enabled a successful collection and analysis of data. The next chapter highlights data analysis, interpretation and discussion of the findings of the study.

# CHAPTER FOUR

# DATA ANALYSIS, INTERPRETATION AND DISCUSSION OF FINDINGS

## 4.0 Introduction

The chapter delves into the data analysis, interpretations and discussion of the study findings. First, the respondents' demographic information is outlined followed by other subsequent sections. These include influence of age of maternal health care access, age of women at first birth, experiences due to levels of education, experiences due to distance to health centres, experiences due to cost of maternal health care services and socio-cultural factors influencing maternal health care access.

## 4.1 Demographic Information of Respondents

The study participants' demographic information is presented and discussed according to various themes. They are the age of women seeking maternal health care, age at first childbirth, education levels of the women, marital status and distance to the closest health centre. Note that the names used in the study are just pseudonyms.

### 4.1.1 Age of Women Seeking Maternal Health Care

Objective One of the research aimed to establish the relation between maternal health care access and maternal age. An analysis was done on the age of women who sought maternal health care services. Table 4.1.1 indicates the age distribution of women participants seeking maternal health care who took part in the research. The results indicated that 23 participants (15.3%) were aged between 18-22 years, 47 respondents (31.3%) were aged between 23-27 years, 43 respondents (28.7%) were aged between

28-32 years, 23 respondents (15.3%) aged between 33-37 years while 14 respondents representing 9.3% were aged between 38-45 years.

A total of 150 respondents participated in this research as indicated in Table 4.1.1 below;

**Table 4.1.1 Age Distribution of Women Respondents Seeking Maternal Health Care**

| Age group | Frequency | Percentage |
|---|---|---|
| 18-22 | 23 | 15.3 |
| 23-27 | 47 | 31.3 |
| 28-32 | 43 | 28.7 |
| 33-37 | 23 | 15.3 |
| 38-45 | 14 | 9.3 |
| Total | 150 | 100.0 |

The research results indicated that majority of the women who sought maternal health care were aged between 18-32 years. This could be explained from the fact that at this age is when majority of women give birth. Moreover, the research findings revealed that the highest percentage of mothers fell between the ages of 23-27 years. This translates to 31% of the total number of women who sought maternal health care. Women in their mid-late 20s and early 30s comfortably seemed to seek the services. This may be associated with their exposure education and other obstetric experiences; thus, they know the services they need and they also know what to go for. At this age, majority are through with their studies and probably married.

The age of the women seeking maternal health care maybe a proxy for amassed awareness on the significance of maternal health care services which impacts positively the uptake and use of maternal health care services (Chakraborty et al., 2003). However, due to highly developed modern medicine and improved opportunities for learning, women who are young maybe more knowledgeable

regarding modern maternal health care and thus, seek maternal health care services more (Morgan et al., 2017). This is also supported the Pathway Theory views as advanced by Kroeger (1983). Relatively young women have more access to developing knowledge in medical field. Therefore, being informed influences access as the theory proposes.

One respondent noted that;

> *At my age I get informed nearly every day on the current trends in health and news to a larger extent. Also, given, my age I can make decisions about my health and that of my children without depending so much on others since I can comfortably use the social media (An Oral Interview with Kamene, aged 30 years on 8/07/2021).*

Further, according to the findings, mothers in their early 20s were fewer compared to those in their late 20s. This might have been occasioned by the society's view that at this age women are not expected to bear children and if they do, their decision making is dependent on others. The husband and significant others such as the mother-in-law control the young mothers to the extent of dictating to them what to do when pregnant or even after birth.

One respondent reported that,

> *When I was newly married my mother-in-law commanded everyone around at home. My husband could not even make a decision to take me to hospital before consulting the mother. Due to my age, I was naïve and I could not challenge them. Some decision on my pregnancy were wrong but I could not oppose them (OI with Kambua, 30 years old mother on 8/07/2021).*

One of the teenager mothers said that;

> *Most of us shy away from health facilities due to societal stigma. We are perceived to be minors who are supposed to be in school yet we are expectant (OI with Kataa, 18 years old mother on 30/06/2021).*

Another teenager mother claimed that;

> *In hospitals, we are mistreated by the health officials who abuse and mishandle because of our age. This makes many of us not to seek maternal health care due to shame (OI with Musangi, 18 years old mother on 2/7/2021).*

Teenager mothers (18-19) were evidently few as many shy away from seeking maternal health care due to stigma associated with early pregnancy. Some may be school going children who even conceal the pregnancy until late stages. Some attend antenatal clinic once or twice then the due date arrives. Moreover, teenager mothers may come from polygamous families where resources are limited. Thus, family structures play a role as the girls are voiceless and get less care in such settings. Women's age at the first birth also played a critical role in utilization and maternal health care access as discussed in the sub-theme that follows.

#### 4.1.1.1 Age of Women Seeking Maternal Health Care at First Birth

The researcher interviewed women who sought maternal health care for further analysis. Table 4.1.2 shows age of the women seeking maternal health care at first child birth. More women (N=67, 44.7%) had their first child while aged between 23-27 years while some (N=9, 6%) had their first child when they were aged 33-45 years. The findings further revealed that 42 women (28.0%) had their first child while they were aged between 18-22 while 23 women (15.3%) had their first child at 28-32 years.

**Table 4.1.2 Age of Women Seeking Maternal Health Care at First Child Birth**

| Age group | Frequency | Percentage |
|---|---|---|
| 18-22 | 42 | 28.0 |
| 23-27 | 67 | 44.7 |
| 28-32 | 23 | 15.3 |
| 33-37 | 9 | 6.0 |
| 38-45 | 9 | 6.0 |
| Total | 150 | 100 |

The highest frequency was 23-27 years at 44.7% as seen in Table 4.1.3. Evidently, there was a sharp increase in the mean age of women when giving birth to their first child. The women's age at the time of the first birth can determine the experience of women's chances to seek health care services. Those aged from 23-27 years were the highest number due to the fact at this age one is expected to have completed their education and already married. They also seemed confident seeking these services since the society expects them to be procreating. The numbers decrease as the women advance in age (38-45) implying that less women give birth at this age bracket. Besides, those at the upper age limit may feel uncomfortable seeking maternal health care as the society expects their children to be the ones giving birth.

For instance, research done in Japan indicated that women who had advanced in age at first child birth related negatively to prenatal outcomes such as low birth weight which results to ineffective foetal growth, preterm birth and placental abruption (Koshida, et al., 2019). Therefore, women at an advanced age at their first child birth were at a higher risk if they failed to seek maternal health care because of complications like; obstructed labour, cephalopelvic disproportion, preterm birth or Vesico vaginal fistula. This shows the impact of age on childbirth which has a negative influence on maternal health care access as the research established. The

researcher also examined the education level of respondents seeking maternal health care.

#### 4.1.1.2 Clinical Health Officers' Perspective on Mother's Age on Access to Maternal Health Care

The research further sought to obtain the views of clinical health officers on the effect of women's age on maternal health care access. The findings are as shown on Table 4.1.3 below.

**Table 4.1.3 Influence of Mother's Age on Access to Maternal Health Care**

| Response | Frequency | Percentage |
|---|---|---|
| Very large extent | 1 | 20 |
| Large extent | 3 | 60 |
| Does not influence at all | 1 | 20 |
| **Total** | **5** | **100** |

The research results shown in Table 4.1.3 revealed that 60% of the clinical health officers noted that women's age influenced maternal health care access to a large extent while 20% noted that the mother's age influenced access to maternal health in very large extent. Conversely, 20% of clinical health officers were of the view that woman's age did not impact access to maternal health care. The results indicated that women's age had a significant effect on their seeking maternal health care and therefore a clear sign that women at different age brackets had varied experiences when accessing these services.

CHO A confirmed that;

> *It influences to a large extent because women of reproductive age below 19 years need more care than elderly women.*

In a rejoinder CHO B noted that;

> *Teenage mothers do not access maternal health care due to fear.*

Another CHO B observed that*;*

> *Majority of women seeking maternal healthcare services are middle aged and educated.*

CHO C in affirmation noted that;

> *Very young aged girls may develop complications during labour and delivery. This is also the case with women approaching menopause.*

Additionally, CHOs were asked to describe their experiences with mothers at different age brackets. In this regard, CHO D noted that;

> *It is not easy to deal with young mothers seeking maternal health care but when everything is explained clearly to them, they understand and can be very co-operative.*

CHO E noted that;

> *It is easier to serve or deal with middle-aged mothers than teenage mothers. Middle age mothers are comfortable with pregnancy and thus comes out to seek services without any reservations*.

According to the CHOs' views they felt that middle aged women seemed focused and willing to share their maternal health experiences than the teenage mothers. Most of the teenage mothers were reported to shy from seeking maternal health care services since they thought that that their pregnancy was unwanted by the society and this made them uncomfortable.

CHO B concurred noting that:

> *It is easy to deal with young mothers because most of them are educated and don't have much of cultural behaviours or stereotypes. Most of the aged mothers are tied to some believes like that of red eyed people; one should not interact with when pregnant as they potent bad omen.*

CHO D however noted;

> *Most of the teenage mothers do not co-operate well with health care givers because of their level of understanding and stigma associated with early pregnancy. Different age groups perceive maternal health care differently. The young mothers seem to understand the need for these services better than those advanced in age.*

These responses confirm the extent to which maternal health access is influenced by the age at which a mother gives birth. Therefore, a mother's age is viewed as a key factor in deciding whether to seek maternal health services or not. At different ages mothers feel either comfortable or uncomfortable seeking these services.

#### 4.1.1.3 Results of Women Seeking Maternal Health on the Influence of their Age on Access Maternal Health Care

The researcher requested women who sought maternal health care to indicate their age. The data on age and accessibility to maternal health care services were analysed using a cross tabulation. The findings of the cross tabulation are shown in Table 4.2.24.

**Table 4.1.4 Age of Women Seeking Maternal Health Care Influence on Access to Maternal Health Care**

| Age group | Accessible | Slightly accessible | Difficulty in accessible | Total | $\chi^2$ |
|---|---|---|---|---|---|
| 18-22 | 23(100%) | 0(0%) | 0(0%) | 23 (100%) | 212.18 |
| 23-27 | 36 (76.6%) | 11 (23.4%) | 0(0%) | 47 (100%) | |
| 28-32 | 0(0%) | 43 (100%) | 0(0%) | 43 (100%) | 0.0001 * |
| 33-37 | 0(0%) | 14 (60.9%) | 9 (39.1%) | 23 (100%) | |
| 38-45 | 0(0%) | 0(0%) | 14 (100%) | 14 (100%) | |
| Total | 59 (39.3%) | 68 (45.3%) | 23 (15.3%) | 150 (100%) | |

*Values in parenthesis is the Chi-Square significance level
6 degrees of freedom (df)

Table 4.1.4 shows that 23(100%) women seeking maternal health care who were aged 18-22 years indicated that health care was accessible while none of the respondents did not report difficulty in access to health care. 36 (76.6%) of the respondents aged 23-27 years highlighted that maternal health care health was accessible while 11 (23.4%) of the study participants reported that maternal health care was slightly accessible and none (0%) of the respondents reported difficulty in accessing maternal health care (Table 4.1.4). All (N=43, 100%) women seeking maternal health care who were aged between 28-32 years reported that maternal health was slightly accessible (Table 4.1.4). Fourteen (60.9%) and 9 (39.1%) of the women seeking maternal health services aged between 33-37 years reported slight and difficulty in accessing maternal health care, respectively. All respondents (N=14, 100%) who were aged between 38-45 years indicated that maternal health care access was difficult (Table 4.1.4).

