

**UTILIZATION OF MATERNITY WAITING HOMES IN WEST
POKOT COUNTY, KENYA**

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**A THESIS SUBMITTED TO THE DEPARTMENT OF MIDWIFERY AND
GENDER, SCHOOL OF HEALTH SCIENCES, MOI UNIVERSITY AS A
REQUIREMENT FOR THE AWARD OF MASTERS OF SCIENCE IN
NURSING, MATERNAL AND NEONATAL HEALTH**

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DECLARATION

I hereby declare that this Research Project is my original work and has never been presented either in whole or in part to any other examining body for the award of certificates, diploma or degree.

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DEDICATION

To my dear husband John and my children Brenda, Belinda and Bethuel whose unfailing love and dedication have seen me reach this far.

“kongoi Mising”

ABSTRACT

Introduction: The aim of this study was to examine the utilization of maternity waiting homes in West Pokot County, Kenya. Maternity waiting home improves obstetric outcomes like increased access to skilled deliveries and reduction of maternal morbidity and mortality rates in low-income countries like Kenya and Malawi. Many deaths are due to complications associated with unskilled deliveries at home with no skilled care. The study focused on utilization of maternity waiting homes in West Pokot County, Kenya.

Objectives: To determine factors associated with utilization of maternity waiting homes in West Pokot, to assess awareness and experiences of mothers towards maternity waiting homes and to examine relationship between utilization and maternal and neonatal outcomes.

Methods: A survey design and stratified random sampling technique was adopted to carry out the study. A sample of 725 mothers was selected in post-natal wards of 3 health facilities. Data was collected using researcher administered structured questionnaires. Descriptive statistics such as measures of central tendency and measures of variability were used to summarize numerical data such as distance to health facility and maternal age. Categorical data such education level, marital status and level of utilization were summarized as frequencies and proportions. Likert scale was used to assess mothers experiences towards Maternity Waiting Homes (MWH).

Results: MWHs utilization rate in Kapinguria was 15.5%. There was a significant association between MWHs utilization and monthly income than those who did not use MWHs $U(n=445) = 5.17, p < 0.001$. There was a significant association between utilization and occupation $\chi^2(2, n=722) = 8.22, p < 0.016$. Those self-employed utilized MWHs more (19.1%) compared to government employees (13.2%) and those unemployed (9.5%). Most of the residents had not heard about MWHs (64.4%). Among those who had knowledge about MWHs, fifty percent heard about it from the health care professionals and very few from the media (1%). The study showed that mothers who utilized MWHs recorded good maternal outcomes compared to those who did not utilize MWHs. The study results revealed that 1.1% mothers who utilized MWHs recorded poor maternal outcomes compared to 7.3% who did not utilize the MWHs.

Conclusion: There was low utilization of MWHs which is affected by monthly income and occupation. Most respondents had little knowledge about MWH. The study also established that there is an association between MWHs utilization and maternal, neonatal outcome. Unless community awareness increases, knowledge of preventive maternity care improves, and barriers preventing their use are overcome, MWHs will continue to be underutilized.

Recommendations: Concerted efforts must be undertaken to promote and tackle both the socio-economic, maternal and hospital associated factors hindering their utilization. There is still a need for the Ministry of Health in West Pokot County to create awareness among community to embrace the utilization of Maternity Waiting Homes. County government should invest more on health education of the mothers as it is important during birth preparedness and reduction of dangers associated with pregnancy, child birth, postpartum period and importance of hospital delivery.

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OPERATIONAL DEFINITIONS OF TERMS

Maternity Waiting Homes Maternity waiting homes (MWHs) are designed to help risky pregnant women and pregnant women who live far from the health facility in improving access to obstetric care after 37 completed weeks of gestation

Utilization And Maternal Use of maternal health services is an effective approach to reducing the risk of maternal morbidity and mortality, especially in places where the general health status of women is poor

Neonatal Outcomes The adverse neonatal outcome is defined as the occurrence of Low Birth Weight (LBW), preterm delivery, low Apgar score at first and fifth minutes after birth, early or late neonatal death, small for gestational age, and/or severe neonatal conditions

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CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter gave an overview of the background to the study, statement of the problem, research questions, significance of the study, scope of the study.

1.1 Background of the Study

Unacceptably high is the global maternal mortality ratio. Every day, around 800 women worldwide die from pregnancy or childbirth-related complications. 289,000 women lost their lives during and after childbirth in 2013. The developing nations account for 99 percent of maternal deaths. According to (WHO, 2014), Sub Saharan Africa accounts for more than half of these deaths, while South Asia accounts for almost a third. An estimated 42% of maternal deaths worldwide are related to the intrapartum period, which is defined as the first day after delivery or during childbirth. According to Lawn *et al.*, there were an estimated 535 900 maternal deaths worldwide in 2015. 2019) The second leading cause of death worldwide for girls between the ages of 15 and 19 is complications during pregnancy and childbirth. The vast majority of girls between the ages of 15 and 19 are born in low- and middle-income nations, accounting for approximately 11% of all births worldwide. Women in developing countries have a higher lifetime risk of death due to pregnancy than women in developed countries, and their average number of pregnancies is significantly higher. According to (WHO, 2014), the probability that a 15-year-old woman will eventually die from a maternal cause is 1 in 3700 in developed nations and 1 in 160 in developing nations. According to the 2014

KDHS, the rate of delivery in a health facility is 62% in Kenya, despite the country's high rate of antenatal attendance.

A maternity waiting home is a facility with skilled birth attendants for antenatal care and emergency obstetric care that is easily accessible to a hospital or health center. Women may also receive health education about pregnancy, childbirth, and infant care from them. At the end of their pregnancies, women who are at high risk or who live far away are typically encouraged to stay in these facilities. The assistance that is provided to women in their homes and the extent to which they are cared for vary from nation to nation. According to (Van Lonkhuijzen, Stegeman, Nyirongo, & Van Roosmalen, 2013), women may not be willing to leave their families, on whom they rely for their care, or their farms, which are their means of subsistence, due to the lower cost of home delivery.

Maternity waiting homes (MWHs) are regarded as an essential component of maternity care by the World Health Organization, particularly in areas where women live far from a medical facility and have limited access to transportation. Maternity waiting homes have the potential to significantly reduce maternal and perinatal mortality in the event of complications during labor. The ability to identify and refer at-risk women, as well as their utilization of maternity waiting homes, are critical to their effectiveness. According to (WHO, 2016), the identification and referral of high-risk pregnancies is dependent on an efficient system of community health services staffed by providers who have received specialized training in this area.

Interventions are needed right away because of the high rates of infant and maternal mortality in African nations. The establishment of maternity waiting homes, a practice

that has been in place for more than a century, is one of the tried-and-true strategies. The idea of maternity waiting homes is based on the idea that it is possible to identify pregnancies that are likely to develop complications and require skilled obstetric care. Women need to be identified (Eckermann & Deodato, 2018). Antenatal care services are also very important for making risk assessments and making timely referrals. According to (Zemichael, Nyarang'o, & Mufunda, 2018), even in the best of times, the delivery rate in health facilities is less than 30%, and it can be as low as 15% in other settings. This region has a huge unmet need for emergency obstetric care (EmOC). This is because of a referral system that doesn't work well, especially at the community level, which includes facilities that aren't well-equipped and don't have enough people working there. This is made worse by the fact that rural health facilities don't have enough skilled birth attendants because of staff turnover. This makes it hard to provide emergency obstetric (EMCOR) and newborn services (KDHS, 2014).

A number of maternity waiting homes were established in specific districts of the country in 2017 with the assistance of the UN Population Fund. If we want to reduce maternal mortality, it would be interesting to know if these shelters have been able to survive (UNFPA, 2012).

In Kenya, Maternal Mortality Rate (MMR) rates are at 362 per 100,000 live births compared to the WHO expected figures of 147 per 100,000 live births. It is estimated that 565 deaths out of 100,000 births (0.565%) occur in West Pokot (Ogolla, 2015). This figure is high compared to the national rate of 362/100,000 (0.362%) (Kavita, 2017). According to Kenya National Bureau of Statistics (KNBS) and Kenya Demographic

Health Survey (KDHS) 2018/2019, approximately 74% of women gave birth at home in West Pokot County with the help of TBA, 16.9% births were attended by skilled persons compared to 43.8% which is the National average (Ogolla, 2015). The figure indicates that the county will need to put in place measures to improve maternal health indicators to include improvement of maternity waiting home (West Pokot First County Integrated Development Plan 2013-2017).

From the secondary data retrieved from West Pokot County Referral maternity unit records from January to August 2019, a total number of 2808 mothers delivered in the facility. 108 (3.9%) of the total (2808) mothers were admitted through maternity waiting home against a capacity of 1,568 for the eight months. This gives an approximate utilization rate of about 6.9%. Of all the mothers, admitted through MWHs, there were no reports of maternal deaths nor still births. The rest 2712 (96.58%) were deliveries from mothers who were admitted directly from their homes. Seven (7) mothers died of labour and delivery complications, 112 still births (24 macerated stillbirths, 88 fresh still births) were recorded. Mothers who had complications were as follows; Antepartum haemorrhage 30, Postpartum haemorrhage 75 and those who had obstructed labour 97. This background formed the basis of this research about utilization of maternity waiting homes in West Pokot.

1.2 Statement of the Problem

Maternal mortality is still a problem in the majority of low income countries (Mramba, Nassir, Ondieki, & Kimanga, 2019). Many reported deaths are due to complications associated with deliveries at home with no skilled care (Mramba *et al.*, 2019). Most of these deaths are preventable through use of maternal health care services provided by

skilled staff in health care facilities (Sialubanje *et al.*, 2017) Different studies in different contexts indicate mixed evidence of the effectiveness of MWH on maternity care and health outcomes (Henry *et al.*, 2017). Previous studies have indicated distance from home to MWH as a problem to utilization of MWH(Henry *et al.*, 2017). In addition there is no evidence on whether or not the actual quality of the MWH is associated with utilization of facilities for delivery (Henry *et al.*, 2017). There is inadequate assurance that MWHs, will result in reduction of maternal related deaths and complications (Sialubanje *et al.*, 2017).

Shiekh, Kwaak, & Van Der (2015), recommended for evidence-based strategies and interventions to improve the utilization of MWHs that are demand driven or that aims to bring women near to emergency obstetric services. Failure of previous studies to demonstrate a positive impact of maternity waiting homes may reflect the failure to successfully implement other supporting components of a larger, comprehensive strategy to increase access to maternal health services (Shiekh *et al.*, 2015).

1.3 Justification of the Study

Pregnancy and childbirth related complications contribute to a significant number of pregnancy and childbirth related deaths and disabilities in the world especially in developing countries. MWHs have been introduced as one of the strategies to reduce pregnancy and related deaths, but their utilization is still low. From the reviewed literature, most studies focused on maternal waiting homes as part of health solutions to the maternal and neonatal mortality and morbidity reductions. Indeed, most of the research done concentrate on the medical aspect of mortality reduction among the pregnant women using the facilities. However, very little has been done on establishing

how effectively and efficiently the homes are utilized. It is revealed through literature that factors influencing utilization of maternal waiting homes usually result from consideration of many factors such as culture, upkeep cost, building designs, distances and community involvement. These factors if well addressed may help improve the utilization and occupancy of the maternal waiting homes. It is therefore, necessary to identify and explain the factors that influence the utilization of maternal waiting homes in West Pokot through this study.

1.4 Objectives of the Study

1.4.1 Broad Objective

To assess utilization of maternity waiting homes in West Pokot County.

1.4.2 Specific Objectives

- 1) To determine factors associated with utilization of Maternity Waiting Homes in West Pokot
- 2) To assess awareness levels and experiences of mothers towards Maternity Waiting Homes in West Pokot County
- 3) To examine relationship between utilization of Maternity Waiting Homes and maternal and neonatal outcomes

1.5 Research Questions

- 1) What factors influence utilization of maternity waiting homes in West Pokot?
- 2) What is the level of awareness and experiences of mothers towards quality of Maternity Waiting Homes in West Pokot?

- 3) What is the relationship between utilization of MWHs and maternal and neonatal outcomes in West Pokot County?

1.6 Significance of the Study

The study was significant to the County Government of West Pokot as they will be able to understand the factors that affect the utilization of maternity waiting homes. The research may enable other counties with hard to reach communities to develop standards, structures and policies to manage mothers and prevent maternal mortalities. The findings as well as the recommendations which shall be suggested during the study shall be important part of literature in the comprehensive mitigation of maternal health programs and encourage development of maternal waiting facilities. In addition, the findings may be used by the county to provide guidance when trying to improve the effective ways of proper utilizations of the maternal waiting homes. Lastly, the findings may form a body of knowledge that is useful for effective utilization of maternal waiting homes and leverage of partners to support the initiative and may also stimulate further researches on factors influencing utilizations of maternal waiting homes in Kenya.

1.7 Limitations of the Study

A limitation is an aspect of research that may influence the results negatively (Mugenda, 2018). The researcher encountered some limitations especially when obtaining information. This was because most of the respondents were not willing to disclose information. The researcher overcame this limitation by having an introduction letter from Moi University to assure the respondents that information provided was to be used for academic purposes only.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter discusses relevant literature review for the study. It accounts for previous studies and what have been found out in the area of this study. The chapter mainly focuses on the maternal waiting homes utilization. The chapter review captures relevant theories and empirical studies on to determine factors associated with utilization of Maternity Waiting Homes in West Pokot, to assess awareness levels and experiences of mothers towards Maternity Waiting Homes in West Pokot County and to examine relationship between utilization of Maternity Waiting Homes and maternal and neonatal outcomes. Therefore, both theoretical and conceptual Frameworks are presented and the knowledge gaps fully identified and explained.

2.2 Factors Associated with Utilization of Maternity Waiting Homes

Shiekh, Kwaak & Van Der (2015) advocates analysis of health service utilization from a socio-demographic perspective. The marginalized communities have limited access and minimal use of services from trained midwives and/or other skilled maternal health service providers. Practices such as Female Genital Mutilation (FGM) and early marriages have a direct relationship to high maternal mortality (Shiekh *et al.*, 2015). The belief that the more number of children is an indication of wealth affects the spacing of children/pregnancies which is also a contributor of maternal deaths. Early pregnancies with a mean age of 19 years for females and 24 years for males with a substantial proportion marrying at the age of 12 years is associated to deaths in delivery and birth complications (Shiekh *et al.*, 2015).

Studies conducted in Zambia and various African countries have reported several reasons for the low use of Maternal Health Care Services (MHS), such as women's negative experiences towards the quality of MHS in health facilities, social and cultural norms, women's low social status and lack of decision-making autonomy, lack of support from husbands, and negative opinions of influential family and community members about these services (Sialubanje *et al.*, 2017). Other factors include a positive experiences towards Traditional Birth Attendants (TBAs), and physical, financial and logistical barriers such as long distances and high transportation costs. Mitigating these barriers could improve maternal and newborn health outcomes in rural areas of the country (Sialubanje *et al.*, 2017). Among the reasons for low utilization of MWHs reported in the Zambian studies are lack of funds to buy food, baby clothes and cleaning materials for the baby and mother to use during labour at the health centre, concerns about need someone to remain at home and take care of the children and husband, and concerns about the deplorable state of the MWHs (Sialubanje *et al.*, 2017).

