

**FACTORS INFLUENCING UTILIZATION OF MATERNAL
WAITING HOMES IN KENYA: A CASE OF TURKANA WEST
SUB-COUNTY**

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DECLARATION

This research project report is my original work and has not been submitted for examination in any other University.

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DEDICATION

I dedicate this research project to my wife Proscovia and daughters Shayne, Jasmine and Lynelle for their unconditional support during the period of conducting this project.

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ABBREVIATIONS AND ACRONYMS

ANC	-	Antenatal Care
CHVs	-	Community Health Volunteers
EmNOC	-	Emergency Obstetric and Newborn Care
MMR	-	Measles, Mumps – Rubella
MWHs	-	Maternal Waiting Homes
UNFPA	-	United Nations Population Fund
UNICEF	-	United Nations International Children's Emergency Fund
USA	-	United State of America
WHO	-	World Health Organization
ZDHS	-	Zimbabwe Demographic and Health Survey
ZMPMS	-	Zimbabwe Maternal and Perinatal Mortality Study

ABSTRACT

This study examined the factors influencing the utilization of maternal waiting homes in Kenya through a case study of Turkana West Sub County. The pregnancy related deaths are still a common thing in many parts of the world as access to skilled health care remains one of the challenges facing many developing countries. Maternal waiting homes concept was introduced by World Health Organization as a means of improving accessibility to skilled healthcare thus reducing morbidity and mortality for mothers and neonate should any complication arise as these are homes within the reach of established health facilities. There has been little attempt to find out how effectively these homes are utilized for their main purpose in Kenya. This study therefore sought to identify and determine factors influencing utilization of Maternal Waiting Homes in Turkana West Sub-County. The study was based on four identified factors being; building design of the homes, community involvement, and distance of maternal waiting homes from residential places of the users and upkeep cost while staying in the maternal waiting homes and it determined how each factor influences their utilization. The study adopted survey method where maternal waiting homes in Turkana West were surveyed. Simple random sampling was used to obtain respondents from a purposively selected population of local administrators, community health volunteers and health facility in charges in Turkana West Sub-County. The questionnaires and interview schedules were used to obtain primary data while secondary data was obtained from records and report found in these homes and other related materials. The data collected, was edited, coded, classified and analyzed using descriptive statistics. The study cautiously determined how each of the identified factors influences the utilization of maternal waiting homes. The study revealed that key stakeholders in the utilization of maternal waiting homes are the community and they must be fully involved to create awareness on them. The study evidently concluded that upkeep cost highly influence how maternal waiting homes are utilized and governments both at county and national level together with other stakeholders should devote sufficient upkeep resources to these homes to realize their full utilization. The study further recommended a cultural change to accommodate modern health system and accept interventions among the communities who uses the maternal waiting homes. The construction of these homes alone without consideration of the factors in this study may not achieve the desired results why these homes are established and the stakeholders must intervene based on the identified factors to put these maternal waiting homes to full utilization.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Maternal deaths among pregnant women are still a major global health issue leave alone Kenya. WHO (2005) notes that the maternal deaths are caused by resource based-limited settings including obstructed labor, eclampsia, partum infections as well as obstetrical hemorrhage. The mentioned causes arose because of untimely reach to the skilled birth attendants and access to the facility. In the event that the pregnant women did not seek the proper and professional care from the skilled child birth attendants then the probability of losing life is higher. On the other hand Early Infant Diagnosis Database (2014) identified that in Turkana County, only 23.1% deliveries occur in health facilities against national average of 61.2%. In a nutshell, most of the deliveries in the County Government of Turkana are aided by traditional birth attendants or family members who are competent in responding effectively to obstetric emergencies situations. In the year 2014, a total of 32,021 women were reported dead in the state of Kenya. Out of the 32,021 deaths, 6,632 deaths were attributed to complication arising during children birth among near term pregnant women and this account for 21% of the mortality rate of women in Kenya. The UNFPA Annual Report (2014) had noted that out of these deaths 15 counties out of 47 accounted 98.7% with Turkana being third in the list.

Maternal Waiting Homes (MWH) were endorsed by World Health Organization as a way of creating a conducive environment where the most vulnerable women can be accommodated within the reach of an established health facility with indispensable obstetric services for the pregnant women. The MWH are set up to accommodate pregnant women for a few weeks to delivery, where they can wait for the onset labor upon which they relocated to the nearest health facility for safe delivery. Maternal waiting homes had existed in developed countries and now introduced in evolving countries but their efficacy in dealing with decrease of maternal transience remains contentious. Lori and others (2011) argues that despite of the fact that maternal waiting homes are fundamental in maternal interventions chain, there is little evidence on the influence of social cultural factors on their use. Maternal waiting homes expedite the decline in neonatal as well as maternal and better-quality maternal and neonatal

aftermaths by firstly identify and shift the vulnerable women to alternative precaution in case of complication incidences.