The Pearson Chi-square test results revealed that the Chi-square statistic was 212.18, with 6 degrees of freedom and a p-value 0.0001. The p-value is of the Pearson Chi-square ($p=0.0001$) is statistically significant given that the P-value is less than 0.05. Hence, an association that is significant between health care access and the age of the women who sought maternal health services existed.

These research findings are in congruence with Adamu (2008) study that maternal age as a variable is significant in the determination of uptake and usage levels of health facilities. Further, Adamu argues that younger women are more likely to experience pregnancy and childbearing related complications. The research further gave the extent to which age affects access to maternal health care in form of percentages as

shown. Therefore, the age of a woman determines the safety of delivery and physical growth, self-acceptance and willingness to seek and access medical services.

### 4.1.2 Education Level of Women Respondents Seeking Maternal Health Care

An analysis of the education levels of women seeking maternal health care services was done. Table 4.1.5 presents the education levels. The results of the research revealed that, 30 participants (20%) had no formal education, 100 respondents (66.7%) had primary education, 19 respondents (12.7%) had secondary education while 1 respondent (0.7%) had tertiary education as presented in Table 4.1.5 below.

**Table 4.1.5 Education Level of Women Respondents Seeking Maternal Health Care**

| Education level | Frequency | Percentage |
|---|---|---|
| No formal education | 30 | 20 |
| Primary | 100 | 66.6 |
| Secondary | 19 | 12.7 |
| Tertiary | 1 | 0.7 |
| Total | 150 | 100 |

Table 4.1.5 above indicated that most of the women had at least attained primary school level of education. The education level of those seeking maternal health care services has been reported to positively impact uptake and utilization of maternal health care provision (Gao & Kelley, 2019). The positive influence between the education level and women who seek maternal health care could be attributed to the concerted by the medical fraternity in raising awareness levels of the services, their availability and associated costs in addition to the little education they have (Wulandaria & Laksonob, 2020). Women who have some level of education are aware of the problems related to failure to seek maternal health care services.

Therefore, they would effectively use the information they have to obtain maternal health services (Mwilike et al, 2018).

However, the study having been carried out in a remote area, the education levels were low given the socio-economic activities and high poverty index in the County (63.1%) compared to the national average of 41.9% and an increase from 47.5% in 2019 (Mwanangi and Manyanza, 2023). The high number of women seeking maternal health services were less educated meaning that majority did not proceed with their education due to early marriage or pregnancy. Evidently then, education has a significant role to play as it informs the availability of services and even the resolve to access them.

During the interviews ones of the respondents said that,

> *It is in school where I learned about the importance of attending clinics when expectant and even after birth to ensure my child grows healthy. (OI with Mutio, a 32-year-old mother on 2/7/2021).*

In a rejoinder another respondent noted that,

> *I have a friend who doesn't attend clinics because she has never been to school. She believes that the traditional birth attendant is capable of helping her during pregnancy and delivery (OI with Vaati, 43 years old mother on 30/6/2021).*

The study found out that those who had attained at least some education even if it was it was primary level understood that it was very essential to seek maternal health care more than the illiterate ones. Out of the 150 respondents only 30 without formal schooling sought the services. Comparatively, it meant a higher number of those who sought the services had some formal schooling where they learned the importance of maternal health care.

Moreover, Pathway theory by Kroeger (1983) advances that education to a very large extent determines health care access. This is clearly evident since educated women participants in the study accessed maternal health care more than the less educated ones.

The CHOs' opinion on whether a relationship existed between maternal health access and the level of education of expectant mothers was sought. The findings are presented and discussed below.

#### 4.1.2.1 Clinical Health Officers' Perspective on Mother's Education Level and Maternal Health Care Access

In order to gain insights into the perspectives of the CHOs on the role of expectant mothers' education level and maternal health care access, the CHOs were requested to indicate their views. The findings are presented in Table 4.1.6

**Table 4.1.6: Influence of Mother's Education Level on Access to Maternal Health Care**

| Response | Frequency | Percentage |
|---|---|---|
| Very large extent | 3 | 60 |
| Large extent | 1 | 20 |
| Little extent | 1 | 20 |
| **Total** | **5** | **100** |

The findings showed that 60% of the CHOs noted that mother's levels of education influenced maternal health care access to a very large extent, while those who indicated a large extent and little extent were both at 20.0%. Further, most of the CHOs perceived mother's education level as a significant factor that influenced access to maternal health care in Mutito Sub-County, Kitui County. These results agree with Agha (2008) study which established that education is one of the most vital

correlates of good health. That a mother's schooling level determined maternal health care access. Accordingly, expectant mothers' education level could improve their ability so chose better healthy lifestyles rather than relying upon the provided healthcare services. The research further noted that through literacy improvements there was an increased desire and the actual utilization of maternal healthcare services.

In addition, the CHOs were asked to highlight some of the ways mother's level of education influenced access to maternal health care. The results showed that the mothers' levels of education influenced maternal health care access as illustrated below.

CHO A said that;

> *Mothers with low levels of education take time to understand what is expected of them.*

CHO B said that;

> *Some of the mothers whose education levels are low fail to answer critical health questions regarding them.*

CHO C observed that*;*

> *Mothers who have higher education levels are always more persistent when seeking maternal health care as compared to their compatriots with low education.*

CHO D was of the view that*;*

> *If mothers are not educated, they don't even know the importance of hospital deliveries.*

CHO E indicated that;

> *Mothers with low levels of education have difficulties following what they are taught by clinical health officers.*

#### 4.1.2.2 Results on Education Level of Women Seeking Maternal Health Care Influence on Maternal Health Care Access

Data on education collected from women seeking maternal health services was cross tabulated with maternal health care access. Table 4.1.7 presents results on the influence of education level of women seeking maternal health on maternal health care access.

**Table 4.1.7 Education Level of Women Seeking Maternal Health Care Influence on Maternal Health Care Access**

| Education level | Accessible | Slightly accessible | Difficulty in accessible | Total | $\chi^2$ |
|---|---|---|---|---|---|
| No formal education | 30 (100%) | 0(0%) | 0(0%) | 30 (100%) | 180.67 |
| Primary | 29 (29%) | 68 (68%) | 3 (3%) | 100 (100%) | |
| Secondary | 0(0%) | 0(0%) | 19 (100%) | 19 (100%) | 0.0001* |
| Tertiary | 0(0%) | 0(0%) | 1 (100%) | 1 (100%) | |
| Total | 59 (39.3%) | 68 (45.3%) | 23 (15.3%) | 150 (100%) | |

*Values in parenthesis is the Chi-Square significance level
6 degrees of freedom (df)

All 30 (100%) women who sought maternal health care who had no formal education reported they had access to maternal health. Twenty-nine (29%), 68 (68%) and 3 (3%) of the participants who attained the primary level of education reported that access to maternal health care was accessible, slightly accessible and difficulty in accessibility, respectively. All the women (N=19, 100%) seeking maternal who had secondary level education indicated difficulty in accessing maternal health. Women seeking maternal health services (N=1, 100%) who had tertiary level of education reported that access to maternal health was difficult.

To test whether there was any association that was significant between mothers' level of education and maternal health care access, the Pearson Chi-square test was run. The results revealed 180.67 Chi-square statistic with 6 degrees of freedom and a 0.

0001 p-value. With a p-value of less than 0.05, the study concluded that there existed a positive significant relation between health care access and the mothers' education level when seeking maternal health services.

These study results concur with a research by Royston's (2003) that women who have some level of education understand the physiology of reproduction and the related risks one can be exposed to if they fail to attend antenatal clinics. Therefore, they will ensure that they attend these clinics unlike the uneducated women. Moreover, women who are educated are less likely to accept dangerous practices which purport to alleviate pregnancy related complications. Equally, mothers whose level of education is low are more likely to fail seeking health services given that they may not even be aware that such health services exist. Most probably, the culture of modern health care facilities scares and alienates them. Hence, they will stay away from them leading to low access to the services.

These findings concur with the Pathway Theory which asserts that the more an individual is informed the more he/she uses social services. Therefore, higher levels of educational level translate to increased levels of seeking and utilization of maternal health care services. Equally, the distance covered to the closest health facilities may hinder access to maternal health care.

Women's marital status further had a role to play regarding maternal health care access as discussed in the sub-theme that follows.

### 4.1.3 Marital Status of Respondents Seeking Maternal Health Care

The results in this research revealed that marital status affected maternal health care access as discussed in the preceding sub-section.

Table 4.1.8 indicates that majority of the women participants who sought maternal health services (N = 105, 70%) were married, 30 respondents (20%) were single while a minority (N= 15, 10 %) were widowed.

**Table 4.1.8 Marital Status of Respondents Seeking Maternal Health Care**

| Marital status | Frequency | Percentage |
|---|---|---|
| Married | 105 | 70 |
| Single | 30 | 20 |
| Widowed | 15 | 10 |
| Total | 150 | 100 |

The results revealed that most of the research participants who sought maternal health care services were married. This means they may have been supported by their spouses to seek these services. This indicates the combined efforts of the spouses to access health care. It may also imply more resources accruing from the combined efforts of the spouses. Out of this, there are resources to finance any extraneous cost out of the access. Kroeger (1983) on the Pathway Theory argues that socio-economic status is a factor that impacts utilization of social amenities. Thus, married women sought maternal health care more than the single or the widowed ones. This implied that decision making involved both parties and hence, the associated costs were easily taken care of.

The economic dynamics also affected single mothers leading to low usage of maternal health services. A smaller percentage was recorded of those who were single and widowed at a combined 30%.

The study further investigated how the type of marriage impacted maternal health care access. Table 4.1.9 shows the type of marriage relationship the women participants seeking maternal health care were in. Out of the 105 married respondents, the largest

proportion of respondents (N=95, 90.5%) were in a monogamous marriage while the smallest proportion (N=10, 9.5%) were in a polygamous marriage relationship.

**Table 4.1.9 Type of Marriage Women Seeking Maternal Health Care were in**

| Type of marriage | Frequency | Percentage |
|---|---|---|
| Monogamous marriage | 95 | 90.5 |
| Polygamous marriage | 10 | 9.5 |
| Total | 105 | 100 |

One of the respondents noted that;

> *Some women noted that monogamy eases the cost of support of mothers as they seek maternal health care because there is more direct negotiation between the two. Those in polygamous marriages noted petty differences, rivalries and scramble for the few resources from one provider (husband) may find it difficult to afford and access the cost of catering for their obstetrical needs as recommended (OI with Mulekye, 38 years old mother on 2/7/2021).*

The researcher further investigated the effect of spouses who lived together on access to maternal health care. Table 4.1.10 indicates the respondents' views on living with their spouse. Out of the 150 married respondents, majority (N=100, 95%) were living with their spouse while the minority (N=5, 5%) were not living with their spouse. Respondents who did not live with spouses highlighted that the spouses had moved to urban areas in search of employment opportunities.

**Table 4.1.10 Married Respondents Living with Spouse**

| Living with spouse | Frequency | Percentage |
|---|---|---|
| Yes | 100 | 95 |
| No | 5 | 5 |
| Total | 105 | 100 |

Most of the married respondents at 95% lived with their spouses. This indicated that they may have been influenced by their spouses to seek maternal health services. This combined effort eventually resulted to increased levels of access to maternal health care.

Table 4.1.11 presents results on the effect of marital status on the number of children women seeking maternal health care would give birth to. According to the findings, 120 respondents (80%) indicated that their marital status influenced the decision on the number of children born while the minority (N=30, 20%) highlighted that their marital status did not influence the decision on number of children they bore.