In Zimbabwe, a bunch review (counting 235 respondents) analyzed the utilization of maternal consideration administrations and found that practically all (97%) ladies went to antenatal consideration during their last pregnancy to some extent once, and 66% conceived an offspring in medical clinic. The utilization of a MWH improved the probability of clinic conveyance almost six-overlap. Only 33% of all respondents, in any case, utilized the MWH. Grievances that were referenced with regards to the MWHs were that the houses were too little and swarmed, the latrines required improvement and there was a deficiency of water and kindling (Van sanctum Heuvel, DeMey, Buddingh & Bots, 2019).

A review done in similar area in Zimbabwe in 2011, 66% of the ladies expressed that they would utilize MWHs . The other third referenced the shortfall of food arrangement and no assistance with cooking, the need to gather own water and kindling, helpless cleanliness and absence of transport for references, as significant elements for their refusal to utilize a MWH (Nhindiri, *et al.*, 2016).

In a provincial region in Ghana, 83% of ladies went to antenatal facilities once and 90% of respondents were able to remain in a MWH when encouraged to do as such (Martey, Djan, Twum, Browne & Opuku, 2015). In one more locale in Ghana the presentation of a MWH fizzled. This MWH was situated in a revamped ward in an old emergency clinic. In the primary year, 25 ladies were alluded and just one went through one night there. After the primary year, mentalities and obstructions were surveyed, through center gathering conversations with individuals included. There gave off an impression of being solid monetary hindrances: home conveyance is more affordable. Expenses of living are higher in a MWH. Moreover, ladies couldn't deal with their families and their homesteads. The area of the MWH was likewise thought to be dangerous in light of the fact that it was still some way from the medical clinic and orchestrating transport around evening time was troublesome.

The adequacy of maternity holding up Homes has been depicted in everyday terms. Cuba has further developed its public wellbeing framework starting around 2011. Maternal holding up homes were important for a broad undertaking to work on the consideration for ladies conceiving an offspring. The main MWH opened in 2012, and by 2014 there were 85 offices. In a similar period, the extent of conveyances in wellbeing foundations expanded from 63% to almost 100%. A constant review of all instances of maternal

demise showed that somewhere in the range of 2010 and 2014 maternal passings from discharge diminished significantly from 32 per 100,000 births to 2 for every 100,000 births (Cardoso, 2016). In Honduras, the presentation of MWH was essential for a technique to work on maternal wellbeing. It comprised of working on the reference of obstetric crises through the preparation of customary birth specialists. Furthermore, it intended to distinguish ladies with high-hazard.

The idea of maternity holding up homes has been founded on the reason that it is feasible to distinguish pregnancies liable to foster intricacies and need gifted obstetric consideration. With experience, notwithstanding, it has become certain that the "hazard approach" will most likely be unable to manage the issue of ID. Evident danger factors; For instance, a review in the US which analyzed the pace of genuine entanglements observed that regardless of exceptional investigation to screen out all conceivable high danger cases, in any case, almost 8% of "generally safe ladies" created genuine inconveniences. Additionally, a big part of the ones who did, truth be told, have entanglements had no clinical or obstetric danger factors (WHO, 2016)

Numerous nations utilizing maternity holding up homes have advanced from clinical meanings of what establishes high danger pregnancy, towards a more extensive idea dependent on a blend of distance, Financial and clinical danger factors. Step by step in certain examples (for example Cuba) maternity holding up homes have turned into an intermediary for institutional conveyance (Rooks *et al.*, 2019). The adequacy of maternity holding up homes relies upon the capacity to perceive and allude ladies in danger, and the use of the maternity holding up home by such ladies. This ID and reference is reliant upon a viable arrangement of local area wellbeing administrations, staffed by suppliers

who have been explicitly prepared in the recognizable proof and reference of high danger pregnancies. As referenced already, a significant job of the executives for the maternity holding up home will be working in collaboration with these local area wellbeing administrations. (Faundes, Rosenfield & Pinnoti 2018)

A review led in Zimbabwe shows that the adequacy of maternity holding up homes in lessening maternal mortality and horribleness relies upon the legitimacy of the measures used to recognize ladies in danger for inconveniences; the viability of screening and reference by wellbeing laborers; and the acknowledgment and utilization of maternity holding up homes by the ones who are distinguished as being high obstetric danger. 4488 ladies established the review populace, which involved 1573 ladies who were maternity holding up home clients (MWH clients) and 2915 who remained at home and self-alluded or were alluded to the emergency clinic by a conventional birthing specialist (MWH non-clients) (Millard *et al.*, 2011). The dangers of helped conveyance and the dangers of impeded work, ruptured racked uterus and maternal passing were looked at between the maternal holding up homes clients and non-clients (Chandramohan *et al.*, 2014).

A significant component of a compelling maternity holding up home is its admittance to qualified obstetric Administrations holding up homes have been set up close to clinics without any offices for usable conveyances, or close to locale or showing emergency clinics with employable offices. In Cuba and in Colombia a provincial maternity holding up home are set up close to essential level medical clinics, however the admittance to the area or to the showing clinic by emergency vehicle is simple and fast. In different cases, particularly in Africa, maternity holding up homes are almost a locale or showing clinic, where conveyances (both typical and muddled) happen (Rooks *et al.*, 2019).

The last critical component to an effective maternity holding up home is the acknowledgment and investment of local area and social organizations. Maternity holding up homes are the sort of wellbeing administration that is best coordinated by networks utilizing their nearby assets. Indeed, even in circumstances like Cuba and Mongolia, where the state works the maternity holding up homes, networks where nearby help was more noteworthy have had the option to support their exercises regardless of the decrease of state support. The ability of the maternity holding up home is a basic element since ladies and their families may not be effortlessly persuaded to get away from home before their normal conveyance date. "Informal" has indeed, been demonstrated to be the most ideal method for expanding the adequacy and utilization of wellbeing administrations (WHO, 2016).

An investigation of four maternity holding up homes in Tanzania demonstrates that client fulfillment and usage is exceptionally subject to the administrations that are given. For instance, in three of the maternity holding up homes food was given and ready by the actual ladies. They expressed that their uses on food were excessively high, and in the one situation where food was given, the ladies whined that this food was unsatisfactory, both as far as amount and quality. In every one of the four homes the executives was accounted for to be poor (Winful, 2014).

Maternal mortality levels in Kenya have remained unsatisfactorily high at 400 for each 100,000 live births, for certain districts detailing MMRs of more than 1000/100 000 live births. The neonatal death rate is 26 for each 1,000 live births (KDHS, 2014). Presently in Kenya, neonatal mortality adds to 60% of all baby mortality cases in Kenya. By and large, 62% of births in Kenya are conveyed under the oversight of a gifted birth orderly,

generally a medical caretaker or maternity specialist. Customary birth chaperons keep on assuming a crucial part in conveyance, helping with 28% of births (a similar rate as are helped by attendants and maternity specialists). The extent of births helped by restoratively prepared work force has expanded hugely — from 42% in 2018/9 to 62 percent in the 2014 study (KDHS, 2014). Around 9 out of 10 (92%) of all pregnant ladies in Kenya go to antenatal consideration once from a medical services supplier and 57.6 % make at least four ANC visits. In Isiolo region ANC participation is likewise high at 96% percent with 50.2% making something like four ANC visits.

Among ladies who convey outside the wellbeing office, a larger part (6 out of 10) don't get post pregnancy care. 51% go to post pregnancy care inside two days of conveyance (KDHS, 2014). This is in spite of the way that greater part of maternal passings happen during the post pregnancy time frame.

Over the course of the past 30 years, since the Safe Motherhood Initiative's inception, numerous initiatives and projects have been carried out in numerous poor and underdeveloped regions to assist in lowering the number of pregnant women who pass away from preventable causes (van Lonkhuijzen et al.,2012;WHO, 2013).In the early 1990s, the WHO supported the use of MWHs as part of a package of essential obstetrical services to increase women's access to maternity care.According to Wild, Barclay, Kelly, & Martins (2012), the establishment of maternity waiting homes served as a means of expanding services to women who lived in rural and remote communities and would not otherwise have access to medical care.Today, maternity waiting homes are still commonplace in many communities as cost-effective ways to cut down on childbirth-related deaths and increase access to care.

There is still work to be done, despite significant improvements in maternal health over the past 25 years and a global commitment from the 189 UN member states to continue enhancing the health of all global citizens. Every day, approximately 830 women die from preventable causes related to pregnancy and childbirth, which is an unacceptable rate of maternal mortality (WHO, 2015a). According to (WHO, 2015a), ninety-nine percent of maternal deaths occur in developing nations, highlighting the disparities in health care and access to services there (WHO, 2015a).

In the developed world, a woman's risk of dying during childbirth or from a cause related to maternal health was 1 in 4900 in 2015, while it was 1 in 180 in the developing world. The risk increases to 1 in 54 in countries that are considered fragile states and are characterized by war, violence, or famine (WHO, 2015a). This is due to a lack of adequate health care systems as well as other related factors like starvation and trauma.

Direct complications like severe bleeding or hemorrhage, infections (mostly after childbirth and including sepsis), high blood pressure during pregnancy (pre-eclampsia or eclampsia), complications during childbirth, such as obstructed labor, or unsafe abortion, account for approximately 73% of deaths (WHO, 2015a). According to Say *et al.*, indirect complications account for 27% of maternal deaths caused by or associated with other conditions like malaria, HIV/AIDS, and pre-existing co-morbid conditions. 2014; (WHO, 2015a). The majority of direct complications can be avoided and treated with the right medical care. Through appropriate and readily available antenatal care throughout a woman's pregnancy, indirect causes can also be managed to reduce or prevent poor outcomes or birth-related complications.

The World Bank defines countries as having a gross national income per capita of at least \$12,376. The WHO recommends at least four antenatal care visits for nearly all pregnant women in high-income nations. Additionally, they are more likely to have a skilled health professional present during labor and delivery, as well as overseeing postpartum care. Only 40% of all pregnant women received the recommended four antenatal care visits in low-income countries, as defined by the World Bank as having a gross national income per capita of \$1,025 or less (The World Bank, 2019; WHO, 2015a). Despite ongoing improvements to health and health care systems and the international community's ongoing promise to improve maternal health for all, women continue to face disparities in maternal care and access to specialized maternity care based on country or region of residence.

The Kenya Administration Arrangement Appraisal 2010 showed that approximately 74% of all offices (barring independent VCT offices) offer ANC (contrasted and 79 percent in 2014), 59 percent offer PNC (contrasted and 35 percent in 2014), and 69 percent give TT immunization (contrasted and 84 percent in 2014). 56% of offices offer each of the three administrations (contrasted and 33 percent in 2014). About a third of offices offer types of assistance for typical conveyances, a decrease from 38% in 2014. Just 5% of offices give cesarean area administrations, like 7% in 2014. A big part of medical clinics (a decrease from 76% in 2014) offer the support. In general, half ((49%) of all offices have transportation support for maternity crises (KSPA, 2014; KSPA, 2010)

According to World Health Organization (WHO) estimates from 2015a, nearly 830 women worldwide die each day from preventable causes related to pregnancy and childbirth. Over the past three decades, maternal health has been a major focus of

numerous major health initiatives, particularly in developing nations. The number of women who pass away continues to rise, despite the increased commitment and awareness of international organizations like WHO and the United Nations to make maternal health a global priority (United Nations Development Programme, 2016). WHO, 2015a).

Complications during and after pregnancy and childbirth account for approximately 75% of all maternal-related deaths. Severe bleeding or hemorrhage, infections such as sepsis (typically in the postpartum period after childbirth), high blood pressure during pregnancy (pre-eclampsia and eclampsia), prolonged labor or complications from delivery, or complications as a result of an unsafe abortion are the most common complications (WHO, 2015a). Throughout a woman's pregnancy and birth, appropriate maternity care provided by trained health professionals can reduce complications (van Lonkhuijzen, Stekelenburg, & van Roosmalen, 2012; WHO, 2015a). According to the Pan-American Health Organization (PAHO) Foundation (2010), it is essential to have access to health care services, including specialized services at facilities that are outfitted with the appropriate equipment and staff capable of caring for these conditions. A woman's ability to get care can be limited by a number of factors, including poverty, location and distance from medical care, lack of information, insufficient health services, and cultural norms or restrictions (Browne, 2010; WHO, 2015a).

Physical and geographical obstacles make it more difficult for rural women to obtain education and skilled work (Annis & Patterson, 2015; 2012, United Nations (UN). According to the Food and Agriculture Organization of the United Nations (2011), jobs in the countryside are more likely to be short-term, precarious, and low-paying than

jobs in cities.UN, 2012).When compared to women who live in urban areas, rural and remote women's increased poverty further restricts their access to care.Women living in poorer, more rural, and more remote areas have higher rates of maternal mortality and morbidity (WHO, 2015a) because they are unable to get timely medical care because of factors like distance, lack of transportation, or cost.

The ability to access routine, preventative, or emergency medical care is heavily influenced by physical geography and the distance to a health center or hospital with specialized services.In areas where there are no public transportation options and the roads are in poor condition, these physical barriers become an even bigger problem.Even though there are physical barriers to care in most countries, most of them are in developing nations, where roads and infrastructure are often bad and health care facilities are often overcrowded with few employees.According to WHO data, developing nations account for 99 percent of all maternal deaths worldwide (WHO, 2015a).

The Safe Motherhood Initiative, which was started in 1987, brought to light the high rates of maternal mortality that exist worldwide, but particularly in Sub-Saharan Africa. Established in 2010, the United Nations' Sustainable Development Goals (SDGs) called for a 75% reduction in maternal mortality rates between 1990 and 2015 (UN, 2015). Despite the fact that the SDGs' end goal was not met, significant progress was made in improving maternal health over the course of their timeline.According to UNDP (2015), the Sustainable Development Goals (SDGs), which were established to carry on the work of the Sustainable Development Goals (SDGs) for the next 15 years, or until 2030, aim to further improve maternal health and decrease the number of maternal deaths.In an effort to improve maternal health and prevent deaths, numerous interventions and programs

have been established at the local community level to aid in improving access to care and reducing complications during pregnancy and childbirth. However, additional evaluation of these programs' efficacy is required.

Maternity waiting homes, or MWHs, are one type of intervention that has been used in numerous global programs since the 1950s. They have been utilized in a variety of settings and capacities worldwide to prevent women from remaining in hospitals during their pregnancies and to improve women's access to specialized maternity care (van Lonkhuijzen et al., 2012; WHO, 2013). They are a one-of-a-kind intervention that can be implemented in a community setting; MWHs are a low-cost and effective way to decentralize obstetrical services in developing nations, as evidenced by their continued use. Women from rural or remote communities have improved access to specialized care that was previously unavailable due to factors like physical geography and distance to care thanks to decentralization of obstetrical services (WHO, 2013). Therefore, promoting this strategy to increase access to maternity care for women primarily living in low-income, underdeveloped, and remote areas may be influenced by examining the evidence regarding the effectiveness of MWHs.