Maternal waiting homes had become necessary as Kenya advances in the comprehensive health care promoting the reduction of maternal mortality and this study has identified and explained factors that influence the utilization of these homes. It has made recommendation on a number of factors that influences full utilization of the homes and the findings can be used as a guide in maternal health policy making towards a zero maternal deaths which is championed in Kenya through “Beyond Zero Campaign” to advance the effectiveness and promote their full utilization.

1.2 Statement of the Problem

The setting up of the maternal waiting homes was not to compete with the established health facilities but to provide temporary accommodation for pregnant women to stay near the hospital facilities. According to WHO (1996), the maternity waiting homes which were developed initially were used to accommodate pregnant women with obstetric complications for whom delivery operation were anticipated nonetheless, the homes were inaccessible since they were in remote rural areas. The main aim of developing maternal waiting homes was to reduce death rate among pregnant women through provision of equipped health facilities.

In line with National Census (2009), Turkana West Sub County covers a vast area of 15,444.8Km² with a population of 207,080. The Sub County has only 3 operational maternal waiting homes located at Lokangae, Oropoi and Natira Health Centers, this loosely translate to coverage of approximately 5,148.3Km² per maternal waiting home that also has to serve more than 69,000 persons based on 2009 National Population Census. However, this had not been the case with the available data on the population indexes and Maternal waiting homes remains the white elephants. The three operational waiting homes in Turkana west Sub County are underutilized.

In Kenya, a little research has been done on Maternal waiting homes. Mramba, Nassir, Ondieki and Kimanga (2009) in a study founded that despite reported positive effects of maternal waiting homes, there were still major factors that have affected their proper utilization, namely; quality of facilities, cost of living, culture issues, awareness and cost of reaching the facilities. These factors in a way have influenced the underutilization of Maternal waiting homes in Kenya. Despite the fact that the government and Non-

Governmental Organizations (NGO) have embraced the MHWs in the rural areas like Turkana West Sub County, the homes were still being poorly utilized. By understanding and explaining the factors that shape the utilization of these homes, the researcher had made progress toward providing solution on forging a positive utilization even with difficult encountered by pregnant women. This have to improve the latter's' chance of success in the utilization of homes. Through identification of research gap highlighted in the background of this study, the researcher sought to find out and offer explanation on factors affecting the utilization of maternal waiting homes in Turkana West Sub County, Kenya.

1.3 Purpose of the Study

The study sought to establish the factors influencing utilization of maternal waiting homes in Turkana West Sub County in Kenya.

1.4 Objectives of the Study

The following were the objectives that guided the study;

- i. To determine how the building designs influences the utilization of maternal waiting homes in Turkana West Sub County.
- ii. To evaluate the influence of community involvement on the utilization of maternal waiting homes in Turkana West sub county.
- iii. To assess how distances from homesteads influence the utilization of maternal waiting homes in Turkana West Sub County.
- iv. To determine how upkeep costs influences the utilization of maternal waiting homes in Turkana West sub county

1.5. Research Questions

The study was guided by the following research questions;

- i. Do building designs influence the utilization of maternal waiting homes in Turkana West Sub County?
- ii. How does community involvement influence the utilization of maternal waiting homes in Turkana West Sub County?
- iii. How does distance from homesteads influence the utilization of maternal waiting homes in Turkana West Sub County?
- iv. How do upkeep costs influence the utilizations of maternal waiting homes in Turkana West Sub County?

1.6 Significance of the Study

The findings as well as the recommendations which were suggested during the study shall be important part of literature in the comprehensive mitigation of maternal death programs and encourage development of maternal waiting facilities. The findings will be used by the county as a guide when trying to improve the effective ways of proper utilizations of the maternal waiting homes. The findings will form a body of knowledge useful for effective utilization of maternal waiting homes and leverage of partners to support the initiative. The findings will also stimulate further researches on factors influencing utilizations of maternal waiting homes in Kenya.

1.7 Delimitations of the Study

This study was limited to identifying and explains the utilization of maternal waiting homes based on 4 identified factors only leaving out other factors that may also affect the utilization. The four variables that the study was focused on are: building design, community involvement, distance and upkeep cost however there may be other important such as homes management styles and care givers attitude among others that the study looked into. In this study, though the targeted population was the local community served by the three maternal waiting homes in Turkana West Sub County, the sample size was made of facilities in charge, local administration and community health volunteers who were considered to be informed about maternal waiting homes and had understanding of local community in utilizing the homes.

1.8 Limitations of the Study

The study area of Turkana West Sub County had a coverage of 15,444Km² which was quite vast for study. However, this was addressed by allocating more resources and time for the study. The questionnaires for this study were in some cases not properly interpreted by the respondents. To minimize the chances of getting incorrect answers from respondents, the questionnaires items were simplified to ensure they were able to comprehend and give the most relevant information.