**Table 4.1.11 Marital Status Influence on Number of Children Born**

| Marital status influence on number of children born | Frequency | Percentage |
|---|---|---|
| Yes | 120 | 80 |
| No | 30 | 20 |
| Total | 150 | 100 |

For a long time, maternal health access and services have been perceived predominantly as a feminine affair. Until recently, men involvement in issues of maternal health care has not received any serious focus. The first endorsement to get men engaged in maternal health care issues took place in Cairo, in 1994 during the International Conference on Population and Development (ICPD) (Cohen & Richards, 1994). Hence, the idea to involve men in maternal health care and reproductive health is a concept that is relatively new. Kinanee and Ezekiel-Hart (2009) argue that in maternal health, men partners have a significant role to play which cannot be overlooked.

Ganile et al. (2015) argue that husbands/male partners play a crucial role in encouraging or discouraging their wives to seek maternal health care. They further observe that the opinions and values held by husbands/male partners affect the decision to seek maternal health care services. Sumankuuro et al. (2019) are of the opinion that, how the husband/ male partner perceives access and uptake of maternal health greatly influences the decision the women make on whether to seek and utilize maternal health care provided.

It was evident from the research findings that the type of marriage affected maternal health care access. Respondents claimed that mothers in a polygamous marriage missed maternal health appointments due to financial constraints and family structure. The researcher also sought to establish how distance covered to the closest health facility, transport costs and consultation fee affected access to maternal health care.

### 4.1.4 Distance to Health Facility Covered by Women Seeking Maternal Health Care

Objective three of the study sought to establish how distance covered to closest health facility and transport expenses affected maternal health access. Distance is an indicator that affects maternal health care access. This is demonstrated in Table 4.1.12 below.

In this study, it was established that most (N=60, 40%) of the participants seeking maternal health care covered a distance of 4-5 kilometres while few (N=20, 13.3%) covered a distance of 0-1 kilometres in order to reach a health facility that offered maternal health care. The study further revealed that 40 (26.7%) covered 2-3 kilometres while 30 (20%) covered over 6 kilometres to the nearest health facility that offered maternal health care as shown in Table 4.1.12.

**Table 4.1.12 Distance from Home to the Nearest Health Facility of Respondents Seeking Maternal Health Care**

| Distance from home to the nearest health facility | Frequency | Percentage |
|---|---|---|
| 0-1 Km | 20 | 13.3 |
| 2-3 Km | 40 | 26.7 |
| 4-5 Km | 60 | 40 |
| >6 Km | 30 | 20 |
| Total | 150 | 100 |

The distance covered by women seeking maternal health care definitely impacts access to maternal health care. In the study area, typical of rural areas maternal health utilization was impacted by the long distance to the closest health care facility. This concurs with Lohela et al. (2012) findings of a research carried in Malawi and Achana et al. (2015) done in Ghana respectively. Both studies reported that long distances covered by the women seeking maternal health between their homes and the nearest health facilities discouraged them from seeking maternal health care and other related services. Thus, distance as hindrance to maternal health care access was established.

A woman seeking maternal health opined that;

> *The mothers whose places of residence are very far away from the health facilities find it hard to access maternal health care. Sometimes mothers may not have money to enable them access the facilities leading even to home births (OI with Wayua, 42 years old mother on 30/6/2021).*

Another respondent claimed that,

> *Fare so as to cover the kilometres to health facilities has been a factor making mothers not to seek maternal health care. Bodaboda being the only available means of transport in most areas charge highly yet economically most people in the area are challenged (OI with Mutindi, 28 years old mother on 8/7/2021).*

Mothers who lived in far-flung areas away from the health facilities complained of having challenges due to poor infrastructure especially during the wet season, availability of means of transport and cost of transportation. “Bodaboda” being the readily available means of transport was said to be unreliable and risky to expectant mothers. Respondents who stayed close to the health facilities easily accessed services whereas those living far away only came to the facilities when emergencies arose. Many home births were reported in such areas. This resulted in complications during

delivery, high mortality and morbidity rates. Thus, distance was established as a hindrance to access to maternal health care in the area of study.

Table 4.1.13 highlights the findings. The research established that majority (N=68, 45.3%) of women who sought maternal health care were slightly affected by distance covered to the nearest heath facility while a minority (N=23, 15.3%) reported that they were affected adversely by the long distance they covered to the closest health facility. Additionally, 59 (39.3%) participants indicated that distance affected them slightly.

**Table 4.1.13 Level of Distance Hindrance to Access Maternal Health Services**

| Level of distance hindrance to access maternal health | Frequency | Percentage |
|---|---|---|
| Does not affect at all | 59 | 39.3 |
| It affects slightly | 68 | 45.3 |
| It affects adversely | 23 | 15.3 |
| Total | 150 | 100.0 |

The analysis on Table 4.1.13 agrees to a greater extent with findings on Table 4.1.12 given that most of the research participants seeking maternal health stayed relatively close to the maternal health facility. On the other hand, few respondents stayed more than 6 kilometres away from the health facility. Those respondents who stayed more than six kilometres away from the health care facilities faced the challenge of distance; hence, were more likely to be hindered from accessing them.

CHOs gave their opinions on the influence of distance covered to health facilities and the impact it had on mothers' access to maternal health services. The findings are discussed below.

#### 4.1.4.1 Clinical Health Officers' Perspective on Distance to Health Centres

The CHOs were asked to score the extent distance from the homes of women seeking the maternal health facility affected the women's access to maternal health care.

The research results are highlighted on Table 4.1.14.

**Table 4.1.14: Influence of Distance to Health Centres on Women's Access to Maternal Health Care**

| Response | Frequency | Percentage |
|---|---|---|
| Very large extent | 1 | 20 |
| Large extent | 2 | 40 |
| Little extent | 1 | 20 |
| Very little extent | 1 | 20 |
| **Total** | **5** | **100** |

The study showed that 40.0% of the CHOs noted that the distance to the health centres impacted access to maternal health care by the women to a large extent, 20.0% said that distance to the health centres influenced them to a very large extent while 20.0% indicated that distance covered to the health centres influenced women's maternal health care access to a little extent and another 20% to a very little extent. These findings indicated that CHOs perceived that the distance to the health centres greatly determined access to maternal health care in Mutito Sub-County, Kitui County. These results agree with Rashid, Afsana and Begum (2014) study that mothers whose residences are in far-flung areas away from healthcare centres are more reluctant to seek maternal health services than those who live closer to them.

To gain a deeper understanding, the researcher asked CHOs to describe ways in which the distance to health centres influenced maternal health care access. Their responses revealed that the distance covered to the health centres was a key determiner when

women sought to access maternal health care services in Mutito Sub-County, Kitui County.

CHO A noted that*;*

> *Because of long distances to the hospital, some mothers end up having home deliveries or worse still delivering on the way while trying to access health centres.*

CHO B observed that*:*

> *Difficulty of access of the health facilities due to lack of transport means has led to home deliveries which are prone to birth complications.*

CHO C stated that*:*

> *Most women are unable to access medical facilities because of the challenge of transport and lack of money.*

CHO D asserted that*:*

> *Long distances reduce access since available means of transport is motorcycles popularly referred to as "boda boda" which are in most cases expensive and not suitable for major emergencies as the patient cannot be attended to while on transit.*

This was an indication that most mothers were limited in accessing maternal health care due to the long distance to and from health facilities which was a hurdle. Low access to maternal health is thus largely associated to distance as the few health facilities in this remote part of Kitui County are far placed from the general population.

#### 4.1.4.2 Results of Women Seeking Maternal Health Distance from Home to the Nearest Health Facility Influence on Access to Maternal Health Care

So as to gain insights on the relationship between the distance covered to the closest health centre and how it influences access to maternal health care, the researcher ran

cross tabulation analysis between the distance and maternal health access. To test the influence, the researcher did a chi-square test.

The findings are shown in Table 4.1.15 below.

**Table 4.1.15 Distance from Home to the Nearest Health Facility of Women Seeking Maternal Health Care Influence on Access to Maternal Health Care**

| Distance | Accessible | Slightly accessible | Difficulty in accessible | Total | $\chi^2$ |
|---|---|---|---|---|---|
| 0-1 Km | 20 (100%) | 0(0%) | 0(0%) | 20 (100%) | 248.53 |
| 2-3 Km | 39 (97.5%) | 1(2.5%) | 0(0%) | 40 (100%) | 0.0001* |
| 4-5 Km | 0(0%) | 60 (100%) | 0(0%) | 60 (100%) | |
| >6 Km | 0(0%) | 7 (23.3%) | 23 (76.7%) | 30 (100%) | |
| Total | 59 (39.3%) | 68 (45.3%) | 23 (15.3%) | 150 (100%) | |

*Values in with asterisk is the Chi-Square significance level
6 degrees of freedom (df)

Twenty (100%) of the research participants who sought maternal health services whose distance to the nearest maternal health facility was 0-1 Km reported they had easy access to the maternal health centre. Women who sought maternal health care who resided 2-3 Km to the maternal health facility reported having access (N=39, 97.5%) and slight access (N=1, 2.5%) to maternal health care centre. Out of the 60(100%) women seeking maternal health care who lived 4-5 Km away from the maternal health facility, all reported that the maternal health centre was slightly accessible. Out of the 30 women who 6 Kilometres to access a maternal health centre, majority (N=23, 76.7%) reported slight accessibility while the minority (N=7, 23.3%) reported difficulty in accessibility of maternal health facility.

To answer the question as to whether there existed any significant relationship between access to maternal health and distance to the nearest health centre, the Pearson Chi-square test was ran. The Pearson Chi-square statistics obtained was

248.53, with 6 degrees of freedom and a p-value 0. 0001. Therefore, the study drew a conclusion that there existed a relationship that was significant between distance from home to the closest health facility and accessibility to maternal health care by mothers who sought the maternal services because the p-value was less than 0.005.

These findings concur with Sauerborn, et al. (2015) study which was done in Cameroon. The results revealed that the women's willingness to seek maternal healthcare services decreased to a great extent if they were faced with long distances to cover to and from the nearest health facilities.

Distance comes with a cost as discussed in the proceeding sub-theme.

### 4.2 Transport Cost Incurred by Women Seeking Maternal Health

Distance comes with a cost as established from the study's objective four**.** The research determined the existence of significant relation between the cost of transport and its influence on access to maternal health care. Transport costs for longer distances or during emergency may hinder mothers when trying to access maternal health care as the research found out. The available means of transport in the study site are boda boda (motorbike) and matatu. Boda boda provide door to door services in most parts of Mutitu Sub-County. Matatu are only available in the morning and evening hours. This makes boda boda an indispensable means of transport in the study site. The use of motorbikes come with challenges such as exposure to adverse weather conditions, high cost and even higher chances of accidents due to untrained riders.

Out of the 150 women seeking maternal health care, 113 (75.3%) incurred transport cost to the maternal health care facility while 37 (24.7%) did not incur any transport cost.

**Table 4.2.16 Transport Cost Incurred by Women Seeking Maternal Health Care**

| Transport cost | Frequency | Percentage |
|---|---|---|
| Yes | 113 | 75.3 |
| No | 37 | 24.7 |
| Total | 150 | 100 |

Whether or not a mother who seeks maternal health care incurs transport cost is highly depended on where they reside in relation to the distance covered to the health care centre. The findings in Table 4.1.15 therefore suggest that since most of the women seeking maternal health care were living beyond a four-kilometre radius, they actually needed transport to access the maternal health care facilities.

A respondent said;

> *I sometimes miss the appointment date because I lack the fare to pay for my transport. I cover over 10kms and it is impossible for me to walk all the way in my current situation even when I give birth (During an OI, Katheo, 19 years old mother on 8/7/ 2021).*

Another respondent opined that,

> *This area has very few health facilities such that one must look for means of transport to access them. Take for example the distance from Endau to the next facility at Malalani is about 25kms. This means the distance comes with a given cost which may make some mothers opt out of the maternal health services (During an OI with Monika, 44 years old mother on 5/7/2021).*

The transport cost depended entirely on where one lived translating to distance one had to cover to the closest health centre. Due to economically hard times, a number of mothers couldn't afford to access maternal health services as required.