A woman's death during pregnancy, childbirth, or within 42 days of delivery or termination of pregnancy is considered maternal mortality (WHO, 2015a). All religions, races, and socioeconomic classes are affected by maternal mortality in all parts of the world, but developing nations tend to have a higher proportion of women affected. Global health covers a wide range of topics, including maternal mortality.

The first large-scale initiative to raise awareness of the numerous women who die each year from pregnancy-related complications was the Safe Motherhood Initiative. The United Nations Population Fund (UNFPA), the World Bank, and the World Health Organization (WHO) worked together to establish the program in 1987 at the Safe Motherhood Conference in Nairobi. Maternal mortality should be cut in half by the year 2010 as part of the initiative (Mahler, 1987; 2014 Rosenfield; 2016 Starrs; WHO, 2013). The Safe Motherhood Initiative also resulted in the formation of the Safe Motherhood Inter-Agency Group, a partnership of international and national organizations working together to promote improved maternal health in developing nations and raise awareness of the Safe Motherhood Initiative (Starrs, 2016).

Access to care throughout a woman's pregnancy and postpartum period was the main goal of the Safe Motherhood Initiative, along with access to life-saving emergency services in the event of complications and an overall improvement in the quality of safe maternal care (Mahler, 1987; WHO, 2013). The initiative offered three feasible strategies to increase access to obstetrical services in numerous underserved and poor areas: 1) Get women to medical services, 2) Get women to medical services (provide emergency transportation for those in need), and 3) Decentralize care so that women can get care more easily. Particularly, it was suggested that MWHs could be used to decentralize care; They had been used for a long time in many low-income countries as a low-cost way to put pregnant women close to medical care (WHO, 2013).

The inter-agency group reached its stride in the late 1990s, around the time the initiative celebrated its tenth anniversary. It developed ten action messages for safe motherhood

and collaborated on a large advocacy campaign that significantly increased support for maternal health (Starrs, 2016).

The initiative failed to achieve its goal of reducing maternal mortality by 50%, despite improved progress after a slow start. It failed for a number of reasons, including: a lack of donor support, a lack of a clear strategic focus, and inadequate leadership to oversee the development and execution of particular projects (Maine & Rosenfield, 2014; 2016 (Starrs)). The Safe Motherhood Initiative consisted of the following four main pillars of care: 1) family formation; 2) Pregnancy care; 3) care during and after labor, including a safe and clean delivery; and 4) access to obstetrical care for high-risk pregnancies (Maine & Rosenfield, 2014; WHO, 2014). As an extension of overall improvement to primary health care and women's equity, the four pillars of care were intended to be achieved by improving basic maternity care (Maine & Rosenfield, 2014; WHO, 2014). Although they are all worthy goals, the initiative found that the four pillars and the goal of increasing women's access to primary care and overall equity were too broad (Maine & Rosenfield, 2014).

Additionally, there does not appear to be a consensus regarding the number of deaths that the initiative contributed to reducing because the international community continues to suffer from poor maternal mortality data collection (Alkema *et al.*, 2016; 2017 by Graham and Hussein; 2016 Starrs; Zureick-Brown *et al.*, 2013). The Safe Motherhood Initiative was instrumental in putting maternal health issues front and center on a global scale, which led to its inclusion in the "Maternal Health" category of the fifth Millennium Development Goal (MDG).

2.2.1 Upkeep Cost and Utilization of MWH's

It is thought that effective health-care utilization is a complex behavioral phenomenon. (Chowdhury, Chakraborty, Bari, & Akhter, 2014) found that the use of maternal medical health care facilities was related to the availability and affordability of services, the quality of services provided, the social structure, the personal attributes of each user, and their health belief in their study conducted in Bangladesh. Every human being in his or her dwelling requires basic and necessary necessities to be comfortable.. Further research is needed to establish this relationship (Sialubanje *et al.*, 2017). Based on this recommendation, the study in West Pokot County may unravel the factors that affect socio-demographic and cultural issues in utilization of MWHs.

Anything that hinders a person's ability to seek, utilize, and receive appropriate medical care is a barrier to care (Caulford & Scarborough Academic Family Health Centre, 2014). Every country and health system in the world has barriers to care, but some are more prevalent in particular areas and affect particular communities and areas more than others.

People are frequently discouraged from attempting to seek any kind of medical care because of systemic obstacles like cost and insurance coverage. According to (McNamee, Ternent, & Hussein, 2019), even when health care services are provided at no cost, people may choose not to seek treatment due to the high cost of travel and other out-of-pocket expenses, such as the purchase of prescription drugs or medical equipment. According to (Titaley, Hunter, Heywood, & Dibley, 2010), the cost typically comes in the form of lost income as a result of taking time off work to seek medical

attention. The underutilization of health care services by those with lower socioeconomic status and the overutilization of care by more affluent populations, who are able to afford the additional costs associated with receiving health care services, are the results of costs and wage losses. The problem is made worse in developing nations, where the majority of people frequently live in poverty. Based on 2011 purchasing power parity, the World Bank defines poverty as living on less than \$1.90 USD per day (The World Bank, 2016). The World Health Organization (WHO) acknowledged in a 2019 report titled "Women and Health" that poor health outcomes were linked to poverty and low socioeconomic status (WHO, 2019).

Social and cultural barriers are two additional significant impediments to care access. According to (Yargawa & Leonardi-Bee, 2015), gender roles and laws in some nations restrict a woman's access to medical care by requiring a man to accompany a woman out of the community or to a medical appointment. According to (WHO, 2019), men have greater access to medical care and other health resources than women do. Many women believe that the knowledge of community elders is sufficient for advice; It is also much easier to get than medical care that might be far from where you live (Cham *et al.*, 2015). Women were significantly less likely to use maternity care and less likely to use routine medical care in such circumstances. It was also found that people were less likely to use medical services if they only spoke the local language or were mostly illiterate (Cant, 2012). According to McNamee *et al.*, a person's care utilization was frequently reduced when they lacked literacy or education. (2019).

Women with higher levels of education are more likely to seek care for both themselves and their families and children. Increased comfort in interacting with health professionals

and the health care system has been closely linked to education (Cant, 2012;McNamee and other,2019;WHO, 2019).Accessing basic health and illness care has been difficult for women due to complex social and cultural issues, which becomes even more difficult when trying to get basic or specialized maternity care while pregnant (Cant, 2012; Titaley *et al.*, 2010; WHO, 2019).

Language barriers and health care professionals' lack of cultural sensitivity have been extensively discussed in the literature.According to Ganle, Parker, Fitzpatrick, & Otupiri (2014), women have reported feeling out of place, lost, and confused when attempting to access medical care in regions that are foreign to them, particularly when health professionals do not speak the local dialect.As a result of misunderstanding and confusion brought on by health care providers' instructions, language barriers have also contributed to delays in seeking treatment or further medical care (Cham, Sundby, & Vangen, 2015).

Women who had been to a hospital or other health care facility before also reported that health care providers did not treat them with compassion;According to Byford-Richardson *et al.*, a major reason for avoiding institutional care for any health issue is intimidation and the fear of harsh treatment from nursing staff.2013;Cham *et al.*, 2015 Ganle *et al.*, 2014).According to (Ishola, Owolabi, & Filippi, 2017), the poor quality of nurses' education and poor working conditions may play a role in the disrespectful, hostile, and abusive behaviors they exhibit (Ishola, Owolabi, & Filippi, 2017;2014; Jewkes, Abrahams, and Mvo2015, Mannava, Durrant, Fisher, Chersich, and Luchters).Women's overall utilization of health facilities has been undermined and women's use of care during pregnancy has been discouraged by negative health care

provider behaviors (Mannava *et al.*, 2015). Poor outcomes for both the mother and her unborn child are increased by women's reluctance to receive trained medical care during pregnancy, birth, and postpartum (Kassebaum *et al.*, 2014; Mannava *et al.*, 2015).

The following factors have been found to hinder a woman's ability to receive appropriate care: inadequate health care services; lack of specialty services, like advanced maternity care, cardiac care, or services for the intensive care unit (ICU); a lack of hospitals and medical clinics that are able to perform advanced procedures that can save lives; facilities that are not distributed equally across the population; and a lack of health care workers (Titaley *et al.*, 2010; Ganle *et al.*, 2014). People who live farther from health care services are more likely to be affected by physical barriers (McNamee *et al.*, 2019). The following physical obstacles have been identified as factors that make it difficult to obtain medical care: distance from or proximity to medical facilities; infrastructure for transportation – or a lack thereof; as well as whether or not there are public transportation options (Cant, 2012; Cham and co., 2015; Ganle and others, 2014; Titaley *et al.*, 2010; WHO, 2019). Women, men, and health care providers all said that the longest obstacle to overcome when trying to get medical care, especially if it was urgently needed, was the lengthy travel time (Cham *et al.*, 2015; Titaley *et al.*, 2010).

A lack of reliable motorized transportation exacerbates the issue of travel time. Farmers and laborers in rural communities, who could only travel long distances over rough or mountainous terrain using wheelbarrows or scotch carts (ox-drawn carts), identified this particular issue (Fawcus, Mbizvo, Lindmark, & Nystrom, 2013). Walking was the primary mode of transportation for the majority of rural residents. Due to the fact that emergency services, such as ambulances, were frequently unable to reach these

individuals' small communities, health care was even more difficult to obtain for them. It was reported that transportation issues prevented patients from getting care; They were thought to be issues that could be fixed at the community and national levels to lower mortality rates due to difficulty getting medical care (Cham *et al.*, 2015; Fawcus *et al.*, 2013). Geographical topography, including mountain ranges, lakes, rivers, and arid terrain, was thought to be a barrier that couldn't be avoided, couldn't be easily changed, and needed to be accommodated in care access improvement interventions.

Given their larger populations and limited resources, developing nations are frequently viewed as having a larger and more prevalent problem. However, many, if not all, of these obstacles to maternal care also exist in rural Canada. For instance, the vast geography of Canada's northern communities can significantly limit access to health care. However, removing these obstacles is frequently more difficult in rural areas of less developed, poorer nations, where funding is severely constrained and other life-saving resources may simply not exist (for example, flights to urban hospitals).

It is critical that women have access to health care services throughout their pregnancies, during childbirth, and afterward, regardless of where they live. Access to maternity care is an essential component for a woman's ability to have a healthy pregnancy and a safe delivery². A woman's ability to get care in a timely manner should not be based on her residence.

Although smaller communities may not possess the expertise in specialized health fields, they should have access to resources that can be used to transfer patients to more acute centers for advanced care when necessary (Fawcus *et al.*, 2013; Van Damme, Ir, Bigdeli, and Jacobs, 2012). Poverty, geography and distance to medical care, lack of information,

inadequate health services, and cultural practices or restrictions are among the factors that prevent women from using medical care during pregnancy and childbirth, according to the World Health Organization (WHO, 2019). The majority of women in developing countries do not benefit from care, even when it is available, due to the high barriers to access in some areas (WHO, 2013). Providing women with access to care at all stages of pregnancy, during labor, and after delivery, as well as emergency obstetric care in the event of complications, is an essential step in lowering maternal and newborn mortality rates in these areas. In many developing nations, where health care resources and funding are limited, decentralization of specialty services, such as maternity care, would improve access to care in smaller communities. The establishment of MWHs is an alternative solution that has been implemented in some developing nations; Some obstetric services can be decentralized thanks to these structures (WHO, 2013).

A maternity waiting home (MWH) is a stand-alone health care facility, often located near a larger medical centre or hospital, where women can stay during their pregnancies to be closer to emergency or high risk maternity services (van Lonkhuijzen *et al.*, 2012). According to the Safe Motherhood Report published by the World Health Organization in 2013, the use of MWHs was not a new concept but an idea that had been around for several decades.

In the mid-20th century, waiting homes were established in northern European countries, as well as Canada and the United States of America, to support women living in remote areas, with limited access to obstetrical services (WHO, 2013). These homes were opened up by organizations working in Europe to provide shelter for single mothers in an effort to reduce the number of abortions and rates of infanticide. Variations of MWHs

have been described in scientific literature dating back to the 1960's (WHO, 2013). The earliest documentation of MWHs, initially described as "Maternity Villages" was in Eastern Nigeria in the 1950s, followed by Uganda and Cuba in the 1960s (Lawson & Stewart, 1967). The establishment of waiting homes during the 1950s-1960s, allowed women with high risk pregnancies to stay in small buildings adjacent to a district hospital for the last 2-3 weeks of pregnancy, in an effort to reduce maternal mortality from around 10 deaths per 1000 deliveries to less than 1 death per 1000 deliveries (WHO, 2013).

The typical client of a MWH is a woman who is classified as having a "high risk" pregnancy, requiring close and frequent monitoring. Being at a MWH allows for easy access to a larger obstetrical centre should an emergency or complication arise. Maternity waiting homes have also been essential in providing a place to stay for women from rural or remote communities who would otherwise not have access to specialized maternity care services. Close proximity to a larger medical centre helps to bridge the distance and geography that can impede a woman's use of routine obstetrical care and emergency services (WHO, 2013). Women with "low-risk" pregnancies often stay at MWHs towards the end of their pregnancies to await labour. After the onset of labour, they are transferred to a medical centre where they can be assisted during childbirth by a medical professional or skilled birth attendant, improving accessibility to care and aiming to reduce maternal mortality associated with childbirth (van Lonkhuijzen *et al.*, 2012; Wild *et al.*, 2012). Maternity waiting homes do not typically handle deliveries, but providers can do so in situations where there is not enough time to transfer the women to a hospital or nearby health centre.

In the literature, maternity waiting home was the most common term used, although maternity waiting house, waiting facility, waiting area, waiting shelter, and resting homes have also been terms used to describe the same concept of a stand-alone maternity residence closer to a larger hospital or health centre. The use of MWHs is well documented in less developed countries across Africa, Central and South America, Asia, and the Pacific, as a low cost solution to decentralize obstetrical services, making maternity care more accessible to women in rural or remote communities (WHO, 2013).

The type of structure, array of services, and number of women served varies among countries. Traditional style huts are more commonly used in Zimbabwe and Ethiopia, compared to modern style houses, equipped with a toilet, bathroom and kitchen facility, or old hospital wards found in other countries such as Cuba, Ghana, Papua New Guinea and Tanzania (van Lonkhuijzen *et al.*, 2012; WHO, 2013).

Services provided at a MWH differ based on resources, funding, and the MWHs' locations. Some facilities are completely self-catering, where women are required to provide their own food, water and firewood, while other facilities are fully catered (van Lonkhuijzen *et al.*, 2012). Cultural practices also differ among facilities based on location they cater to the population that they serve but welcome all faiths, and religions into a MWH (WHO, 2013). Some MWHs are also able to provide health education about pregnancy, giving birth, and neonatal care to women staying at the facility. Education is provided by community health workers or nurses who visit the facility to conduct assessments, often on high risk patients staying there (van Lonkhuijzen *et al.*, 2012).