These findings conform to Hirose et al. (2015) finding that transportation costs can hinder women from accessing maternal health care. Moreover, Hirose et al. (2015) argue that the transportation cost becomes expensive when there is an emergency. Accordingly, the theoretical framework underpinning this study indicates that socio-

economic conditions determine access to social services. Those at the lower socio-economic level are challenged when accessing maternal health care given the transport cost.

### 4.2.1 The Influence of Maternal Health Facility Transportation Cost on the Access to Maternal Health Care

The research aimed to determine the influence transport cost had on maternal health care access. Out of the 113 (100%) respondents who incurred a transport cost when seeking maternal health care, 59 (52.2%) reported that maternal health care facility was accessible while 54 (47.8%) of the participants showed that the maternal health care facility was slightly accessible (Table 4.31). In contrast, out of the 37(100%) respondents who indicated that they did not incur transport cost, 14 (37.8%) reported that they had a slight access to the maternal health facility while 23 (62.2%) respondents disclosed that they had difficulty accessing maternal health services. This is evident in Table 4.2.17 presented here after.

**Table 4.2.17 The Influence of Maternal Health Facility Transportation Cost on the Access to Maternal Health Care**

| Transport cost | Accessible | Slightly accessible | Difficulty in accessible | Total | $\chi^2$ |
|---|---|---|---|---|---|
| Yes | 59 (52.2%) | 54 (47.8%) | 0 (0%) | 113 (100%) | 90.17 |
| No | 0 (0%) | 14 (37.8%) | 23 (62.2%) | 37 (100%) | 0.0001* |
| Total | 59 (39.3%) | 68 (45.3%) | 23 (15.3%) | 150 (100%) | |

*Values in with asterisk is the Chi-Square significance level
2 degrees of freedom

To determine whether there existed a relationship that was significant between the transport cost incurred and access to maternal health care, a Pearson Chi-square test was done. The statistic results of 90.17, 2 degrees of freedom and a p-value of 0.000

was obtained. The findings obtained indicated that there existed a significant relation between transport costs and maternal healthcare access at 0.05 level of significance ($\chi^2$=90.17, 2 df, p=0.0001).

These findings are in congruence with a study done by Demery (2000) and Makinen et al. (2012). Both studies note that poor people fail to utilize public services due to demand and supply factors which force individuals to have money. Also, access to maternal health care can be affected by religious and social-cultural hindrances as shown below.

This observation showed that cost is a vital factor that is considered when accessing health care in Kenya. For instance, research prior to 2013 by Montagu et al. (2011) noted that women who are poor are three times more likely to give birth at their home than those who are able financially. Therefore, there is an overall positive influence of the reduced cost of health care (cost met by government) to women who access maternal health care. Nonetheless, in some cases mothers were able to meet costs such as the transportation cost which made the maternal health care inaccessible (Treacy et al., 2018).

Any expense that comes with health services means less access. It is evident that low access could be associated to payments done before free maternal health care was introduced in the public health facilities.

Consultation fee was also seen as a hindrance to access as discussed below.

### 4.2.2 Consultation Fee Paid by Women Seeking Maternal Health Care

Consultation fee also played a role impacting women who sought maternal health care as the findings below indicated. Table 4.2.18 presents consultation fee the women incurred while seeking maternal health care. About 86.7% (N=130) women seeking maternal health care highlighted that they had paid a consultation fee while 13.3% (N=20) did not pay a consultation fee.

**Table 4.2.18 Consultation Fee Incurred by Women Seeking Maternal Health Care**

| Consultation fee | Frequency | Percentage |
|---|---|---|
| Yes | 130 | 86.7 |
| No | 20 | 13.3 |
| Total | 150 | 100 |

In June, 2013, in an attempt to enhance affordability and maternal health care access, the Government of Kenya (GoK) abolished all fees associated with maternity care. But most respondents claimed to have paid consultation. Other respondents sought services from AIC Zombe Mission Hospital which is a private entity and they had to pay. This was occasioned by lack of services or medicine in the nearby Zombe Hospital which is a government facility.

A respondent commenting on consultation fee said;

> *We don't pay for the services nowadays except for a small amount like 50 shillings for the clinic booklet. We appreciate the government's initiative though it has come with other challenges like poor services. (OI with Kalinae, 26 years old mother on 30/6/2021).*

The few who did not pay said they had lacked the small fee due to economic hard times. It was reported that this hindered them from accessing maternal health care services to some extent since some services were offered to them with at a fee. However, most respondents complained about challenges they faced like lack of

personnel, unavailability of drugs and other necessities. Despite all these challenges, the Ministry of Health (MoH) 2020, reported that maternal services access increased from about 60% to 80% by 2021. The study utilized two indicators to measure the cost; the transportation cost and the hospital bill. In all the instances, the respondents visited a government hospital. During the maternal health facility visit, some respondents (86.7%) were required to pay consultation fee but not the maternity fee as earlier shown in Table 4.2.18.

Moreover, the study established the CHOs' views on the effect of cost on maternal health access.

### 4.2.3 Clinical Health Officers' Perspective on Cost and Access to Maternal Health Care

In order to ascertain the influence of cost on maternal health care access, CHOs were asked to score to what extent they believed cost influenced access to maternal health care. The research findings are as highlighted on Table 4.2.19 below.

**Table 4.2.19: Cost and Access to Maternal Health Care**

| Response | Frequency | Percentage |
|---|---|---|
| Very large extent | 2 | 40 |
| Large extent | 2 | 40 |
| Little extent | 1 | 20 |
| **Total** | **5** | **100** |

The research findings revealed that 40% of the CHOs were of the view that cost influenced the ability of the mothers in accessing maternal health care to a very large extent, 40.0% of the CHOs said that cost influenced to a large extent while 20.0% were of the view that it was to a little extent. This finding indicates that most of the CHOs perceived that the health care cost significantly influenced mothers' maternal health care access in Mutito Sub-County, Kitui County. This finding agrees with

Makinen et al. (2012) research that transportation costs can be prohibitively high when there is no option of walking. They noted that the cost of transportation for a roundtrip bus ticket to a hospital went as high as $60, which was beyond the reach of many; therefore, many families were discouraged from seeking medical care in Tanzania (Magadi, 2014).

The researcher asked CHOs to explain how the cost of health care influenced women's maternal health care access. The responses obtained showed that the transport cost significantly impacted the mothers' access to maternal health care. Therefore, the study results identified transport costs as posing a great barrier inhibiting access to maternal health care.

CHO A noted that;

> *Lack of money makes women not to access maternal health care on time.*

CHO B observed that;

> *Most women in the sub county have minimal income and therefore cannot afford going to the hospital and instead prefer home delivery.*

It was further established that in most cases, the means of transport available were motorcycles which were not suitable and safe for transporting women in need of emergency treatment. They are often involved in accidents leading to serious injuries or even death. They were also expensive as compared to other means of transport; this hindered the mothers' ability when accessing maternal health care.

The current study further revealed that the cost of treatment including related medical procedures prevented women from accessing or seeking maternal health care.

CHO C observed that;

> *The caesarean section is only done in Kitui Referral Hospital. The cost of transport more so in an emergency situation is expensive and many women who are seeking maternal health care services may not afford.*

Furthermore, the CHO observed that:

> *Some procedures such as caesarean section are expensive and they require extra care; hence, this may lead to some women dying at home whereas they could have been saved at hospital.*

The cost of medicine was also identified as another barrier preventing women from seeking maternal health care since some cannot afford or they might have exhausted the available resources.

CHO D argued that*;*

> *Expensive medication is not affordable to all women and therefore limits access to quality maternal health care. Moreover, not all medicine is affordable to the low-income mothers.*

CHO E added that:

> *Due to inadequate funds, most health facilities end up with no medicine further curtailing women's ability to access to maternal health care.*

However, another respondent noted that the cost of medicine was not a barrier for mothers trying to access maternal health care because of the free maternity provided in government health facilities. This may have been true but the related costs were a challenge coupled with the few available public health facilities and inadequate medical supplies in the government hospitals made the respondents procure them from private pharmacies.

Another cost incurred when seeking maternal health care identified by the respondents was the consultation fees charged by some hospitals.

CHO A noted that;

*Some hospitals charge high consultation fees leading to low rates of accessibility to maternal health care among mothers.*

Nonetheless, it was observed that in most public health facilities, patients were not required to pay consultation fees under the free maternity services program. This had a positive impact on access though some respondents sought services in private facilities where services were better.

The last cost which was established to limit mothers' access to maternal health was occasioned by admissions fees. This happened when a mother had to be admitted for observation or was due.

CHO B observed that;

*Some health facilities charge high admission fees which hinder some clients from accessing maternal health care.*

It was however noted that in most public health facilities, women were not charged admission fees and therefore it was not viewed as a hindrance that curtailed women from accessing maternal health care. But after giving birth, mothers were expected to foot the medical bill before being released. Moreover, other women sought maternal health services in private health facilities and they were required to pay for every service offered.

### 4.2.4 The Influence of Maternal Health Facility Consultation Fee on the Access to Maternal Health Care

The research aimed to determine if consultation fees influenced maternal health care access. Table 4.2.20 presents results on influence of maternal health facility consultation fee on maternal health care access. Out of the 130 respondents that reported paying consultation fee, 59 (45.4%) indicated that maternal health care was

accessible to them, 68 (52.3%) reported that the maternal health facility was slightly inaccessible while 3 (2.3%) indicated that they had difficulty accessing the maternal health facility. On the other hand, all the respondents (N=20, 100%) who did not pay consultation fee reported no being hindered when they sought access to maternal health care.

**Table 4.2.20 Influence of Maternal Health Facility Consultation Fee on the Access to Maternal Health Care**

| Consultation Fee | Accessible | Slightly accessible | Difficulty in accessible | Total | $\chi^2$ |
|---|---|---|---|---|---|
| Yes | 59 (45.4%) | 68 (52.3%) | 3 (2.3%) | 130 (100%) | 127.42 0.0001 * |
| No | 0 (0%) | 0 (0%) | 20 (100%) | 20 (100%) | |
| Total | 59 (39.3%) | 68 (45.3%) | 23 (15.3%) | 150 (100%) | |

*Values in with asterisk is the Chi-Square significance level
2 degrees of freedom

To establish whether there existed a relation that was significant between paying consultation fees and access to maternal health facility, a Pearson Chi-square test was done. A127.42 Pearson chi square statistic was obtained with 2 degrees of freedom and a p-value of 0.0001. Hence, the research concluded that there existed a statistically significant correlation between consultation fee and access to maternal health care service at 0.05 level of significance ($\chi^2$=127.42, 2 df, p-value=0.0001).

### 4.2.5 Women Seeking Maternal Health Care; Antenatal and Postnatal Clinic Attendance.

#### 4.2.5.1 Antenatal Clinic Attendance for Women Seeking Maternal Health Care

An analysis of women accessing antenatal clinic was done; results are as given below. From Table 4.2.21, out of the 150 respondents, 120 (80%) had attended antenatal clinic while 30 (20%) had not attended any antenatal clinic for the index pregnancy.

**Table 4.2.21: Antenatal Clinic Attendance for Women Seeking Maternal Health Care**

| Antenatal clinic attendance | Frequency | Percentage |
|---|---|---|
| Yes | 120 | 80 |
| No | 30 | 20 |
| Total | 150 | 100 |

The results in Table 4.2.21 shows that a higher number of mothers who were seeking services on maternal health care had attended the antenatal clinic. WHO recommends that the expectant mother should seek antenatal care for her to have a positive pregnancy experience (Tunçalp, Pena, Lawrie & Bucagu, 2017). This agrees with the results in Table 4.2.21 on women antenatal care. However, the minority number of women seeking maternal health care who do not attend antenatal care are in danger of late detection of any pregnancy abnormalities. Therefore, is it important for women to attend antennal care clinics (Aji, Manan, Kisuti & Munin, 2019).

A respondent reported that;

> *Antenatal clinics have been of great help to me and my pregnancy. A lot is taught in terms of diet, cleanliness and exercise that keeps mothers fit. Observations are also made to ensure the foetus is growing as expected (During an OI with Mutethya, 35 years old mother on 2/7/2021).*

Therefore, the importance of women attending antennal care clinics was noted. Those who failed to attend the antenatal clinics associated this to a number of factors like education level, age, distance and even cost associated with the access. It was also noted that some of those who attended the antenatal clinics did not meet the recommended visits. Some mothers made only one visit while others attended two despite the recommended visits. These visits sometimes were occasioned by complications of the pregnancy. The CHOs reported that this was a worrying trend as mothers who miss antenatal reviews may also miss postnatal clinics.

#### 4.2.5.2 Postnatal Clinic Attendance for Women Seeking Maternal Health Care

In Table 4.2.22 results on the postnatal clinic attendance of women seeking maternal health care are presented. Many (N=145, 96.7%) of the respondents had attended postnatal clinics while few (N=5%, 3.3%) had not attended.

**Table 4.2.22 Postnatal Clinic Attendance for Women Seeking Maternal Health Care**

| Postnatal clinic attendance | Frequency | Percentage |
|---|---|---|
| Yes | 145 | 96.7 |
| No | 5 | 3.3 |
| Total | 150 | 100 |

There is the provision of postnatal to the child and mother after delivery up to nine months after delivery with an objective of enhancing the health wellbeing of mother and child (Akunga et al., 2014). The findings presented on Table 4.2.22 are in congruence with the Kenya Demographic and Health Survey (KDHS, 2014) which highlighted that more women sought postnatal care after giving birth (KNBS, 2015). However, this contradicts a report by the Kenya District Health Information System (DHIS, 2015) which indicates that nationwide, postnatal care is about 53%. This

result indicates that in the study area, the postnatal care uptake was higher compared to the national average.

Explaining why the intake of postnatal services was seen to be high in the study area, a respondent said;

> *I believe many women seek these services due to the belief that a new-born is in need of medical care during the early years of growth. Mothers would wish to see their children grow healthy. Thus, we attend these clinics to learn on diet, cleanliness, immunization and child care in general (During an OI Kasomi, 21 years old mother on 5/7/2021).*

Another respondent noted that,

> *The community health volunteers have been of great help to us. They train us on child care and also mobilise us to attend the postnatal clinics in total (During an OI with Kasyoka, 43 years old mother on 2/7/2021).*

Generally, the study area recorded commendable numbers in postnatal clinic attendance. This was associated with the sensitization done by community health volunteers. A lot still is needed to be done so as to bring on board more mothers to seek these maternal health services.

### 4.3 Socio-cultural and Religious Factors and Access to Maternal Health Care

The fifth objective of the research sought to establish the relation existing between religious and social-cultural factors and how they impact maternal health care access. To understand this relationship two indicators were used. They were; religious group affiliation and knowledge of pregnancy and childbirth taboos. The indicators are discussed in the sub-sections below.

#### 4.3.1 Religious Group Affiliation for Women Seeking Maternal Health Care

Religious group affiliation effects women's maternal health care access as discussed below in Table 4.3.23. Majority (N=135, 90%) were Christians followed by 8 (5.3%)

Muslims and 7(4.7%) who did not identify themselves with any religious organization.

**Table 4.3.23 Religious Group Affiliation for Women Seeking Maternal Health Care**

| Religious group affiliation | Frequency | Percentage |
|---|---|---|
| Christian | 135 | 90 |
| Muslim | 8 | 5.3 |
| Indifferent | 7 | 4.7 |
| Total | 150 | 100 |

As the research results revealed, one's faith influenced access to maternal health care. Only a small number at 4.7% did not profess to have any faith affiliation but majority of women who sought maternal health services had religious background.

Seminal work by Heuvel et al. (1999) in a Zimbabwe reported that women who belong to certain religious group are asked to refrain from seeking maternal health care. Additionally, a study done in Sub-Saharan Africa by Mrisho et al., (2007) reveals that religion determines the norms, beliefs, values and taboos that influence maternal health care uptake. Therefore, religion was a crucial factor that influenced the mothers' efforts when seeking maternal health care in the area of study since there are some who completely shun seeking maternal health care due to their faith.

A respondent reported that,

> *My neighbour cannot go to hospital because of her "Kavonokya faith". At one point her children suffering from measles were rescued by the area chief and police and they were taken to hospital for treatment. To her, prayers are enough to heal her and the family members (During an OI with Mutio, 38 years old mother on 30/6/2021).*

This view shows how much influence religious teachings have on access to maternal health care. In the research, it was evident that religious teachings influenced women's decisions to seek maternal health care and other medical services in general.

### 4.3.2 Religious Practices Observed by Women Seeking Maternal Health Care

Table 4.3.24 highlights results on the religious practices observed by women seeking maternal health care in Mutito Sub-county. Out of the 150 respondents, 109 (72.7%) of the respondents were observing some religious practices while 41 (27.3%) of the respondents were not.

**Table 4.3.24 Religious Practices Observed by Women Seeking Maternal Health Care**

| Religious practices | Frequency | Percent |
|---|---|---|
| Yes | 109 | 72.7 |
| No | 41 | 27.3 |
| Total | 150 | 100 |

The results in Table 4.3.24 corroborates those by Warren (2010) who reports that religious practices help to form very strong foundations that dictate the way of life of a given community. In the study, Warren, (2010) explains that religion leads to an acceptance of certain beliefs that can change people's behaviour in a society. The role of religion starts from making behavioural decisions like what to do on a daily basis to more complex behaviours such as seeking maternal health care (Nostlinger, Shahabuddin, Delvaux, Sarker, Delamou, Badaji, Broerse & De Brouwere, 2017).

The CHOs were requested to provide their views on the extent to which they thought religious practices and social-cultural factors influenced access to maternal health care. The findings are as indicated on Table 4.3.25.

**Table 4.3.25 Socio-cultural and Religious Practices and Access to Maternal Health Care**

| Response | Frequency | Percentage |
|---|---|---|
| Very large extent | 1 | 20 |
| Large extent | 1 | 20 |
| Little extent | 2 | 40 |
| No influence at all | 1 | 20 |
| **Total** | **5** | **100** |

The results indicate that 40% of the CHOs noted that the mothers' maternal health care access was influenced by socio-cultural factors to a little extent, to a very large extent at 20%, while another 20.0% said that the socio-cultural factors affected mothers' maternal health care access to a large extent and another 20.0% noted that socio-cultural factors had no influence on mothers' maternal health care access. This implies that there was a possibility that socio-cultural factors influenced access to maternal health care s among mothers in Mutito Sub-County, Kitui County.

These research results agree with Mesganaw (2013) who opines that, health and culture are so closely related to the extent that culture controls decisions made concerning health. In most African societies, one seeks medical care in line with one's cultural expectations. The CHOs gave their opinions on socio-cultural and religious practices as discussed below.

### 4.3.3 Clinical Health Officers' Perspective on Socio-cultural and Religious Practices

The researcher asked CHOs to describe ways in which socio-cultural and religious practices factors influenced mothers' maternal health care access. From the responses obtained, they implied that socio-cultural factors had an influence on access to maternal health care among the women in Mutito Sub-County, Kitui County. The

research findings pointed out that socio-cultural factors impacted access as a result of community and household experiences where in some cases members of the community did not allow women to go to hospital to seek maternal health care while some encouraged home deliveries.

During an interview conducted on 13/06/2021, Mzee Kitili from Zombe in Mutito Sub-County noted that elders in the area believed that going to hospitals was equivalent to inviting a bad omen and that they once declined to give land to the colonial government for hospital construction at Kaumu village in Mutito Sub-County. They believed that the hospital would lead to an outbreak of wounds. Expectant mothers were not allowed to go to hospitals since it would make the ancestors aggrieved leading to death of the new born. Further, the respondent reported that with the construction of modern hospitals they were viewed as posing competition to the traditional medicine men.

CHO A noted that;

> *Many women deliver at home because they receive encouragement to do so from the traditional mid-wives. Even in the recent times, many still prefer to give birth at home. This has been tied to the believe that hospitals portend a bad omen; thus, it is believed that they may lose (death) the new born.*

CHO B affirmed that;

> *The traditional mid-wives are still a threat to a healthy delivery since even the ancestors are involved through pouring of libations. Also, it is believed that complications are rare since fore fathers support procreation thus, safe delivery.*

It was noted that where complications occurred, women sought medical help as the last resort.

In some other cases, women gave birth at home if the man was not around to grant permission for the woman to access maternal health services at a health facility. This indicated that the gender power balance is biased in the society as the voice of the women is suppressed.

### 4.3.4 Pregnancy and Childbirth Related Taboos and Access to Maternal Health Care Services

To determine the correlation between pregnancy and childbirth related taboos and maternal health care access, the study participants were requested to indicate if they were aware of any taboos related to pregnancy and childbirth. The knowledge of pregnancy and taboos related to childbirth were used as a proxy for socio-cultural factors.

The responses were analysed using cross tabulation analysis and the findings are highlighted in Table 4.3.26

Out of the 60 participants who responded that they had knowledge of pregnancy and childbirth related taboos, 37 (61.7%) of them indicated that they had slight accessibility to the maternal health care while 23 (38.3%) of the research participants noted that they had difficulty accessing maternal health care. In contrast, out of the 90 respondents who reported that they had no knowledge of pregnancy and childbirth related taboos, 59 (65.6%) indicated that they accessed maternal health care while 31 (34.4%) of the respondents highlighted that they had a slight access to maternal health care.

**Table 4.3.26 Pregnancy and Childbirth Related Taboos and Maternal Health Care Access**

| Pregnancy and childbirth related taboos | Accessible | Slightly accessible | Difficulty in access | Total | $\chi^2$ |
|---|---|---|---|---|---|
| Yes | 0 (0%) | 37 (61.7%) | 23 (38.3%) | 60 (100%) | 79.72 0.0001* |
| No | 59 (65.6%) | 31 (34.4%) | 0 (0%) | 90 (100%) | |
| Total | 59 (39.3%) | 68 (45.3%) | 23 (15.3%) | 150 (100%) | |

*Values in with asterisk is the Chi-Square significance level
2 degrees of freedom

The current research aimed to establish the correlation between childbirth and pregnancy related taboos and access to maternal health using Pearson Chi-square test. The Pearson Chi-square statistic result obtained was 79.72, 2 degrees of freedom and a 0.0001 p-value. These findings revealed that there existed a significant correlation between maternal health care access and pregnancy and childbirth related taboos at 0.005 level of significance ($\chi^2$=79.72, 2 df, p=0.0001). Therefore, it was noted that expectancy and taboos related to childbirth influenced access to maternal health care.

### 4.3.5 Knowledge of Pregnancy and Childbirth Related Taboos by Women Seeking Maternal Health Services

The research participants' views were sought on whether they knew or were aware of any pregnancy and childbirth related taboos. The findings are shown in Table 4.3.29. Majority (N=90, 60%) of the participants responded that they were aware of pregnancy and childbirth related taboos while few (N=60, 40%) indicated they were not aware.

**Table 4.3.27 Knowledge of Pregnancy and Childbirth Related Taboos by Women Seeking Maternal Health Services**

| Pregnancy and childbirth related taboos | Frequency | Percent |
|---|---|---|
| Yes | 60 | 40 |
| No | 90 | 60 |
| Total | 150 | 100 |

This research results are in congruence with Yarney's (2019) study done in Ghana. He reports that many women are knowledgeable on matters childbirth and pregnancy related taboos. The knowledge on taboos related to childbirth and pregnancy help women to be safe and healthy during their pregnancy term. The Pathway Theory puts the attitudes and values of a society at the centre of service access such as maternal health care in the society.