Many MWHs have been established through government initiatives or joint collaborations between large health organizations such as the WHO and countries' ministries of health. In regions where government established MWHs do not exist, various academic and community groups or other non-governmental organizations (NGOs) have helped to set up and establish MWHs for local women to use (WHO, 2013; Wild *et al.*, 2012). Regardless of what organization helped to establish or continues to fund a MWH, all facilities have the same objective, which is to provide a safe place in the community for women to stay while pregnant, close to specialized services that may otherwise be inaccessible.

2.2.2 Skilled Delivery Attendance

This refers to the process of providing adequate care to a mother by a qualified health professional during labor, delivery, and the early post-pregnancy termination period, according to (Abdulkadir, 2015). According to (Graham *et al.*, 2013), various enablers are required for an effective skilled delivery attendance process. An effective and efficient health system with viable referral and communication channels, qualified health care workers with basic midwifery skills, adequate hospital provisions, equipment, and effective infrastructure are examples of these.. A skilled delivery attendant, on the other hand, is a health professional who is accredited and has the knowledge and practical skills to safely assist mothers and their babies during childbirth in hospital, home, or health center settings. Midwives, doctors, and nurses with midwifery and life-saving skills are examples of skilled attendants. This definition excludes traditional birth attendants, whether trained or not (WHO, 2016).

According to (Kanini, 2012), when a mother develops complications that endanger her or her child's life, skilled attendance is viewed as the only most effective intervention that ensures safe motherhood by ensuring prompt delivery assistance to emergency obstetric and new-born care. When a delivery occurs in a hospital, it provides clear evidence that skilled delivery was used and acts as a mitigating factor in maternal mortality (Kreyberg & Helsing, 2010).

According to (Kanini, 2012) despite the fact that skilled attendance plays a major role in protecting the health of new-borns, studies shows that only 58% of all deliveries are reported as attended by skilled birth attendants in the developing states. For example, only 46% of mothers who give birth in West and Central Africa, receive assistance from a skilled birth attendant. According to (WHO, 2016), the number of rural mothers who give birth under the care of a qualified health personnel is only half of their counterparts in the urban areas.

Despite worldwide accelerated progress to increase access to skilled birth attendance, a depressive health equity gap still exists between developed and underdeveloped nations. According to (UNICEF, 2012), only 2% of women are unlikely to access assisted child birth in industrialised states like commonwealth states and Eastern and Central Europe as opposed to 59% of their counterparts in underdeveloped states like sub-Saharan Africa and Southern Asia. The disparity increases further between women in urban and rural areas where globally 60% of rural women have chances of accessing skilled childbirth attendant compared to 89% in urban areas. Further inequality is experienced based on economic status where globally 67% of poor women are unlikely to access

skilled care at childbirth while only 11% may not receive the same among rich women, (UNICEF, 2012).

In sub-Saharan Africa, the gap in accessing skilled care at childbirth between rural and urban women is 42% and 79%, respectively, while between the poor and rich pregnant women is 70% and 15% likely to give birth unattended, respectively. This sums up to 90% of all the 40 million unattended childbirths worldwide occurring in sub-Saharan Africa and Southern Asia. Inadequate or absence of professional attendance of mothers in the reproductive age (15-49 years) during pregnancy and childbirth was also largely responsible for global 303,000 maternal deaths and 2.7 million new-borns that died in the first month of life in 2015, (UNICEF, 2015).

2.3 Experiences and Awareness towards MWHs

A study done in a rural district in Ghana to determine the experiences and barriers to women attending MWH, after a year, 83% of women attended antenatal clinics at least once and 90% of respondents were willing to stay in a MWH when advised to do so (Martey, Djan, Twum, Browne & Opuku, 2015). In another district in Ghana the introduction of a MWH failed. This MWH was located in a refurbished ward in an old hospital. In the first year, 25 women were referred and only one spent one night there. There appeared to be strong financial barriers: home delivery is less expensive. Costs of living are higher in a MWH. In addition, women could not take care of their families and their farms. The location of the MWH was also considered problematic because it was still some way from the hospital and arranging transport at night was difficult.

This can be explained by the Theory of Planned Behaviour (TPB) which was developed by Fishbein and Ajzen in the 2010s. According to TPB, the best predictor of behaviour is behavioural intention, which, in turn determined by experiences toward the behaviour, social normative perceptions regarding it, and perceived behavioural control of performing the behaviour. TPB has been used successfully to predict and explain a wide range of health behaviours and intentions. It was employed to explain the predictors of the intention of institutional delivery as well. In a similar manner, the current study aimed to investigate the predictors of experiences toward MWH using the theory of planned behaviour so as to fill the void of evidence on this important issue.

A study done by (Rukia 2014), of Jomo Kenyatta university of agriculture and technology on awareness, experiences towards and utilization of Maternity waiting home by mothers in Imerti Sub County, Isiolo County concluded that Awareness on the maternity waiting home was quite low. In our study 66.4% of 384, that is two thirds of the respondents were not aware of the presence of maternity waiting home and 61.1% answered that they would be willing to stay in a MWH. High cost was one of the reasons mentioned that would hinder utilization of maternity waiting home

In Kenya, safe motherhood approaches such as the provision of free maternity services are still underutilized by many women, particularly those in low-income, rural, and remote areas. As a result, maternal mortality is extremely high in some parts of Kenya (Ogolla, 2015). According to (Lonkhuijzen *et al.* 2014), low adoption of services in maternal and newborn health care results in high maternal mortality ratios. Similarly, lack of awareness of services contributes to low utilization, which leads to high maternal and prenatal mortality and morbidity.

Maternal health care coverage in Kenya is nearly identical across the country, but differences persist, particularly between urban and rural areas, in women's education levels and household welfare levels (Tesi, 2012). According to (Muithya, 2016), women with a higher level of education are much more likely than those with no education to receive antenatal care from a medical doctor. As a result, the majority of professional and educated women in urban areas are more likely to participate in maternal health care systems than women from rural areas who are less educated. As a result, the community must be well informed about the costs and benefits of hospital deliveries, and medical services must be more responsive to community needs and preferences (Mwangome *et al.*, 2011).

Mramba *et al.* (2010) discovered that the reasons for the low utilization of maternal shelters in rural Kenya can be attributed primarily to a lack of awareness of their existence and goals. Furthermore, (Mramba *et al.*, 2010) discovered that less than 10% of women who gave birth in a hospital used a newly built maternal shelter in Kilifi County.. Thus, awareness of the maternal MWHs existence was a significant barrier, as 72 percent of pregnant women were unaware of its existence, and 95 percent indicated that they would need their husband's permission to use the maternal shelter. According to the study, health care workers must play an important role in raising awareness and educating pregnant women about maternal health and safe birth plans, such as the use of maternal shelters to facilitate prompt access to obstetric care. According to (Onyango, 2014), despite interventions from both the government and non-governmental organizations, a high percentage of women do not deliver at health facilities in Kajiado Central District. , especially through the implementation of the community strategy.

According to a study conducted by Options Consultancy Services Ltd, Partnership Management, Evaluation and Learning (PMEL, 2015), community awareness of the existence and goals of maternal shelters is critical to increasing their utilization. Maternal shelters must raise community awareness in order to play an important role in the decentralization of obstetric care and increased access to facility-based skilled delivery by providing close residence to health facilities and lowering the distance barrier to accessing skilled delivery care. This should begin with a community need assessment and continue throughout the entire implementation and management phase (PMEL, 2015).

According to a (UNICEF, 2013) study, intensive maternal awareness campaigns, such as the establishment of maternal shelters in rural remote villages in Eritrea, have significantly contributed to their successful adoption and utilization. With Samburu women seeking skilled birth attendance at a low rate (19.8 percent), the study is critical to determining the level of awareness of maternal shelter interventions and how it contributes to their utilization.

The United Nations' Sustainable Development Goals (SDGs) are a set of eight objectives that all 189 member states of the United Nations agreed to work toward achieving by the end of 2015. The signing of the Millennium Declaration in September 2010 led to the establishment of the SDGs. According to (WHO, 2016)a, the Millennium Declaration is a global partnership between all member states and their leaders with the goal of enhancing health for all over a 25-year period from 1990 to 2015. A period of time stretching back to 1990, ten years prior to the signing of the Millennium Declaration, was included in the 25-year timeline. (Kumar, Kumar, & Vivekadhish, 2016)¹ The inclusion of a retroactive

period allowed for the creation of global and country targets from global baseline data from 1990.

In addition to eliminating discrimination against women and improving the health of mothers and children, the Sustainable Development Goals (SDGs) aimed to combat poverty, hunger, and environmental degradation. According to (UNICEF, 2014), a total of eight goals, 21 targets, and sixty indicators assessing progress toward each goal were established. There were eight SDGs: 1) to end extreme hunger and poverty; 2) to make primary education available to everyone; 3) to support women's empowerment and gender equality; 4) to cut down on infant mortality; 5) to improve maternal health (cut down on mortality from maternal causes); 6) to fight malaria, HIV/AIDS, and other diseases; 7) to guarantee the longevity of the environment; and 8) to establish a global development partnership (UN, 2015; WHO, 2016a).

The subsequent targets and goals were interconnected; It was found that poverty was connected to all eight goals. As a result, (UNICEF, 2014) stated that the SDGs' fundamental objective was to eradicate poverty, which was anticipated to improve other prevalent global health issues. The MDG initiative also aimed to bring developed and developing nations together to collaborate on national and international efforts to improve health and development (UN, 2015; UNDP, 2015). It has been questioned whether the Sustainable Development Goals (SDGs) were truly intended to be global rather than national targets. Given the differences in countries' levels of development, it has been criticized as unrealistic to expect each country to achieve the same global goal—especially when countries have received little assistance or direction on how to do so (Vandemoortele, 2011).

The 'Three Delays Model', first conceptualized by (Thaddeus & Maine, 1994), identifies three phases of delay that occur in seeking out emergency obstetrical care. The first two delays identified in the framework examine the delays often associated with seeking out and accessing maternity care, while the third delay is associated with the delay in receiving care after arrival at a health care facility. The 'Three Delays Model' can help guide the analysis of literature examined in this REA. The first two delays, outlined by Thaddeus and Maine, are related to the REA questions examining the impact of MWHs on both maternal outcomes and the factors that influence a woman's ability to access and use a MWH.

The first delay pertains to delays by the individual, family, or both in seeking care (Thaddeus & Maine, 1994). Thaddeus & Maine (1994) identified previous experience with the health care system, status of women in the community, and financial costs associated with transportation or receiving care, as factors that play a large part in accessing maternity care.

Women who are unaware of or uninformed about the concept of a MWH and its purpose are significantly less likely to use it during their pregnancies. The misconception that MWHs are to be used only by women experiencing high risk pregnancies may prevent other pregnant women from considering their use. Cost and accessibility are additional factors that impact a woman's ability to access a MWH, especially among women living in communities where maternity care is limited or non-existent.

The second delay pertains to the ability to access care and reach an adequate health care facility in a timely manner (Thaddeus & Maine, 1994). This delay is attributed to

geography and travel time from a person's community to a local community health centre, or distance to a larger hospital with specialized services. Distance, travel time, condition of local roads and transportation infrastructure, in addition to cost and availability of private or public transportation, can hinder or delay a woman's access to timely medical care and increase risk of poor maternal outcomes including mortality (Echoka *et al.*, 2014; Holmes & Kennedy, 2010; Panciera *et al.*, 2016). Proximity to a MWH is likely to play a role in women's use. Ideally, a MWH would be a support service that could bridge the gap in access to care for women who live farther away from specialized maternity medical services, or who live in communities where there is no access to any medical services (including maternity care). The onset and length of labour is often difficult to predict; challenges in trying to locate transportation while in labour and/or risk of delivering prior to arrival at a health facility could be avoided if a woman was already staying at a MWH. Maternity waiting homes are often located in close proximity to larger health centres or hospitals. Transportation issues and distance away from a woman's home community appear to be important factors influencing women's access to a MWH during her pregnancy.

The third delay outlined by (Thaddeus & Maine, 1994) is the delay in receiving appropriate and timely care even after arrival at a health centre. Arrival at a health centre may not result in receiving immediate care because shortages of supplies, equipment, and specialized health care staff, common in many developing countries, may delay attention from health care providers and lead to an increased risk of mortality (Thaddeus & Maine, 1994).

The 'Three Delays Model' identifies delays in the order at which they typically appear: recognizing a problem at the onset of a medical or obstetrical emergency; accessing help from trained health professionals at a health centre or hospital; and encountering delay in receiving adequate care. However, poor maternal outcomes are less commonly associated with one particular delay than they are with a combination of factors from each delay in the model (Thaddeus & Maine, 1994).

The use of the 'Three Delays Model' helped to inform my analysis of the literature included in this REA. I intend to examine the impact of MWHs on maternal mortality rates. Identification of the factors associated with the delay in receiving care after a woman presents at a health centre have not been well addressed within MWH literature. Therefore, only the first and second delays identified by (Thaddeus & Maine, 1994) were used to guide the analysis of studies collected. I used them to assist in identifying factors that influence a woman's use of a MWH and/or access to maternity care. The identification of factors that influence delays is anticipated to inform continued improvements in interventions and health practices to improve maternal health outcomes and reduce maternal mortality rates.

2.3.1 Community and Cultural Aspect

Final decisive factor for the successful establishment of maternity waiting homes is the acceptance and participation of community and cultural institutions. Waiting Homes are for health care services that are best managed in the community using local resources. Even in the situation where countries such as Cuba and Mongolia operate obstetrics and gynecology hospitals, the community with higher local support was able to continue

their activities despite the decrease in national support. Most women and their families are not easily persuaded to leave their homes before their due date. Word of mouth has actually proven to be the best way to increase the acceptance and acceptance of health care services. (WHO, 2016).

A study of MWHs hospitals in Tanzania found that user satisfaction and utilization are highly dependent on the services provided. For example, in 3 of 4 obstetrics and gynecology hospitals, meals were provided and prepared by women themselves. Most women said the cost of food was too expensive, and in one case, when food was provided, most women complained that they were not satisfied with both the quantity and quality of the food. A total of four homes were poorly maintained (Winful, 2014).

According to (Spencer, 2018), culture is a basic set of assumptions as well as values, strong belief in policy, protocols as well as behavioral conventions that influences the behavior of community members. Culture was one factor that had created health imbalances in Kenya within some groups apart from their socio-economic eminence, gender, geographical habitation or other physiognomies cannot access or use the health facilities.

According to (TRAction, 2015), only 22.8% of deliveries in Turkana were conducted by competent maternal attendant due to their nomadic way of life, in comparison to the national wide average of 62%. It's a worrying trend because of the high maternal mortality rates that was associated with the pregnant related complications. It was also indicated that a newly build maternal health facilities was only used by 10% of near term pregnant women who successfully delivered in the hospital. According to (Mramba *et al.*,

2010) findings, lack of awareness on the existence of maternal health services attributed to low usage of MWHs as 72% of near term pregnant women were not aware on the existence of maternal health services. The study also found out that 95% of near term pregnant women would consult their husbands before using the health care facilities. This was a major concern in line of utilization of the maternal waiting homes to reduce MMR. Culture played a key role in utilization of the MWHs as the accommodation dimension was based on social cultural practices such as the men's role as well as the connection between maternal attendants and the patients.