A respondent reported that,

> *Taboos and superstitions are part of this society. It is a taboo for a mother who has recently given birth to expose the young one to the public. People in the study area believe that there are those with evil eyes which may make the child suffer from 'kyeni' (skin rashes) (During an OI with Nduku, 40 years old woman on 5/7/2021).*

In the study area, superstitions like 'people who have bad eyes bring about bad omen' was reported to make some respondents prefer to deliver at home. The belief that the child's exposure to the public may harm the new-born's health discouraged access to maternal health care. This means that mothers may miss postnatal clinics due to fear that their children may be affected through this societal belief. It also indicates the extent to which the society's belief system affects and even binds women even when they willingly seek maternal health care. They are afraid of being accused of

negligence in case something bad happens to the child. Next, the researcher established the effect of religious practices on access to maternal health care.

### 4.3.6 Religious Practices' Influence on Access to Maternal Health Care Services

To establish if a correlation existed between religious factors and maternal health care access, the research participants were requested to share their views on whether they observed any religious practices associated with pregnancy or childbirth. A cross tabulation analysis between religious practices and maternal health care access was done and the findings are presented in Table 4.8.34. Accordingly, the results showed that, most (N=59, 54.1%) of the respondents who were practicing religious practices still accessed maternal health care services while a minority (N=50, 45.9%) had a slight access to these maternal health care services. Conversely, most (N=23, 56.1%) of the respondents who had no religious practices reported that they had difficulty accessing maternal health care services while the minority (N=18, 43.9%) indicated they had slight inaccessibility to the maternal health care. This scenario is highlighted in the subsequent table.

**Table 4.3.28 Religious Practices and Access to Maternal Health Care Services**

| Religious practices | Accessible | Slightly accessible | Difficulty in accessible | Total | $\chi^2$ |
|---|---|---|---|---|---|
| Yes | 59 (54.1%) | 50 (45.9%) | 0 (0%) | 109 (100%) | 83.360.0001* |
| No | 0 (0%) | 18 (43.9%) | 23 (56.1%) | 41 (100%) | |
| Total | 59 (39.3%) | 68 (45.3%) | 23 (15.3%) | 150 (100%) | |

*Values in with asterisk is the Chi-Square significance level
2 degrees of freedom

To establish whether the religious practices had a correlation with maternal health care access, a Pearson Chi-square test was conducted. The Pearson Chi-square test results indicated a statistic of 83.36, 2 degrees of freedom and 0.0001 p-value. This test results meant that between religious practices and maternal healthcare access, there existed a significant relationship at a 0.05 level of significance ($\chi^2$=83.36, 2 df, p=0.0001).

These findings concur with Heida (2016) study on adolescents' usage of mother and child care services. The results indicated that there are indeed religious beliefs which aver that the root cause of diseases lies in the supernatural, traditions and the interpersonal world of magic while modern medicine is of the view that sickness emanates from non-personal observable laws of nature that are manipulated. Consequently, traditional healers interact with their clients using a belief system that is shared which is rooted deeply in one's culture shaping the way both the healer and patient think (Heida, 2016). Moreover, Erinosho (2015) notes that almost all sicknesses are attended to traditionally first before seeking modern remedies among the rural Yoruba of Ile-Ife. Further, Erinosho (2015) notes that for most African societies, child birth is handled by traditional midwives; however, when the cases become complicated, they are transferred to health facilities and in this instance, you find it is already too late leading to death. This indicates that religion and rituals related to pregnancy or birth may inhibit maternal health care access.

Besides, socio-cultural factors such as early marriages and pregnancies contributed in hindering women from accessing maternal health care in Mutito Sub-County. It was found that early marriage led to early pregnancy; hence, high incidences of complications during pregnancy. Some of these young mothers may not be fully

developed physically to have safe delivery. It was also noted that young mothers lacked basic knowledge on child birth.

Large family sizes were also found to prevent mothers from trying to access maternal health. In fact, the larger the family, the harder it is for mothers to plan and access health services. Large family size also means more financial challenges; thus, inhibiting maternal health care access.

Furthermore, childbirth beliefs and practices were found to negatively affect maternal health care access as some women felt they were harmful. The research established that some women still held traditional beliefs and practices like new-born rites which are out dated and sometimes harmful to the mothers and their babies.

Further, the study found that some women used both the traditional and modern medicine leading to some side effects. It was revealed that most mothers opted for traditional medicine because it was cheaper and locally available. The study also established that religion and rituals during labour had an influence on maternal health care access. It was established that some religious groups in Mutito Sub-County such as "*Kavonokya*" (means to save) did not allow their women faithfuls to seek modern maternal health care since they believed that prayers were sufficient. "The Kavonokya" followers pray for women in labour instead of encouraging them to seek maternal health services. Sometimes complicated labour leads to the death of both the new born and the mother.

These findings agree with Addai (2001) and Mekonnon (2012) in their surveys done in Ethiopia and Borno state in Nigeria respectively. In the Ethiopian study, religion predicted utilization of maternal healthcare. Equally, it is established that among the

Muslim ethnic groups residing in Borno State, religious rituals and prayers are conducted for woman in labour ostensibly for a safe delivery.

Moreover, the study findings agree with Kivunaga (2015) study which was done in Nakuru County, among followers of the Church of God (CoG) who are prohibited from seeking maternal healthcare services. This is a great challenge to the achievement of Kenya Vision 2030. The dangers posed by these religious organizations notwithstanding, many people still follow their religious practices and beliefs. In the research area, it was established that religion impacted maternal health care access.

The findings indicated that adherents of "the Kavonokya church" did not believe in modern medical services. This means that they do not seek maternal health care and in a case of an emergency death may result.

Generally, the study findings affirm that the given socio-economic and cultural factors influenced maternal health care access as discussed. Every factor played a role in inhibiting mothers' maternal health care access in Mutito Sub-County. In other instances, a couple of factors limited access to maternal healthcare compounding further an already worse situation. Moreover, the Pathway Theory relevantly explained the research findings given that it argues that access to information, socio-economic status, attitudes and values influence uptake of the available social services. This then links the respondents to a number of factors and societal expectations to a large extent. At the long run, maternal health care access is impacted greatly.

The subsequent section comprises of a summary of the research findings, conclusions and recommendations.

# CHAPTER FIVE

# FINDINGS, CONCLUSIONS SUMMARY OF AND RECOMMENDATIONS

## 5.0 Introduction

The chapter highlights a summary of the research results, conclusions and recommendations. Further suggested are areas for further research.

## 5.1 Summary of the Findings

The research assessed the role of women's socio-economic, cultural factors and maternal health care access in Mutito Sub-County, Kitui County. The first objective of the research aimed to determine the relation existing between maternal age and maternal health care access. It emerged that mothers' age significantly influenced maternal health care access. This implied that women at different age brackets face varied challenges when accessing maternal health care services.

The Second research objective established the relation between maternal level of education and maternal health care access. The research findings showed that mothers' level of education was a determinant in accessing maternal health care in Mutito Sub-County, Kitui County. The study established that mothers with low levels of education tried to understand what was expected of them and had difficulties following instructions given by clinical health officers. On the other hand, mothers whose levels of education were higher were found to be more persistent and assertive when they sought maternal health care information than those with low levels of education.

Objective Three of the study determined whether there existed a correlation between distance to the closest health facilities and maternal health care access. The findings showed that distance to the health centres was a great determinant of access to maternal health care in Mutito Sub-County, Kitui County. It was found that due to long distances to the hospital, some mothers ended up delivering at home; hence, predisposing themselves to complications. Majority of the mothers could not readily access medical facilities given the transport challenges. Long distances reduced access since available means of transport were motorcycles popularly referred to as '*boda boda'*, in most cases, they were expensive and unsuitable for major emergencies as the patient could not be attended to while on transit.

Objective Four of the research sought to establish whether there existed a relation between cost of health care and access to maternal health care. The findings established that the cost of health care significantly influenced mothers when accessing maternal health care in Mutito Sub-County, Kitui County. The study findings identified transport costs as a major hindrance to women when they tried accessing maternal health care. In most cases, the means of transport available were '*boda boda'* motorcycles, unsuitable and unsafe for transporting women in need of emergency attention. They are often involved in accidents, leading to serious injuries and sometimes death. They are also expensive as compared to other means of transport; hence, most women failed to seek maternal health care. Moreover, the research noted that lack of money frustrates women when accessing maternal health care on time; most women in the sub-county have minimal income. As such, they cannot afford to go to hospital; instead, they prefer home deliveries. The cost of treatment was also cited as a challenge including related medical procedures such as

caesarean section. These curtailed mothers in their efforts to seek maternal health care.

Further, the cost of medicine was also identified as another barrier against women's search for maternal health care. It was found that some medicine was not affordable to all women; hence, limiting their access to quality maternal health care. Due to inadequate funding, most health facilities lack medicine further limiting women in accessing maternal health. Most hospitals also charged high consultation and admission fees, leading to low access of maternal health care services.

The Fifth research objective established the relation between maternal health care access and socio-cultural factors. The findings showed that socio-cultural factors influenced maternal health care access as evidenced by a large number of women in Mutitu Sub-County, who were negatively affected. Further, it was noted that in some cases, members of the community did not allow their women to go to hospital to seek maternal health care. Instead, they encouraged home deliveries. This was attributed to the community's negative attitudes towards modern medicine, emanating from the early colonial experience. The community believed that going to hospitals would lead to an outbreak of wounds. They were convinced that allowing expectant mothers to go to hospitals would make their ancestors unhappy. Moreover, socio-cultural factors such as early marriages and pregnancies significantly influenced women when accessing maternal health care. Besides, childbirth beliefs and practices were found to have largely influenced access to maternal health care as some women felt they were harmful. Some women were found to be still adhering to some of the traditional beliefs and practices which are not only harmful to them but also archaic.

Moreover, the research established that some women were aware of taboos related to pregnancy and childbirth. Also, the research revealed that religion and rituals during labour influenced access to maternal health care. The results indicated that some religious groups such as "*Kavonokya*" in Mutito Sub-County did not allow women to seek modern health care since they claimed that the prayers they offered were sufficient. When a mother experienced complicated delivery, she is taken to hospital as a last resort leading to death.

### 5.2 Conclusion

The research examined the relation between mothers' access to maternal health care and socio-economic and cultural factors in Kitui County, Kenya. The results pointed out that mothers' age significantly impacted maternal health care access. The research findings further revealed that there existed a relationship that was significant between women's level of education and seeking maternal health services. In addition, the results indicated a significant relation between the distance covered to health centres and maternal health care access. Moreover, the researcher established that there existed a relationship between mothers' access to maternal health care and the costs involved. These included; transport costs, cost of medical procedures such as caesarean section, cost of medicine, among others, which were identified as hindrances to women when accessing maternal health care.

Furthermore, the research revealed a strong relationship between social cultural factors and maternal health care access whereby the finding showed that in some cases members of the community did not allow women to go to hospital to seek maternal health care; instead, they encouraged home deliveries. Socio-cultural factors such as early marriages and pregnancies, large family sizes, child birth beliefs and

practices as well as religious beliefs such as those of the "*Kavanokya*" religious group were found to influence women greatly limiting their access to maternal health care.