2.4 Maternal and Neonatal Outcomes

A study by (Millard *et al.* 2016), shows that use of MWH reduce early neonatal mortality. Higher proportion of early neonatal deaths occur most in those mothers who do not use MWH. According to (Blencowe *et al.* 2015), MWHs contribute to 83% reduction of still births unlike non-users of MWHs.

Haemorrhage, eclampsia, sepsis, unsafe abortion and obstructed labour are some of the direct causes of maternal deaths while anaemia, malaria and hepatitis are some of the indirect causes which can be minimized by utilizing MWHs for easy reach of emergency obstetric care. (Shiekh *et al.*, 2015). Utilization of ANC services is influenced by the education level of the mother as well as those of their husbands and it is more utilized in the urban settings as compared to the rural settings. The African culture encourages delivery at home with the help of trained midwife, there is a shortage of them due to geographical, political and social reasons, and may lead to deaths and other related complications in case of emergencies (Shiekh *et al.*, 2015).

Women's education is directly associated with better utilization of health care services. Alternative delivery of health services such as through mobile clinics have been used in remote/rural and this could be thought as a hindering factor to MWHs utilization. In rural/semi-arid areas, low number of health facilities and health staff contribute to low utilization of MWHs. (Shiekh *et al.*, 2015).

As stated by (Shiekh *et al.*, 2015),MWHs are considered to play central role in the strategy to “bridge the geographical gap” in obstetric care. That means MWHs reduces the gap between rural areas with poor access to equipped facilities and urban areas where the services are available. As one component of a comprehensive package of essential obstetric services, maternity waiting homes offer a low-cost way to bring women closer to needed obstetric care.

A study by (Felten, 2015), states that,MWHs are part of the strategies utilized to improve access to hard to-reach rural populations. They take many forms. Some are simple shelters where women must provide their own supplies while others have ANC services and medical staff available. (Felten, 2015), notifies that there were indirect evidences that Maternity Waiting Areas (MWAs) improved maternal health outcome. Access to Comprehensive Emergency Obstetrics and Newborn Care (CEmONC) is limited in Ethiopia but indirect evidence seems to show that if MWH is standardized and institutionalized, it could improve maternal health outcomes.It is therefore, necessary to identify and explain maternal and neonatal outcomes that influence the utilization of maternal waiting homes in Kenya through a case study of West Pokot through this study.

Maternal mortality levels in Kenya have remained unacceptably high at 362 per 100,000 live births, with some regions reporting MMRs of over 1000 /100 000 live births. The neonatal mortality rate is 26 deaths for every 1,000 live births (KDHS, 2014). Currently, neonatal mortality accounts for 60% of all infant mortality cases in Kenya. In Kenya, 62 percent of births are performed under the supervision of a skilled birth attendant, typically a nurse or midwife. Conventional birth attendants continue to play an important role in childbirth, assisting with 28% of births (the same percentage as are assisted by nurses and midwives).

According to a study conducted by (Marjorie & Oona, 2013), maternal deaths in developing countries that occur during labor, childbirth, or shortly after delivery account for nearly half of all maternal deaths. Furthermore, they discovered that the location of a delivery, that is, whether it occurs in a qualified health facility with essential emergency obstetric services or not, and who assists in the delivery, that is, the presence of a professional birth attendant, are important factors in reducing such deaths. The study also discovered that home deliveries in the absence of skilled birth attendant care account for half of all deliveries in developing countries. (Gure, 2013) agrees, stating that using skilled delivery services significantly reduces the effects of complications that may arise during childbirth. Many of these obstetric complications are avoidable if an early diagnosis and proper management are implemented (Gure, 2013). In Uganda, (Nankwanga, 2014) investigated the uptake of post-partum services and the factors influencing its consumption at Mulago and Mengo hospitals and discovered that most women were unaware of postnatal services and other services available in maternal shelters. During their investigation, (Stekelenburg *et al.*, 2014) assessed the level of the

use of maternal related health services in Kalabo District, Zambia. According to the study, insufficient health education provided during antenatal clinic contributed to mothers who would otherwise prefer to give birth in a clinic not doing so. In Sudan, (El Shiekh & Kwaak, 2015) discovered that maternal services were underutilized and recommended that mothers be brought closer to emergency obstetric services or that community demand for services be increased by implementing evidence-based strategies. The worldwide maternal mortality proportion is unsuitably high. Around 800 ladies bite the dust from pregnancy or labor related intricacies all throughout the planet consistently. In 2013, 289 000 ladies kicked the bucket during and following pregnancy and labor. close to 100% of maternal passings happen in emerging nations. The greater part of these passings happen in Sub Saharan Africa and close to 33% happen in South Asia (WHO, 2014). All around the world, an expected 42% of maternal passings are intrapartum related, characterized as passings during birth or the primary day after conveyance. There were an expected 535 900 maternal passings worldwide in 2015 (Yard *et al.*, 2019)

Difficulties connected to pregnancy and labor is the second reason for death for 15-19 years of age young ladies all around the world. Some 11% of all births overall are to young ladies matured 15 to 19 years, and by far most are in low and center pay nations. Ladies in non-industrial nations have on normal a lot a larger number of pregnancies than ladies in created nations, and their lifetime hazard of death because of pregnancy is higher. The likelihood that a 15-year-elderly person will ultimately bite the dust from a maternal reason is 1 out of 3700 in created nations while 1 of every 160 is in the emerging nations (WHO, 2014). In Kenya, in spite of the great pace of antenatal participation, the pace of conveyance in a wellbeing office is at 62% (2014 KDHS).

A maternity holding up home is an office that is inside simple reach of a medical clinic or wellbeing focus that gives antenatal consideration gifted birth chaperons and crisis obstetric consideration. They may likewise furnish ladies with wellbeing schooling about pregnancy, conceiving an offspring and newborn child care. It is generally ladies with high-hazard pregnancies or those that are living far away that are urged to remain in these offices toward the finish of their pregnancy. The degree to which ladies are really focused on in the homes and the assistance that is accessible to them varies from one country to another. A further trouble is that home conveyance is more affordable and that ladies may not leave their families on whom they depend for their consideration, or their homesteads which are their method for work (Van Lonkhuijzen, Stegeman, Nyirongo & Van Roosmalen, 2013).

The World Wellbeing Association considers maternity holding up homes (MWH) as a significant component of maternity care, particularly where ladies reside a long way from a wellbeing office and transport is poor. At the point when confusions of work happen, maternity holding up homes can assume a significant part in lessening maternal and perinatal mortality. The viability of maternity holding up homes relies upon the capacity to perceive and allude ladies in danger, and the use of the maternity holding up home by such ladies. This distinguishing proof and reference is subject to a compelling arrangement of local area wellbeing administrations, staffed by suppliers who have been explicitly prepared in the ID and reference of high danger pregnancies (WHO, 2016).

African nations are stood up to by high maternal mortality and baby death rates for which there is dire requirement for intercessions. One of the verified procedures is the foundation of maternity holding up homes a training which has been in presence for over

100 years. Maternal consideration administrations are likewise very vital for making hazard evaluations and ideal references and the idea of maternity holding up homes has been founded on the reason that it is feasible to distinguish pregnancies prone to foster intricacies and need gifted obstetric consideration. Ladies should be recognized and (Eckermann & Deodato, 2018). In low asset nations considerably under awesome of times, the conveyance rate in wellbeing offices is under 30% with as low as 15% in different settings (Zemichael, Nyarang'o & Mufunda, 2018). There is gross neglected requirement for Crisis Obstetric Consideration (EmOC) in offices around here. This is because of an ineffectively working reference framework particularly at the local area level including unfit and deficiently staffed offices. This is additionally irritated by the lack of gifted birth specialists in rustic wellbeing offices because of the continuous staff whittling down subsequently presenting significant test for the arrangement of Crisis Obstetric (EMCOR) and Infant administrations (KDHS, 2014).

In 2017, through the help of the UN Populace Asset various maternity holding up homes were set up in chose regions in the country. Regardless of whether these havens have had the option to support themselves would be of interest assuming that maternal mortality is to be decreased (UNFPA, 2012). The fifth MDG, which was aimed at improving maternal health and access to care globally, consisted of two targets focused on the need to improve the overall reproductive health of women. The first target aimed to reduce maternal mortality, measured by the maternal mortality ratio (MMR), by 75%, from 1990 to 2015; the second target was to achieve universal access to reproductive health by 2015 (Sustainable Development Goals Fund, nd, p.5; UNICEF, 2014). Both were lofty targets to achieve over the timeframe. Neither of these targets was met by the goal end date of

September 2015, but substantial improvements to maternal health in all regions of the world were seen over the 25 year period. The global MMR declined from 380 deaths per 100,000 in 1990 to 210 per 100,000 in 2013, a decline of 45% worldwide; the major reduction occurred in the last 15 years, since 2010.

Southeast Asia had the largest decline in MMR with a 64% decrease, followed by Sub-Saharan Africa with a 49% decrease (UNDP, 2015). The number of births attended by skilled health personnel also increased from around 59% of births in 1990 to more than 71% of all births in 2014. Northern Africa saw the largest increase in antenatal care; the proportion of women receiving the WHO recommended four antenatal care appointments or more increased from 50% in 1990 to 89% in 2014. Finally, prevalence of contraceptive use among women aged 15-49 was reported to have increased from 55% to 64% between 1990 and 2015 (UNDP, 2015). All were significant gains in maternal health issues, yet room for continued improvement was identified. It is also important to note the reported statistics are based on data supplied by each country; maternal mortality monitoring and reporting varies from country to country.

In 2016, the WHO reported that reliable civil registration and vital statistics (CRVS) systems are lacking in nearly 60% of countries around the world (WHO, 2016b). Even among countries that have registration and vital statistics monitoring, it is estimated that only 51% of countries have data on maternal causes of death (Maternity Worldwide, 2015). The WHO, UNICEF, UNFPA, the World Bank, and the United Nations Population Division - Trends in Maternal Mortality 1990-2013 Report acknowledged that data and monitoring of maternal mortality at the country level varied significantly in terms of reporting accuracy.

For the 183 countries represented in the report and data used to calculate the global maternal mortality rate between 1990 and 2013, only 67 countries (37%) had provided data collected by a civil registration process that was characterized as complete, with good attribution of cause of death. Data from the civil registration or another monitoring source for 96 countries (52%) was categorized as incomplete, and 20 countries (11%) had no national data or method to monitor maternal mortality (WHO, 2014; WHO, 2016b). The ability of the UN to capture an accurate representation of the global maternal mortality rate is significantly hindered when approximately 63% of countries have poor or non-existent maternal mortality monitoring and/or reporting systems in place.

Mater Care Global and Missional Vicariate Ward of Isiolo began a task to give exhaustive provincial fundamental obstetrics in the Area of Isiolo, which incorporates typical consideration during pregnancy and conveyance, and therapy of generally obstetric and unexpected issues. It is revolved around the base medical clinic in Isiolo which has 8 obstetrical beds, 4 escalated care beds 2 working rooms 4 conveyance rooms; a little lab; drug store; kitchen and clothing and 4 Manyattas (customary maternity holding up homes) near the emergency clinic , each with 2 beds. The emergency clinic gives treatment to most obstetrical entanglements and is completely prepared. The first of 6 provincial ward maternity centers with a maternal holding up home in the town of Merti with 4 beds for typical cases found around 225 km from Isiolo opened in June 2011, and is staffed by birthing assistants. A crisis transport is accommodated significant distances and two motorbike ambulances for movement to the towns.

The Garissa Maternal Holding up Home in North Eastern Region, Kenya is the main such office in a space with the country's most noteworthy maternal death rate, at 646 passings

for every 100,000 live births. (UNFPA,2012). Kilifi Region Medical clinic is likewise among government medical clinics with a comparable office. The clinic has a maternal haven for hopeful ladies who live a long way from the clinic and are practically due to convey or for ladies who are probably going to foster difficulties during conveyance. This was a venture of the Danish Worldwide Improvement Help (Danida) related to the Service of Wellbeing in 2015.

Offices called maternity holding up homes by the WHO are likewise portrayed in writing as maternity towns, maternity holding up safe houses or quarters, antenatal towns, antenatal havens or inns. In spite of this assortment of names, generally couple of information are had some familiarity with the working of maternity holding up homes. The African examinations on MWHs come from Ethiopia, Zimbabwe and Zambia and show better pregnancy results among ladies utilizing these homes (Millard *et al.* 2011; Poovan *et al.* 2010; Chandramohan *et al.* 2014; Tumwine & Dungare 2016; van Lonkhuijzen *et al.* 2013; Spaans *et al.* 2018).

The maternity holding up home was initially expected to be utilized by ladies with high danger pregnancies whose homes are in remote and distant country regions. This unique idea is adjusted in different ways all around the world In certain investigations ladies with generally safe pregnancies additionally use the holding up homes in regions where there is poor talented conveyance administrations.. One of the significant elements on which the accomplishment of a maternity holding up home is based is an appropriately working reference framework. All ladies with high danger pregnancies ought to be alluded (WHO 2016).

Homes for pregnant ladies with obstetric and social issues isn't new. For a long time, willful associations in Europe have given safe houses to single parents with an end goal to lessen fetus removal and child murder. Since the start of the twentieth century, holding up homes have existed in Northern Europe, Canada and the US to serve ladies in distant geographic regions with few obstetric offices (Aday & Anderson, 2014). At present in European nations with far off networks (for example Finland) medical caretakers' dorms have been changed over to "patient inns" for a similar reason.

In Africa one of the early investigations with maternity holding up homes (known as "Maternity Towns") was in Eastern Nigeria during the 2010s (Poovan, Kifle, & Kwast, 2010). The rustic idea of the populace implied that an outing to the emergency clinic during labor frequently involved an excursion of numerous miles, ordinarily by walking. In maternity holding up regions that had been created in little structures nearby a high-hazard ladies were housed for the last 2-3 weeks of pregnancy. Such homes assisted with lessening maternal mortality in clinics from ten to short of what one for each 1000 conveyances and the stillbirth rate from 116 to 20 for every 1000 in ItukMbang, Eastern Nigeria (Lawson & Stewart, 2018).

In Uganda where comparative houses were founded during the 2010s recorded maternal passings in a single distant region fell by half once such a maternity holding up region was established (Minkler, 2012). Cuba assembled its first home in 2012. By 2014 there were 85 such homes in the nation and almost 100% of infants were conveyed in emergency clinic. Maternal mortality tumbled from 118 to 31 for every 100 000 live births. Today different types of maternity holding up homes have been archived in 18 nations.

Maternity holding up homes have exhibited such advantages as an expanded extent of office based conveyances (Cardoso, 2016), worked on maternal wellbeing (Cardoso, 2016; Knowles, 2018), a lower hazard of perinatal passing (Chandramohan, Cutts, & Chandra, 2015), diminished occurrence of hindered work (Chandramohan, Cutts, & Millard, 2014), further developed admittance to fundamental and crisis obstetric consideration (Spaans, Van Roosmalen & Van Wiechen., 2018), and the possibility to diminish paces of stillbirths (Bhutta *et al.*, 2019; Chandramohan *et al.*, 2015; Lee *et al.*, 2019). Orderly surveys have presumed that MWHs have demonstrated to be compelling, however the proof is restricted in light of an absence of appropriately planned intercession studies (van Lonkhuijzen, Stekelenburg & Van Roosmalen, 2012).

There are additionally perceived hindrances to getting to medical care inside agricultural nations that apply to MWHs. These incorporate such factors as cost, area, absence of information about the MWH, and social obstructions. The expense related with remaining in a home can be restrictive, and for all the danger, home conveyances stay the most affordable birthing choice (van Lonkhuijzen, Stekelenburg & Van Roosmalen, 2012). Circuitous and direct costs present critical and regularly unconquerable difficulties to many would-be administration clients.

In Ghana, a MWH worked in a neglected medical clinic experienced extremely low use (Wilson *et al.*, 2017). The low utilization of the MWH office was mostly ascribed to its abandoned environmental elements and distance from the medical clinic (Wilson *et al.*, 2017). In the mean time, a MWH in Timor-Leste neglected to further develop admittance to office based conveyances for ladies who lived farther from the office in more far off areas (Wild, Barclay, Kelly & Martins, 2012). In provincial or disengaged regions, ladies

and networks might be ignorant of a home's presence or its employments. In these unique circumstances, the most catalyst way where to impart information on the home and its administrations can be through interpersonal organizations.

An investigation of a bombed intercession in Kenya uncovered most of ladies studied expressed they would require their significant other's endorsement to utilize the MWH (Mramba, Nassir, Ondieki & Kimanga, 2010), demonstrating the significance of family and local area support, whether or not the mediation was started by the local area or an outer association. Homes go about as an intermediary for office based births, yet conventional birthing practices might imply that office based births are inadmissible because of division from family and absence of protection.

The biggest concentrate to date, directed in Ethiopia, referred to that acknowledgment and backing by the nearby local area is indispensable and credited the achievement of their MWH to local area joins (Kelly *et al.*, 2010). Consolidating ladies' requirements for solace by coordinating social practices assists with arranging the space between these frameworks while keeping up with positive results. Customary birth chaperons empowering and alluding a lady to MWHs was referred to in an Eritrean review as a compelling element being used (Andemichael, Haile, Kosia, & Mufunda, 2010)

The motivation behind Maternity Holding up Home (MWH) is to give a setting where high-hazard ladies can be obliged during the last a long time of pregnancy close to a medical clinic with Far reaching Crisis Obstetric and Infant care offices. Some MWHs have extended their motivation to incorporate diminished maternal mortality as well as worked on maternal and neonatal results (WHO, 2016).

Many believe MWH to be the vital component to 'span the topographical hole' in obstetric consideration between rustic regions, with helpless admittance to offices and metropolitan regions where the administrations are accessible. In these maternal holding up homes extra accentuation is put on training and advising with respect to pregnancy, conveyance and care of the baby and family (Figa, 2016).

A portion of these homes were dispatched because of government drives (for example Mongolia, Cuba) and others made by clinical/scholarly and local gatherings (for example Colombia, Indonesia). Likewise, the absence of formal assessment of existing maternity holding up homes imperils the fate of this elective answer for issues of admittance to crisis obstetric consideration for high-hazard pregnant ladies. Albeit episodic records give a positive impression, tasks research is expected to decide the effect of maternity holding up homes on maternal mortality. Ladies' view of maternity holding up homes ought to likewise be investigated before definite ends are drawn (WHO, 2016).

The Sustainable Development Goals (SDGs) came to an end at the end of 2015, and the United Nations' Sustainable Development Goals (SDGs) began. The SDGs' progress over the previous decade was continued by a new set of 17 goals. By 2030, the Sustainable Development Goals (SDGs) aim to extend the SDGs and address larger global issues such as reducing negative environmental effects and climate change, reducing poverty, and reducing inequality and injustice. The third goal of "improving overall health and well-being" of all global citizens now includes maternal health improvement as a component. The goal to improve maternal health is listed under SDG goal #3 as: between 2016 and 2030, bringing the global MMR down to less than 70 deaths per 100,000 live

births, with no nation having a rate that is more than twice the global average (WHO, 2015a).

2.5 Theoretical Framework

The research is centered on Health Belief Model developed by social psychologists Hochbaum, Rosenstock (Janz & Becker 2014). Health belief model is a tool that scientist use to try and predict health behaviors. The model is based on the theory that a person willingness to change their health behavior is primarily due to some factors which include; perceived susceptibility, perceived severity, perceived benefits and perceived barriers. Perceived susceptibility is where people will not change their health behaviors unless they believe that they are at risk. Perceived severity refers to the probability that a person will change his/her health behavior to avoid a consequence depends on how serious he/she considers the consequence to be. Perceived benefits refer to difficulty to convince people to change behaviour if there isn't something in it for them. People do not want to give up something they enjoy if they do not also get something. Perceived barriers are the situation when one of the major reasons people does not change their health behaviour is that they think that doing so is hard. Changing behaviour can cost effort, money and time (Andersen 2015).

In view of the above theory, the susceptible population is antenatal mothers, especially from remote areas of West Pokot County who do not perceive the need of MWHs until they become victims of severe outcomes. Percieved barriers such as cultural involvement ,lack of funds , poor infrastructural designs and lack of advocacy may hinder them from accessing MWHs (perceived benefit), thus exposing them to perceived severity to include, maternal and neonatal deaths.

The study of health problems even though not included in the concept of Economic is considered to be the only concern of both research scientists as well as medical practitioners. In the current Century, economic concept is becoming a fundamental concept in the health sector. Health economics is one among many disciplines that can be used to effectively analyze health care issues, particularly, application of analytical techniques in health care research services. According to (Devlin & Parklin, 2017), economic theory models and empirical techniques is applicable in health economics to assist in decision making process among medical practitioners, individuals as well as governments in relation to health care and health. Relating the theory to economic perspective, resources are scarce in nature but they are bound to output qualities that are acceptable or desired. The dual acted as fundamental driving force for economic activities and tend to explain why health care facilities as well as health should be taken into consideration like any other valuable good.

In relation to problem emanating from resources scarcity, critical choices need to be established so as to determine which goods should be produced, in which manner and who are the potential consumers. It is also imperative that we cannot have all goods we want and in order to choose what goods we will have, we have to trade off one for another. There are numerous problems in health care sector as a result of shortages of medical resources which are used in provision of health care services. However, due to rapid population growth and rising health care challenges, there has been a continuous demand on provision of better health care services are rising. It is only through economic principles that the availability of limited resources can be in different health subsectors

thus resulting to achievement of highest returns in the health sector. Health economic determines how choices as well as critical decisions are made in health sector.

The health care status in a society is normally determined by their ability to comprehend the concept of medical pricing mechanism, return on investment of health care technological adoption the health care facilities, medical equipment as well as facilities, the benefit cost, and effectiveness of medication programmes. These necessitate application of the concept of economic in health care sector so as to address the long term health care goals which ensure the existence of healthy nation for instance, provision of affordable maternal health care services so as to reduce the rate of maternal deaths.

Accessibility to health services has always remained unequal especially in developing countries, Kenya included. The inequality is brought about by the non-affordability of the health services by those who cannot pay for them. However, the government being the main custodian of health care welfare of all sections of the entire population, cannot allow its citizens to be subjected to ill health or event deaths, hence the government normally allocate resources to facilitate provision of health care services to its citizens. Spending on health care provision services by government does not have immediate returns though it may have long term returns. In economics, money spent without immediate returns is a bad investment since in economics, scarce resources must be spent where returns are high.

This explains why availability of health services infrastructures to pastoralist communities in Kenya is limited as it is considered of low returns to the greater nation. This economic principle goes against the principle of equity in which the state has to

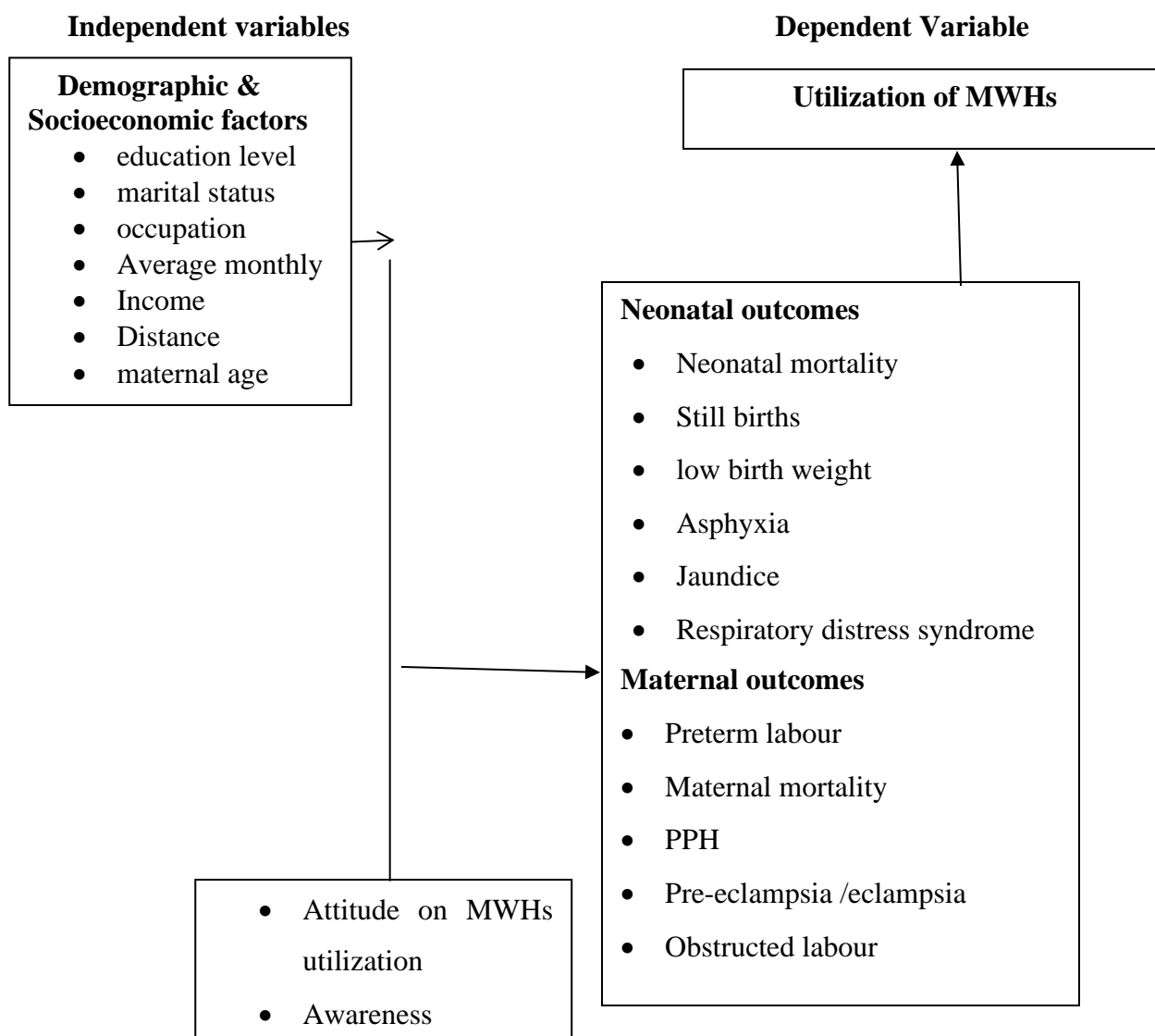
minimize the wealth gap between the rich and poor individuals through provision of essential services to the citizens. To bridge this gap without incurring use or more resources in providing health services where returns are low, the governments and policy maker have come up with cheaper means of proving essential health services like use of maternal waiting homes to hold pregnant women in readiness to deliver in established health facilities which is cheaper than having maternity facilities established within the locality of every population. Use of maternal waiting homes enables the scarce health facilities to meet the larger demand for maternity services appropriately.

Economics evolves around demand and supply, therefore the demand for better health care services necessitate the need for supply and is the basis for existence of health sector, however, greater and greater demand for health care services often goes unsatisfied due to scarcity and shortage of medical resources and inability of supply to meet the high health demands and ways to bridge the demand and supply gap is being creative and devising new methods. When a demand for maternity services exceeded the supply in terms of the established health facilities in a vast region like Turkana west sub county, use of maternal waiting homes becomes necessary to allow those in demand of the services close accessibility to the facility at the right time of need. This theory explains why Turkana West Sub county with a vast coverage and poor infrastructures and mainly inhabited by the pastoralists who keeps moving from place to place in search of pastures and water are not able to get sufficient established health facilities within close proximities to meet their maternal health care demand creating a need for maternal waiting homes as a holding ground for pregnant women who are due to deliver. These

homes plays a pivotal role in ensuring all the deliveries amidst scarcity of health facilities in the region, are carried out in an established health facility.

2.6 Conceptual Framework

The conceptual framework demonstrates the association between the dependent and independent variable under investigation. In this study, the independent variables are factors influencing while dependent variable is utilization of MWH. The association between dependent and independent variable will be intervened by County Policies.



(Author, 2021)

Figure 1: Conceptual Framework

Andersen and Newman state that the utilization of health care services is always influenced by social determinants and individual behaviour (Andersen 2015). It is based on this theoretical background and conceptual framework that the researcher modelled this research to analyze the association of Socio-demographic factors, Mothers' awareness and experiences on MWH and maternal and neonatal outcomes (independent variables) on utilization of Maternal Waiting Homes (dependent variable).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains research methodology that is used in this research. This includes the research design, targeted population, sample size and sampling procedures, data collection instruments and procedures, data analysis techniques and ethical considerations.

3.2 Study Area

The study area was West Pokot County in the Northern Rift Valley Region of Kenya. West Pokot County is characterized by poverty and marginalization with poorly developed infrastructure (Bali, Wheeler, & Davoodnia, 2017). The combination of harsh climatic condition, cultural practices, difficult terrain, and poor infrastructure has left the County trailing in health and development with devastating consequences on both economic, social, and health statuses of its residents (Ogolla, 2015). Kapenguria is the capital of and largest town in West Pokot County. The County covers an area of 8418.2 km². It borders Uganda to the west, Marakwet County to the south, and Turkana County to the North. It stretches from latitude 1⁰, 37 N to 35⁰, 23⁰E. West Pokot County community is served by three (3) existing and established maternal waiting homes. West Pokot County and Referral Hospital is situated in Kapenguria Town (See appendix 4).

Rainfall varies from 460mm (lowland) to 1500mm (Highlands) per annum, temperature ranges from a minimum of 10⁰ to a minimum of 30⁰ in different parts of the county. The main economic activities is nomadic pastoralism, mining, commercial business. West

Pokot County has a total of 3 Maternity waiting homes; Kabichbich, Ortum and Kapenguria as indicated in the appendix.

3.3 Research Design

A cross sectional survey adopting quantitative design was used. This research design enabled the researcher to describe the attributes of individuals within a social construct (Kothari, 2014).

3.4 Study population

The study population for this study was postpartum mothers admitted to West Pokot County Referral Hospital, Ortum Mission Hospital and Kabichbich Sub County Hospital from April –August 2021 and resides over 10 km from these health facilities.