### 5.3 Recommendations of the Study

The following recommendations were made based on the research's objectives:

**The Ministry of Health**

The Ministry of Health working closely with related ministries such as the Ministry of Education ought to scale up advocacy in schools and the community aimed at sensitizing the population on dangers of early marriages and pregnancy as well as cultural beliefs which are retrogressive in nature that limit women when trying to access maternal health care. The GoK should increase access to the Social Health Authority (SHA) by recruiting more members and availing the resources needed countrywide. This can be done by providing special products like; cost subsidies, Beyond Zero and mother and child services for women so as to limit barriers to maternal health care occasioned by high medical costs.

**The National Government in Collaboration with the County Governments**

Health services in the country are devolved to the county units. Thus, county governments are now responsible for key health functions like planning, budgeting, human resources and the provisions of essential medicines. Therefore, the national government in collaboration with the County governments should: create awareness campaigns on various services offered at various health centres and set up more health facilities in the sub-counties. This would reduce the distance that mothers have to cover when seeking maternal health care services.

**County Governments to Train Traditional Birth Attendants (TBAs)**

There is also need for County governments to subject all traditional birth attendants (TBAs) to training so that they respond to emergencies. This is especially in areas which are far away from health facilities or when health services are not available. A case in point is when health workers such as nurses are on strike.

Equally, the County governments should create awareness in view of changing people's attitudes towards traditional health services. This will allow those with less or no complications to seek services, given that there are those who will never accept to go hospital or health centres for personal reasons. Moreover, TBAs should be incorporated in the health systems so that their skills are harnessed and integrated to modern medicine.

Lastly, the government should build more health facilities so that they can be more accessible to pregnant women.

## 5.4 Suggestions for Further Research

This research was conducted in Mutito Sub-County, Kitui County. It is therefore suggested that:

a.) A similar research ought to be carried out in other parts of the county to establish if access to maternal health care is a challenge to women.

b.) A comparative study could be conducted with another county to establish whether women face the same challenges when accessing maternal health care.

c.) A research could also be done on how to improve maternal health care access in rural areas.

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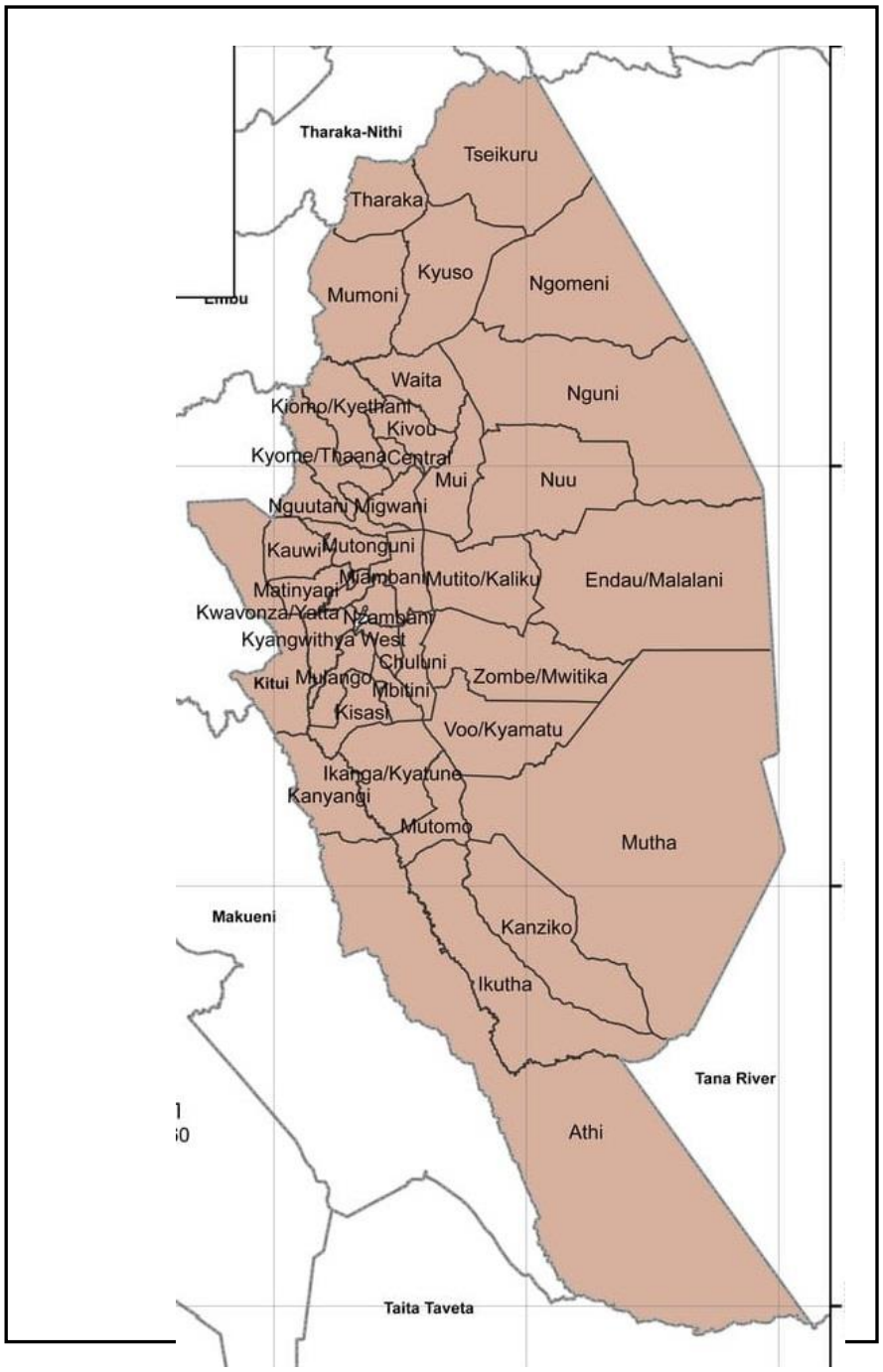
## APPENDICES

### APPENDIX I: MAP OF THE STUDY SITE- KITUI COUNTY




Source: https:/www.researchgate.net

**APPENDIX II: CONSENT FORM**

**Participant's Statement (CONSENT)**

The above information regarding my participation in the study is clear to me. I have been given chance to ask questions and have been answered to my satisfaction. My participation in this study is entirely voluntary. I understand that my participation will be kept private and I can leave the study at any time. I understand that I will get the same care and medical treatment whether I decide to leave the study or not. Moreover, my decision will not change the care I will receive from this hospital today or that I will get from any other hospital at any other time.

Name of participant……...

Signature or Thumb……...

Date……....

**Interviewer's Statement**

I, the undersigned, have explained to the volunteer in the language s/he understands, the procedures to be followed in the study and the risks and benefits involved.

Name of Interviewer……

Interviewer Signature……

Date……

## APPENDIX III: QUESTIONNAIRE FOR THE CLINICAL HEALTH OFFICERS

**Dear Madam/Sir**

**Letter of Introduction**

I am Raymond Keli King'oo, a post-graduate student at Kenyatta University, pursuing a Master of Arts degree in Gender and Development Studies. I am conducting a study on the **Relationship between Women's Socio-economic, Cultural Factors and Access to Maternal Health Care in Kitui County, Kenya**. I am requesting for your assistance in generating related data. Please fill the questionnaire given or answer to the interview instructions as guided. There is no wrong or correct answer. Any information given will be treated confidentially.

Thank you.

Yours Faithfully,

Raymond Keli King'oo

**Instructions to CHOs**

This questionnaire constitutes part of a research study that seeks information on the experiences that curtail women from accessing maternal health care in Mutito Sub-County, Kitui County. Please answer all the all questions by ticking the blank spaces or filling them as you deem appropriate. To ensure confidentiality,

**DO NOT WRITE YOUR NAME.**

**SECTION A: Respondents' Demographic Information**

1. Please indicate your highest level of education.

   PhD ☐ Master's degree ☐

   Bachelor's degree ☐ Diploma Certificate ☐

   Any other

Specify_____

2. For how long have you been working as a medical practitioner?

   1- 5 years ☐ 6 - 10 years ☐ 11-15 years ☐

   Above 16 years ☐

   Any other specify_____

**SECTION B: Factors that Curtail Women from Accessing Maternal Health Care**

3. Averagely, how many women seeking maternal health care do you serve in your facility per day?

   _____

   _____

   _____

   _____

4. (a.) Briefly state the maternal health care services offered in your institution.

   _____

   _____

   (b.) Do you receive any maternal referral cases? Yes ☐ No ☐

(c.) If Yes, how many approximately do you receive per

week?_____

(d) Please describe the nature of such cases_____

5. (a) Do you have access to the women's age? Yes No

(b) If YES, to what extent does a mother's age influence her access to maternal health care?

(i) Very large extent ☐ (ii) Large extent ☐ (iii) Little extent ☐

(iv)Very little extent ☐ (v) Does not influence at all ☐

(c) Explain your answer

_____

_____

(d) Briefly explain your experiences when dealing with young mothers.

_____

_____

(e) What do you suggest should be done to reduce early pregnancies?

_____

_____

6. (a) According to your experience, explain ways in which the level of education of a mother influences her access to maternal health care?_____

_____

(b) Briefly describe some of the experiences you face when dealing with mothers who have minimal schooling_____

(c) What do you suggest should be done to deal with

this?_____

7. (a) In what ways does the distance to the health facilities influence access to maternal health care?_____

   (b) Briefly describe the barriers which face mothers who live far from your facility face in relation to accessing maternal health care

   _____

   _____

   (c) What do you suggest should be done to deal with this?

   _____

   _____

8. (a) According to your experience, explain ways in which the following socio-cultural barriers affect mothers when seeking maternal health care in this community

   i. Community and household experiences:

      _____

   ii. Early marriage and pregnancy:

_____

   iii. Large family size:

      _____

   iv. Childbirth beliefs and practices:

      _____

   v. Traditional medicine:

      _____

   vi. Religion and rituals during labour:

      _____

   (b) What measures do you think should be adopted to overcome these challenges?

9. (a) How do the following costs/charges affect mothers seeking maternal health care?

i. Transportation cost:

_____

ii. Cost of procedures (operations):

_____

iii. Cost of medicine:

_____

iv. Amount of consultation fee:

_____

v. Amount of admissions fees:

_____

(b) What do you suggest should be done to mitigate the effect of these costs/charges to mothers seeking maternal health care?

_____

_____

**THANK YOU.**

**APPENDIX IV: INTERVIEW SCHEDULE FOR MOTHERS SEEKING HEALTH CARE**

**Letter of Introduction**

**Dear Madam/Sir**

I am Raymond Keli King'oo, a post-graduate student at Kenyatta University, pursuing a Master of Art degree in Gender and Development Studies. I am conducting a study on **Relationship between Women's Socio-economic, Cultural Factors and Access to Maternal Health Care in Kitui County, Kenya.** I request for your assistance in generating required data. Kindly respond to the interview questions as you may deem appropriate. Note that there are no wrong or right answers. Any data shared will be treated confidentially.

Thank you.

Yours Faithfully,

Raymond Keli King'oo

**INTERVIEW SCHEDULE FOR MOTHERS SEEKING HEALTH CARE**

1.(a) When were you born?

(b)How many children have you given birth to?

(c)What is your highest level of education?

(d)At what age did you have your first child?

2. (a) If you have more than one child, what is their age difference?

(b) What made you to space the birth(s) of your children in this way?

3. (a) Do you often attend antenatal and postnatal clinics? Explain

(b) Where do you go for your antenatal and postnatal clinics? Explain

4. Did you have complications during child birth? Explain

5. What are your experiences when trying to follow your doctors' instructions and prescriptions? (Explain)

6. (How does it affect a) How far is your home from the nearest health facility?

(b) Does this affect your receiving of maternal health care?

(c) What do you suggest should be done to deal with this?

7. (a) Briefly describe core pregnancy-related traditions you are supposed to observe.

(b) How do they affect your access to maternal health care?

8. (a) Are you in a polygynous or monogamous marriage?