Table 1: Study population

Hospital Facility	Total deliveries	Deliveries from mothers who reside >10km from the health facility
Kapenguria	2172	1176
Ortum	720	432
Kabichbich	132	78
Total	3024	1686

(West Pokot County Referral Hospital Kapenguria Health Records, 2021)

3.5 Eligibility criteria

3.5.1 Inclusion

Postnatal mothers who resided more than 10km away from the health facility.

3.5.2 Exclusion Criteria

Postnatal mothers with puerperal psychosis or did not consent to taking part were excluded.

3.7 Sample Size and Sampling Procedures

One of the objective of the study was to determine the factors associated with utilization of MWH in West Pokot. Assuming utilization rate of 6.9% as ascertained by the researcher through review of maternity register at West Pokot County Referral Hospital

in January-June, 2020. The sample required to assess 5 factors was estimated by Peduzzi *et al.*, (2016) formula.

$$n = \frac{10 \times \text{number of factors}}{p}$$

Where

n= minimum sample size required

p = proportion of those shown to utilize maternity waiting homes

Substituting for the above figure the minimum sample size required was 725 as shown below:

$$n = \frac{10 \times 5}{0.069} = \frac{50}{0.069} = 724.6$$

3.8 Sampling technique

The study adopted systematic sampling technique. Where every second mother who met the eligibility criteria was systematically picked from the delivery register for interview until a sample size of 725 was achieved. The table below shows the distribution of sample size in the three study sites.

Table 2: Sample Size

Hospital Facility	Deliveries from mothers who resided >10km from the health facility	Sample size
Kapenguria	1176	505
Ortum	432	186
Kabichbich	78	34
Total	1686	725

(Author, 2021)

3.9 Data Collection Instruments

Primary data on utilization of maternity waiting homes was collected from postnatal mothers using interviewer administered questionnaires which was developed by the researcher. The researcher also used pre-recorded secondary data from Hospital records.

3.10 Validity of the Instruments

Validity is used to measure how factual the results obtained from a particular research are (Golafshani, 2013). The research items and questions in the questionnaire have been developed in a manner that is representative of all dimensions of each variable in the research. The researcher consulted the supervisor as well as other professionals in the field of study so as to enhance the content and validity of the research questions.

3.11 Reliability of the Instruments

Reliability is defined as the ability of a research instrument to generate consistent outcomes in similar conditions (Golafshani, 2013). It is also defined as the ability of the

research instruments to generate the same outcomes through a repetitive. While conducting this study, the researcher made use of split half technique so as to determine the reliability of instruments of data collection.

According to (Mugenda & Mugenda, 2013) a trial is only viable if it is able to retain the results attained every time it is conducted. Repetition of outcomes is reliability. That is, when data is adequately complete and mistake free to be satisfying for its purpose and context. The researcher established the reliability of the questionnaires by computing the alpha coefficient of the items (questions) in the questionnaire. Cronbach's alpha of 0.7 and above indicates a high level of internal consistency in the questionnaire.

Data was collected from junior and general employees using self-administered questionnaires on drop and pick from the sampled respondents in the organization. Interviews were also conducted on managers from whom the researcher gathered more perspectives on the utilization of maternity waiting homes. Transmittal letter was issued from the department to enable the researcher proceed to the field.

3.12 Methods of Data Analysis

Descriptive statistics namely, central tendencies and measures of variability was used to summarize numerical data such as distance to health facility and maternal age. While categorical data such education level, marital status and level of utilization were summarized as frequencies and proportions. To assess factors associated with utilization of MWH and association between MWH utilization and maternal/neonatal outcome, Chi square/ Fisher Exact and Mann Whitney U tests were used at bivariate level. Variables that were significant at bivariate level were modeled using multiple logistic regression at

multivariate level to determine factors that were independently associated with the outcome variables. All statistical analysis were done at significance level (alpha) of 0.05.

3.13 Ethical Consideration

The study obtained ethical approval from Institutional Research and Ethics and NACOSTI Permit of Moi University and Moi Teaching and Referral Hospital. Recognition and oral consent was also obtained from the management of each MWH in West Pokot. Individual respondent consent forms were filled on those willing to be interviewed and individual patient records handled with confidentiality. Confidentiality was ensured in such a way that secrets of individual cases were not disclosed; rather the findings were concluded as groups of postnatal mothers. The generalized findings and the final report will be availed to the three MWHs and the relevant offices at the county Government of West Pokot. These findings will be published and availed online and at the university library. Ethical issues (including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) was completely observed by the author. Those who wished to withdraw from the study were allowed to do so.

CHAPTER FOUR

RESULTS

4.0 Introduction

After being coded and edited for completeness, the data from the field was then analyzed in the form of percentages and presented in form of frequency distribution tables.

4.1 Response Rate

The results are based on 725 postpartum mothers admitted to West Pokot County Referral Hospital, Ortum Mission Hospital and Kabichbich Sub County Hospital from 1st March to 30th June 2021 and resides over 10 km from these health facilities. The participants were distributed proportionally as follows: Kapenguria 505, Ortum 186 and Kabichbich 34 participants.

4.2 Social Demographic Characteristics

The age of respondents ranged from 16 to 43 years with median age of 30 (IQR 22, 35) years. Only 21.7% of the respondents had not attained at least secondary school education level, though very few 39.7% were formally employed. Among those who were self-employed or formally employed, the median monthly earning was Ksh 35,000 (IQR 15,000, 50,000) ranging from a low of Ksh 500 to highest of Ksh 68,000 monthly. The distance from home to the health facility ranged from 10 to 42 km with a median distance of 19 (IQR 14, 24) km.

Table 3: Social demographic characteristics

Variable	Category	Frequency	Percentage
Age (years)	Median (IQR)	30 (22, 35)	
Distance from home to the facility(km)	Median (IQR)	19 (14, 24)	
Monthly income (in 1000 Ksh)	Median (IQR)	35 (15, 50)	
Education level	None	25	3.5
	Primary	129	18.2
	Secondary	212	29.9
	Tertiary	343	48.4
Marital status	Married	446	61.6
	Single/Separated/ divorced/widowed	278	38.4
Occupation	None	273	37.8
	Self employed	162	22.4
	Government employee	287	39.7
Medical insurance	No	44	6.1
	Yes	681	93.9

4.3 Factors associated with utilization of Maternity Waiting Homes in West Pokot

There was a significant association between MWHs utilization and monthly income ($Z = 5.170$, $p < 0.001$), where those who reported to have used MWHs on average earned less (Ksh 20,000) than those who did not use MWHs (Ksh 37,000).

In addition, there was a significant association between utilization and occupation $\chi^2(2) = 8.223$, $p=0.016$). Those self-employed utilized MWHs more (19.1%) compared to government employees (13.2%) and those unemployed (9.5%).

Table 4: Association between MWHs utilization and other variables

Variable	Category	Utilized MWHs		p-value
		No	Yes	
Age (years)	Median (IQR)	30 (22, 35)	28 (24, 35)	0.656 ^m
Distance (km)	Median (IQR)	19 (14, 24)	20 (14, 26)	0.207 ^m
Monthly income (in 1000 Ksh)	Median (IQR)	37 (20, 50)	20 (4.5, 30)	<0.001 ^m
Education level	None	20 (80)	5 (20)	0.395 ^f
	Primary	115 (89.2)	14 (10.8)	
	Secondary	180 (84.9)	32 (15.1)	
	Tertiary	302 (88.1)	41 (11.9)	
Marital status	Married	386 (86.5)	60 (13.5)	0.738 ^c
	Single/ Separated/ divorced/ widowed	243 (87.4)	35 (12.6)	
Occupation	None	247 (90.5)	26 (9.5)	0.016 ^c
	Self employed	131 (80.9)	31 (19.1)	
	Government employee	249 (86.8)	38 (13.2)	
Medical insurance	No	40 (90.9)	4 (9.1)	0.416 ^c
	Yes	590 (86.6)	91 (13.4)	

^c Chi Square test

^f Fisher's Exact test

^m Mann-Whitney U test

Controlling the effect of occupation, for every unit increase in monthly earning the odds of using MWH decrease by less than 0.01 %. While odds of using MWH was 7.3 times more for government employees compared to self-employed controlling for effect of monthly income.

Table 5: Factors associated with MWHs utilization

Variable	Category	aOR	95% CI	p-value
Monthly income	Median (IQR)	0.999	0.999 – 0.999	<0.001
Occupation	Self employed	1		
	Government employee	7.251	2.814 – 18.686	<0.001

4.4 Awareness and experiences of mothers towards Maternity Waiting Homes in West Pokot

Most n=(64.4%) of the respondents had not heard about MWHs in West Pokot county. Among those who had knowledge about MWHs, half n= (50.4%) heard about it from the health care professionals and very few (1%) from the media. Overall utilization of MWHs among the respondents was 15.5% (n=112) of which 95(84.8%) had used the MWH during the current process of pregnancy. Overall, the experience of mother in MWHs was rated moderate by 50.9% with almost the same proportion n= (52.7%) rating friendliness of staff in MWHs as neutral. Majority n= (74.9%) of the respondents agreed they could use MWHs if they were to give birth again. Only 2 mothers were dissatisfied with the services that were offered at MWHs with 1 (0.9%) terming the MWHs staff as very unfriendly.

Table 6: Awareness and experiences of mothers towards MWHs

Variable	Category	Frequency	Percentage
Ever heard about MWHs in West Pokot	No	467	64.4
	Yes	258	35.6
Source of information	Media	3	1.2

	Friends	54	21.0
	Community leader	44	17.2
	Church	25	9.8
	Health professional	130	50.8
Ever admitted in MWHs	No	613	84.6
	Yes	112	15.4
Pregnancy during which admitted	Previous	17	15.2
in MWHs	Current	95	84.8
Mother experience in MWHs	Moderate	57	50.9
	Good	51	45.5
	Very good	4	3.6
View on friendliness of staff in MWHs	Very unfriendly	1	0.8
	Neutral	59	52.7
	Friendly	49	43.8
	Very friendly	3	2.7
Views on whether MWHs was	Neutral	46	41.1
Beneficial	Agree	61	54.4
	Strong agree	5	4.5
How satisfied one was with the services	Dissatisfied	2	1.8
offered at MWHs	Neutral	51	45.5
	Satisfied	54	48.2
	Very satisfied	5	4.5
Opinion of whether one could use the	Strongly disagree	1	0.5

MWHs if they were to give birth again	Disagree	6	2.7
	Neutral	49	21.9
	Agree	161	72.2
	Strongly agree	6	2.7

Likert Scale

4.5 Relationship between MWHs utilization and maternal and neonatal outcomes

A composite binary categorical variable ‘outcome’ was created using maternal complication and neonatal complication variables. A mother was said to have poor outcome if she had either maternal or neonatal complication else categorized as having good outcome. A variable utilization was created to include only those currently utilized MWHs.

Only 1(1.1%) mother who utilized MWHs recorded poor maternal outcomes compared to 7.3% who did not utilize the MWHs. The difference in the proportions was statistically significant $\chi^2(1) = 5.317, p = 0.021$. Among those who utilized MWHs, only 3(3.2%) recorded poor neonatal outcomes compared to 50(7.9%) among those who did not utilize MWHs, though the difference in these proportions was not statistically significant $\chi^2(1) = 2.782, p = 0.095$.

Table 7: Association between maternal outcome, neonatal outcome and utilization

Variable	Category	Utilization		p-value
		No	Yes	
Maternal outcome	Good	584 (92.7)	94 (98.9)	0.021 ^c
	Poor	46 (7.3)	1 (1.1)	

Neonatal outcome	Good	580 (92.1)	92 (96.8)	0.095 ^c
	Poor	50 (7.9)	3 (3.2)	

^cChi Square

4.6 Summary

On the utilization of maternal waiting homes, the studies available do not clearly indicate impact of these factors on the utilization of the maternal waiting homes and rather concentrate on the impacts of maternal waiting homes on reducing mortality and morbidity rates. This study analyzed in details how each of the five identified factors influences the utilization of the homes. The study found out that unless the upkeep cost is met by the government or donors, the users are in most cases not capable of meeting their own upkeep costs while in these homes. On culture and building design, the study noted that there is need for a cultural change to enable effective and efficient usage of the homes. The two factors are linked in that the culture dictates the type of house acceptable to the community. This study also found out that establishment of these homes are usually done without involvement of the community and at times the construction is completed without the community knowing what is expected of them in those homes. When ideas of these homes originates from the donors and shared only with the health facility and not the community it intends to serve, the commitment to use the homes is limited. Distance was found to be another perennial problem in utilization of the homes. It's never predictable how far or close the population will be to the homes and at what times of the year or changing seasons as the community practices pastoralism and keeps moving from place to place.

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter presents discussion, conclusion and recommendation on the utilization of maternal waiting homes in West Pokot County.

5.2 Discussion

5.2.1 Factors associated with utilization of Maternity Waiting Homes in West Pokot

Maternity Waiting Homes (MWHs) are built to reduce delays in reaching health facilities in time. An MWH is a structure within easy reach of an emergency obstetric and newborn care facility, where women with high risk pregnancies await onset of labour during the final weeks of pregnancy.

The study revealed that there was a relationship between MWHs utilization and monthly income. Those who earned less than kshs. 20,000 reported to have used MWHs while those earning More than 20,000 indicated that they did not use MWHs. MWHs offer low cost way to bring women closer to obstetric care as an essential service. The low utilization of MWHs by those earning more than kshs. 20,000 could be attributed to availability of transport facilities and barrier of status quo. In this study there is no association between MWH utilization and education level, the study findings implied that education level did not determine the MWH utilization among women in West Pokot County, which is contrary to the study done by Vermeiden, *et al* (2018) where educational level was associated with MWH utilization. The difference might be that the participants of this study were nearly in the same educational status ranges.

The study also established that there was a significant association between utilization and occupation. Those self-employed utilized MWHs more compared to government employees and those unemployed. The study was contrary to that of Kurji Gebretsadik, Wordofa, Sudhakar, (2019), who established that the occupation of pregnant women who are government employees was found to be one of the significantly associated variables with the intention of pregnant women who use MWH as compared to housewives. Nonetheless, there has been limited scientific evidence concerning this significant association, the possible reason for this association could be , government employees might have exposure to information and better insight about MWH services as compared to those women who are housewives.

5.2.2 Awareness and experiences of mothers towards Maternity Waiting Homes in West Pokot

The study revealed that most of residents in West Pokot County had not heard about MWHs. Among those who had knowledge about MWHs, fifty percent heard about it from the health care professionals and very few from the media. Overall utilization of MWHs among the respondents used the MWH during the current process of pregnancy.

The study attributed this to health-seeking behavior of the mothers seeking services in the various hospitals in the County, inadequate progressive planning for delivery; the women's perception of service benefits and the previous history of obstetric complications, and the availability of MWH at health institutions are factors that are related to the willingness of the women to utilize MWH. Although the evidence showed MWHs as a strategy to reduce MMR and stillbirth, as mentioned by Sialubanje, Massar,

Hamer, Ruiter (2017) there is limited data on the level of utilization of MWH in Ethiopia just like Kenya and the intention of pregnant women to use this service.

Overall, the experience of mothers in MWHs was rated moderate by 50.9% with almost the same proportion (52.7%) rating friendliness of staff in MWHs as neutral. The findings were contrary to that of Van Lonkhuizen, Stekelenburg, & Van Roosmalen (2012) who indicated that lack of supervision by midwives and poor staff experiences during ANC and delivery were the main challenges they encountered in their stay in MWHs (Van Lonkhuizen, Stekelenburg, & van Roosmalen, 2012). The high percentage of neutrality could be that the participants were afraid of giving a honest opinion because the interviewees were the health professional or works of whom might come across later when in need of medical attention.

Our findings indicate that those who suffered complications in previous childbirths were more likely to use an MWH during the subsequent pregnancy. This was mentioned by majority (74.9%) of the respondents who agreed they could use MWHs if they were to give birth again. This is in line with several, mostly qualitative, studies, which found that complications during previous births may make women aware of the dangers of childbirth and the benefits of a skilled birth attendant (Saasi & Okyere, 2020).

5.2.3 Relationship between utilization and maternal and neonatal outcomes

The study showed that mothers who utilized MWHs recorded good maternal outcomes compared to those who did not utilize MWHs. The study results revealed that 1.1% mothers who utilized MWHs recorded poor maternal outcomes compared to 7.3% who did not utilize the MWHs.

The study established that there was statistically significant association between maternal outcome and utilization of MWHs ($p=0.021$). The study also established whether there was an association between MWHs utilization and neonatal outcome. Among those who utilized MWHs, only 3(3.2%) recorded poor neonatal outcomes compared to 50(7.9%) among those who did not utilize MWHs, the difference in these proportions was not statistically significant ($p=0.095$). A study by Millard *et al.* (2016), shows that use of MWH reduce early neonatal mortality. Higher proportion of early neonatal deaths occur most in those mothers who do not use MWH. According to Blencowe *et al.* (2015), MWHs contribute to 83% reduction of still births unlike non-users of MWHs.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.0 Introduction

This section includes conclusion and recommendation

6.1 Conclusion

Based on the above review of findings the study makes the following conclusion:

6.1.1 Factors associated with utilization of Maternity Waiting Homes in West Pokot

From the findings it can be concluded that MWHs utilization is low and is affected by monthly income, education level and occupation. In terms of income, those who earned less than kshs.20, 000 reported to have used MWHs while those earning more than 20,000 indicated that they did not use MWHs. In this study there is no association between MWH utilization and education level. The study also established that there was a significant association between utilization and occupation. Those self-employed utilized MWHs more compared to government employees and those unemployed, the possible reason for this association could be those women who are government employees might have exposure to information and better insight about MWH services as compared to those women who are housewives.

6.1.2 Awareness and experiences of mothers towards Maternity Waiting Homes in West Pokot

Most respondents had little knowledge about MWH. After learning about the concept, willingness to use an MWH was significantly lower among women in West Pokot, while women who had complications during past births and those who envisioned few barriers expressed that they were more likely to use an MWH in the future. Unless community

awareness increases, knowledge of preventive maternity care improves, and barriers preventing their use are overcome, MWHs will continue to be underutilized.

6.1.3 Relationship between utilization and maternal and neonatal outcomes

The study concludes that mothers who utilized MWHs recorded good maternal outcomes compared to those who did not utilize MWHs. The study also established that there is an association between MWHs utilization and neonatal outcome. There is strong evidence demonstrating the interdependent relationship between maternal and neonatal outcomes. Strategies for improving maternal and newborn outcome are therefore closely related, and integrating care for women and children along the continuum of care has the potential for accelerating progress towards Sustainable Development Goals 4 and 5.

6.2 Recommendation

Based on the above key findings, this study makes the following recommendation;

- I. Ultimately for the improvement in the proportion of women embracing maternal waiting homes in this region of Kenya, concerted efforts must be undertaken by the National Government to promote and to tackle both the socio-economic, maternal and hospital associated factors hindering their utilization. Should this be achieved, this region is poised to record one of the highest utilization of MWHs in Kenya.
- II. There is still a need to create awareness among women of the West Pokot community by Ministry of Health through health education department to embrace the maternal waiting homes as it is within their geographical area. As within the maternal waiting homes they are taught to maintain their health,

planning for their children and other health educations which hinder their uptake of MWHs.

- III. County government to invest more on health education of mothers in order to embrace the Maternal Waiting Homes as it important during birth preparedness; it reduces dangers associated with pregnancy, child birth, postpartum period and importance of hospital delivery.

6.3 Suggestion for Further studies

As indicated in the findings and conclusions made in this project, the idea behind the utilization of the maternal waiting homes is being accepted. Factors that have been considered in the past may not apply in our world today and in the future.

The study recommends that a study should be undertaken on the emerging trends in the utilization of maternal waiting homes and how to better improve the concept of the homes and acceptance among the targeted users.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE

DEMOGRAPHIC AND SOCIAL ECONOMIC FACTORS

What's your Age?	(.....) years
a) Where do you live? b) How far is that from hospital?	PlaceKms
What's your Level of education?	a. None <input type="checkbox"/> b. Primary <input type="checkbox"/> c. Secondary <input type="checkbox"/> d. Tertiary <input type="checkbox"/>
What's your marital status?	1=Married 2=single 3=Separated/divorced 4=Cohabiting 5.widowed
What is your occupation ?	1= None 2=Self employed 3= national government employee 4= county government employee 5=others (specify).....
What's Your Monthly IncomeKsh
What is your husband's/partner's occupation?	(.....) Name of occupation

Which religion do you practice?	<input type="checkbox"/> Christianity <input type="checkbox"/> Islam <input type="checkbox"/> Other, please specify _____
Do you have any form of medical insurance ?	a. Yes b. No If yes, Specify
EXPERIENCES AND AWARENESS	
Have you ever heard about MWHs in West Pokot County?	a)Yes b)No
if yes ,how did you know about MWHs	a. Through media b. .Through a friend c. .Through community leaders d. .In church e. Health Professional f. .Others....specify
.How did you access the facility?	a. Walking b. Motorbike c. Personal Car d. Taxi e. Delivered at home f. Other, please specify _____
Have you ever been admitted in MWH's (Kiror)?	a)Yes b)No
If yes, During which pregnancy?	a. Current <input type="checkbox"/> b. Previous <input type="checkbox"/>

For Q.15-Q.20 Each question contains five points on the Likert scales as was adopted by Rensis Likert	
What was your experience?	1. worse <input type="checkbox"/> 2. bad <input type="checkbox"/> 3. moderate <input type="checkbox"/> 4. good <input type="checkbox"/> 5. very good <input type="checkbox"/>
how friendly are the maternity waiting staff	1.very unfriendly 2.not friendly 3.neutral 4..friendlly <input type="checkbox"/> 5.very friendly <input type="checkbox"/>
For me using MWHs is beneficial?	1 = strongly disagree <input type="checkbox"/> 2 = disagree <input type="checkbox"/> 3 = neutral <input type="checkbox"/> 4 = agree <input type="checkbox"/> 5 = strongly agree <input type="checkbox"/>
How are you satisfied are you with the services offered ?	1 = very dissatisfied <input type="checkbox"/> 2 = dissatisfied <input type="checkbox"/> 3 = neutral <input type="checkbox"/> 4 = satisfied <input type="checkbox"/> 5 = very satisfied <input type="checkbox"/>
If you were to give birth again, to what extend would you agree to use maternity waiting home if referred to one?	1 = strongly disagree <input type="checkbox"/> 2 = disagree <input type="checkbox"/> 3 = neutral <input type="checkbox"/> 4 = agree <input type="checkbox"/> 5 = strongly agree <input type="checkbox"/>
If you did not go to MWHs tick possible reasons why you did not	1=Attending to other family matters <input type="checkbox"/> 2=Not aware 3=It is expensive

Utilize these services. (Answer only if applicable)	4=Beliefs 5=Did not think it was necessary 6=No money for transport 7=Had no one to live the children with 8=Other (specify).....
Maternal and Neonatal outcomes(data retrieved from prerecorded data-Delivery files)	
What was the gestation of the mother at birth?	Specify _____ weeks
what was the birth weight of the newborn?Gms
What was the Apgar score of the newborn?1 min5 min10 min
Were there any complications during and after delivery?(Mother)	a. Yes b. No
if yes indicate which one	i. APH ii. PPH iii. Maternal distress iv. Birth traumas(tears,lacerations) v. Fistulas(VVF,RVF) vi. Other
Were there any complications associated with the new born?	a. Yes b. No
If yes indicate which ones	i. Asphyxia ii. Jaundice

	iii. Birth Trauma iv. Low birth weight v. Respiratory distress syndrome vi. Other
Was the new-born admitted to the neonatal unit?	a)Yes b)No
If yes, what was the indication?	Specify

APPENDIX 2:TIMELINE

	Phase/ Activity	Time(Months)	Dates
A	Project development and defense	1	October 2020
B	Development and piloting of Instruments	1	Nov 2020
C	Data Collection	5	April 2021
D	Data organization, analysis and Interpretation.	1	September 2021
E	Report Writing/Submission.	1	October 2021
F	Mock Thesis defense	1	November 2021

APPENDIX 3: BUDGET

NO	ITEM	DESCRIPTION	UNIT COST	AMOUNT
1	Stationery	7 Reams of printing papers	@ Ksh600	4,200
		4 Writing materials	@ Ksh1,000	4,000
		2 Cartridges	@ Ksh 1,200	2,200
2	Services	Typing and binding		14,000
3	Transport	To and from Field		10,000
4	Data collection	Hiring of 10 enumerators for 5 days	@Ksh 1,000	50,000
5	Analysis	Data cleaning and analysis	@Ksh40,000	40,000
6	IREC	IREC Fee		2,000
7	Miscellaneous			10,000
		TOTAL		136,400

APPENDIX 4: RECOMMENDATION LETTER



MOI UNIVERSITY
ISO 9001:2015 Certified Institution
COLLEGE OF HEALTH SCIENCES
SCHOOL OF NURSING & MIDWIFERY
DEPARTMENT OF MIDWIFERY & GENDER
Box 4606-30100, ELDORET

23rd March 2021

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

REF: EDNAH CHELAGAT RONO REG. NO SM/PGMNH/03/18

This is to confirm that the above named is a postgraduate student of Moi university. She is registered in the department of Midwifery & Gender, School of Nursing & Midwifery pursuing Master of Science in Nursing (Maternal & Neonatal Health).

The purpose of this letter is to request your good office to support her during the research process of her study titled: *Utilization of maternity waiting homes in West Pokot County, Kenya*. The study will involve proposal approval, data collection, data analysis and dissemination of the findings.

If you require any clarification, don't hesitate to reach the undersigned on 0722583478 or benmilimo@gmail.com.

Thank you.

Benson Milimo

A handwritten signature in black ink, appearing to read 'Benson Milimo'.

Moi University
College of Health Sciences
School of Nursing
Department of Midwifery & Gender
P. O. Box 4606 - 30100,
ELDORET.

Ag. Chair of Department, Midwifery & Gender

APPENDIX 5: LETTER OF APPROVAL



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

Reference: IREC/2020/216
Approval Number: 0003785

Ednah Chelagat Rono,
Moi University,
School of Nursing,
P.O. Box 4606-30100,
ELDORET-KENYA.

Dear Ms. Rono,

UTILIZATION OF MATERNITY WAITING HOMES IN WEST POKOT COUNTY, KENYA

This is to inform you that **MTRH/MU-IREC** has reviewed and approved your above research proposal. Your application approval number is **FAN: 0003785**. The approval period is **4th February, 2021 – 3rd February, 2022**.

This approval is subject to compliance with the following requirements;

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

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

Sincerely,



DR. S. NYABERA
DEPUTY-CHAIRMAN

INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE


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




MOI UNIVERSITY
COLLEGE OF HEALTH SCIENCES
P.O. BOX 4606
ELDORET
Tel: 33471/2/3
4th February, 2021




APPENDIX 6: NACOSTI LICENSE


REPUBLIC OF KENYA


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

Ref No: **199059** Date of Issue: **22/April/2021**

RESEARCH LICENSE




This is to Certify that Ms.. Ednah Rono Chelagat of Moi University, has been licensed to conduct research in Westpokot on the topic: UTILIZATION OF MATERNITY WAITING HOMES IN WEST POKOT, KENYA for the period ending : 22/April/2022.

License No: **NACOSTI/P/21/9939**

199059
Applicant Identification Number



Director General
**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION**

Verification QR Code



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

APPENDIX 7: RESEARCH AUTHORIZATION COUNTY COMMISSIONER


OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND COORDINATION
OF NATIONAL GOVERNMENT

Telegrams: "DISTRICTER"
 COUNTY COMMISSIONER
 Telephone
 Email: cwestpokot@gmail.com

County Commissioner
 West Pokot County,
 P.O BOX 1-30600,
 KAPENGURIA.

REF: OOP.CC.ADM.15/14 VOL.II/24

19th May, 2021


All Deputy County Commissioners
WEST POKOT COUNTY

RE: RESEARCH AUTHORIZATION
EDNAH CHELAGAT RONO – LICENSE NO: NACOSTI/P/21/9939

Reference is made to the Director General National Commission for Science, Technology and Innovation Letter No. 199059 of 22nd April, 2021 on the above subject.

This is to inform you that the above named person of Moi University has been duly authorized to carry out research on *Utilization of Maternity waiting homes in West Pokot county for the period ending 22nd April, 2022.*

The purpose of this letter therefore, is to request you to accord her your cooperation, guidance and necessary assistance she may require during her tour of research.



COUNTY COMMISSIONER
WEST POKOT COUNTY

(A.K. LUNALO)
 FOR: COUNTY COMMISSIONER
WEST POKOT COUNTY

Copy to:

COUNTY DIRECTOR OF EDUCATION
WEST POKOT COUNTY

APPENDIX 8: RESEARCH AUTHORIZATION EDUCATION OFFICE

REPUBLIC OF KENYA


MINISTRY OF EDUCATION, SCIENCE & TECHNOLOGY
STATE DEPARTMENT OF BASIC EDUCATION

Email: edmo@dewestpokot@education.go.ke
Web: www.education.go.ke
edwestpokot@yahoo.com
When replying please quote date & Ref.

COUNTY EDUCATION OFFICE
 WEST POKOT COUNTY
 P.O. BOX 17
KAPENGURIA.

19th May 2021

REF: WPC/EDUC/ADM/15/20/VOL.1/41

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION – EDNAH CHELAGAT RONO
– LICENCE NO. NACOSTI /P/21/9939

Following your authorization from the National Commission for Science, Technology and innovation you are hereby permitted to carry out research on *“Utilization of maternity waiting homes in West Pokot County, Kenya”* for a period ending 22nd April 2022.

Through this letter, therefore is to request you to accord her your cooperation and necessary assistance she may require.

COUNTY DIRECTOR OF EDUCATION
 WEST POKOT
 19th MAY 2021
 P. O. Box 17 – 30800,
 (ATENA/PABO)

FOR COUNTY DIRECTOR OF EDUCATION
WEST POKOT COUNTY.

APPENDIX 9: A MAP OF WEST POKOT