(b) Does it influence the number of children you should have? (Explain)

9. (a) Do you sometimes use traditional medicine during pregnancy/childbirth/after childbirth? (Explain)

(b) Which religious group are you affiliated to?

(c) What is the position of your religion as far as maternal health care is concerned.

10. (a) Are you required to pay before you receive any maternal health care services?

(b) If yes, how much do you pay?

(c) What other costs do you incur?

(d) How does the cost of maternal health care affect your access to these services?

**THANK YOU.**

## APPENDIX V: RESEARCH AUTHORIZATION LETTER

NACOSTI

**NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION**

Telephone:+254-20-2213471, 2241349,3310571,2219420
Fax:+254-20-318245,318249
Email:dg@nacosti.go.ke
Website: www.nacosti.go.ke
when replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/17/02649/14551**

Date: **13th February, 2017**

Raymond Keli King`oo
Kenyatta University
P.O. Box 43844-00100
**NAIROBI.**

**RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on ***"Experiences of women in accessing maternal health care in Mutito Division of Kitui County,"*** I am pleased to inform you that you have been authorized to undertake research in **Kitui County** for the period ending **11th February, 2018.**

You are advised to report to **the County Commissioner, the County Director of Education and the County Director of Health Services, Kitui County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

**BONIFACE WANYAMA**
**FOR: DIRECTOR-GENERAL/CEO**

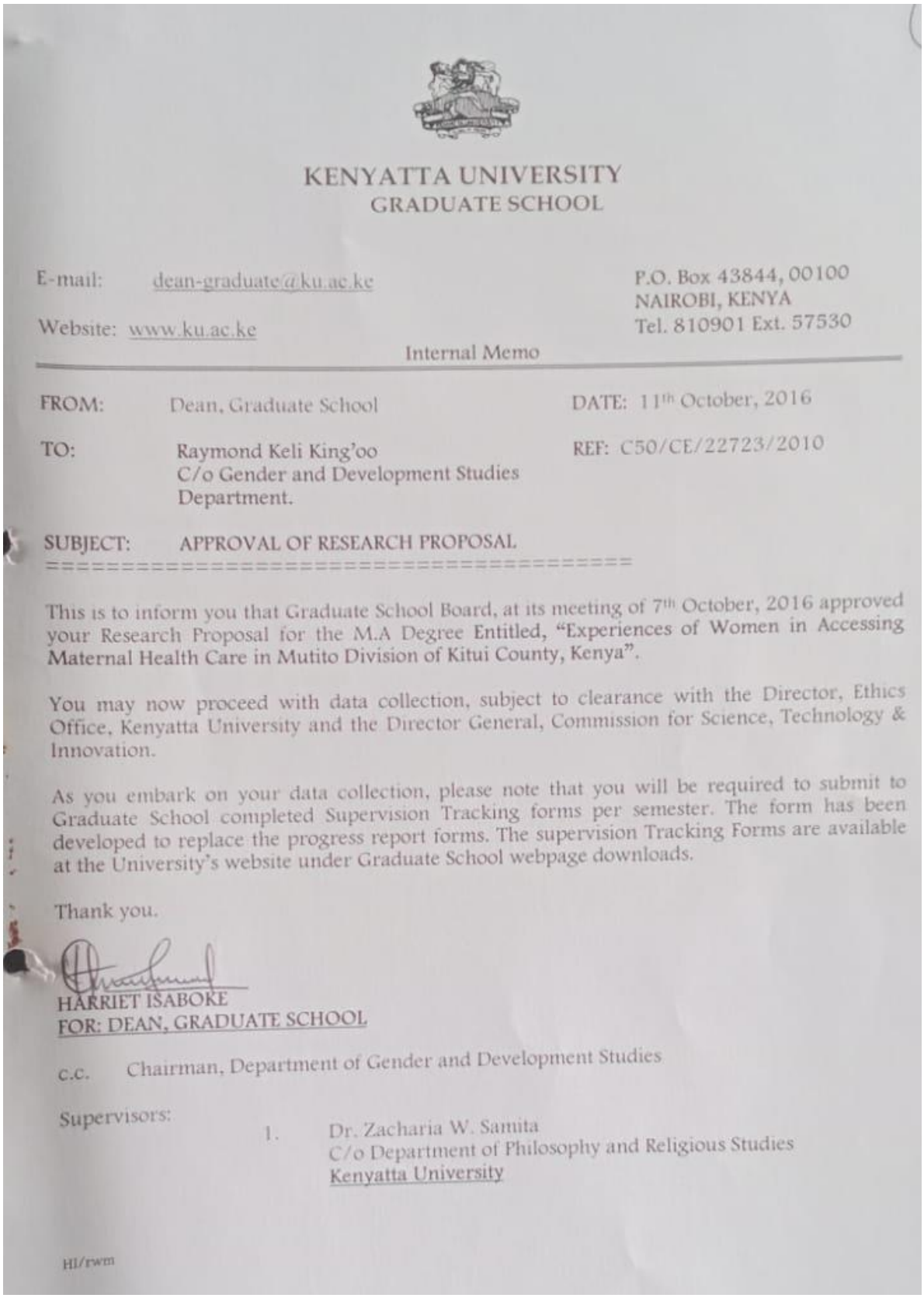
Copy to:

The County Commissioner
Kitui County.

The County Director of Education
Kitui County.

National Commission for Science, Technology and Innovation is ISO 9001:2008 Certified

**APPENDIX VI: RESEARCH APPROVAL LETTER**



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School

DATE: 11th October, 2016

TO: Raymond Keli King'oo
C/o Gender and Development Studies
Department.

REF: C50/CE/22723/2010

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that Graduate School Board, at its meeting of 7th October, 2016 approved your Research Proposal for the M.A Degree Entitled, "Experiences of Women in Accessing Maternal Health Care in Mutito Division of Kitui County, Kenya".

You may now proceed with data collection, subject to clearance with the Director, Ethics Office, Kenyatta University and the Director General, Commission for Science, Technology & Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking forms per semester. The form has been developed to replace the progress report forms. The supervision Tracking Forms are available at the University's website under Graduate School webpage downloads.

Thank you.

HARRIET ISABOKE
FOR: DEAN, GRADUATE SCHOOL

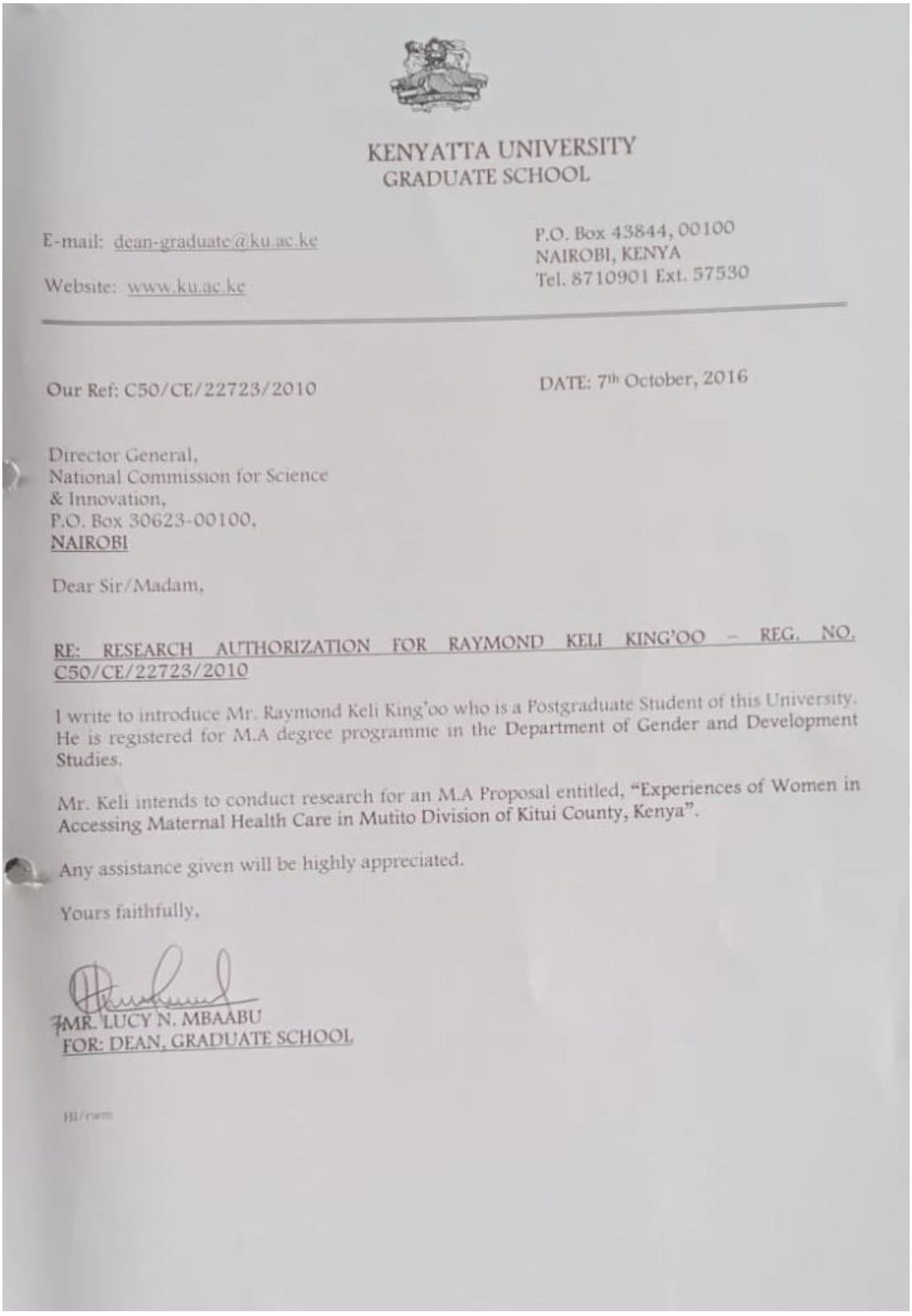
c.c. Chairman, Department of Gender and Development Studies

Supervisors:

1. Dr. Zacharia W. Samita
C/o Department of Philosophy and Religious Studies
Kenyatta University

HI/rwm

## APPENDIX VII: RESEARCH AUTHORIZATION LETTER



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: C50/CE/22723/2010

DATE: 7th October, 2016

Director General,
National Commission for Science
& Innovation,
P.O. Box 30623-00100,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR RAYMOND KELI KING'OO – REG. NO. C50/CE/22723/2010

I write to introduce Mr. Raymond Keli King'oo who is a Postgraduate Student of this University. He is registered for M.A degree programme in the Department of Gender and Development Studies.

Mr. Keli intends to conduct research for an M.A Proposal entitled, "Experiences of Women in Accessing Maternal Health Care in Mutito Division of Kitui County, Kenya".

Any assistance given will be highly appreciated.

Yours faithfully,

MR. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL

lll/cwm

## APPENDIX VIII: RESEARCH PERMIT (NACOSTI)

THIS IS TO CERTIFY THAT:
*MR. RAYMOND KELI KING`OO*
of KENYATTA UNIVERSITY, 0-90213
ZOMBE,has been permitted to conduct
research in *Kitui County*

on the topic: *EXPERIENCES OF WOMEN IN ACCESSING MATERNAL HEALTH CARE IN MUTITO DIVISION OF KITUI COUNTY*

for the period ending:
*11th February,2018*

Permit No : NACOSTI/P/17/02649/14551
Date Of Issue : 13th February,2017
Fee Recieved :Ksh 1000

.....
*Applicant's Signature*

.....
*Director General*
*National Commission for Science, Technology & Innovation*

### CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.
2. Government Officer will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one (1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEACH CLEARANCE PERMIT

Serial No.A 12775

CONDITIONS: see back page