1.9 Assumptions of the Study

The researcher made assumptions that maternal waiting homes in Turkana West Sub County were underutilized, the data collection instruments used had validity and reliability and

measured the desired constructs and the respondents were cooperative and willing freely gave the required information as accurate as possible to the researcher.

1.10 Definitions of Concepts

Building Design:	Consideration of the aesthetic, functional, economic, and sociopolitical dimensions of physical structure comprising of floor, wall and roof for use as a human shelter.
Community Involvement:	It's participation of people in a community in establishments of maternal waiting homes in creating a solution to problem of accessibility of maternal health care by expectant mothers.
Distance	Proximity to maternal waiting homes from the users' residential homes.
Maternal Waiting Homes:	Residential facilities which are located near a well-established health facility, where pregnant women defined as "high risk" stays awaiting their delivery in the adjacent health facility. They facilitate quick accessibility to health facility for expectant mothers.
Upkeep Cost	Monetary value expended and opportunity forgone by expectant mothers and their families to stay in maternal waiting homes.
Utilization:	Putting to full use or turn to profitable account by making full use of maternal waiting homes to produce positive change which is beneficial and useful.

1.11 Organization of the Study

The study was categorized into five chapters. Each chapter had sections which provided details as required for a standard academic research. Chapter one gives the introduction as well as the study's background, statement of the problem, the purpose of this study, research

objectives, research questions as well as the significance of this study. Additionally, chapter one explained the limitation, delimitation and the assumptions of this study.

The second section (chapter two) of this study provides a literature review on previous studies which have been conducted, relating to this study. The section mainly focused on maternal waiting homes and their utilizations across the globe narrowing to the region and to Kenya. Chapter three gives the details on the research methodology and design used; target population, methods of collecting data and validity as well as reliability of instruments of data collection which were used during this study. Chapter four provides the details of statistical data analysis, interpretation as well as presentation of the findings. The fifth section (chapter five) highlights the summary of the findings, discussion, conclusions drawn from the findings as well as recommendations which were made. Further, it provided recommendations for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

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. It captures the global, regional and domestic level utilization perspective. The chapter review captures relevant theories and empirical studies on factors influencing utilization of maternal waiting homes. Therefore, both theoretical and conceptual frameworks are presented and the knowledge gaps fully identified and explained.

2.2 Building Designs and Utilization of Maternal Waiting Homes

Maternal waiting homes were designed and constructed so as to encourage safer facility based deliveries by offering accommodation to high risk as well as to near term pregnant women close to established health facilities that provided obstetrical care. A maternity waiting village in Kasungu Malawi was completed in 2015 designed by MASS Design Group, an architectural firm with support from the Gates Foundation, North Carolina University and the Ministry of Health in Malawi which provided a unique opportunity for evaluation on how the design of maternal waiting homes influences user satisfaction and use. MASS Design Group (2015) conducted a quantitative research study to compare the Kasungu maternity waiting village with the standard Ministry of Health prototype, to determine how design performance measures like comfort, privacy, and attractiveness created an improved experience for mothers, leading to increased use and subsequent deliveries, ultimately resulting in improved maternal and neo-natal outcomes. The maternity waiting villages emulated traditional villages in design with ample garden space, shared kitchenette as well as laundry area located under the shade of galvanized roof that was used for harvesting of rain water. The homes were designed in that manner so as to attract expectant mother from the remote rural area to the maternal facility before giving birth. Christian Beniman- an architect in the state of Rwanda who designed the Indaba Conference conducted in Cape Town, in the year 2016- indicated that the aim of their design was to let the users live as close as possible to their residential areas where they spend most of their time in the courtyards with their colleagues. It was evident through the study that design of homes improved utilization when it's accepted by the users.

In 1976 in Ethiopia, Attat hospital which was a 55-bed rural community hospital with an immediate catchment of 300,000 people and nearest hospitals being 115 kilometers to the South-Eastern part and approximately 180 kilometers to the North-Western part with about two day walk along the tarmac roads for transport to the maternal hospitals opened a maternity waiting home with traditional style “tukul” design. WHO (1996) explained that in the year 1987, 151 pregnant mothers were admitted to "tukul," the majority of them at high risk. In Turkana West Sub County considering that the region is nomadic and pastoralist in nature, they build traditional houses. As with the nomadic pastoralist in Kenya, livestock keeping is their economic activity since time immemorial. They move about from one place to another searching for places with adequate pasture and water for their animals. The houses that they built are round with sticks and mud all round and are constructed by women and when a maternal shelter takes a modern design, some users culturally feels uncomfortable using them.

2.3 Community Involvement and Utilization of Maternal Waiting Homes

Community involvements was a key component of each policy, and in all country community involvement were seen as an important piece to the success of the policy in increasing the number of women delivering in maternal waiting homes. Study done in Zimbabwe has established the platform increasing utilization through the community mobilizations and awareness to create demand for maternal health services in maternal waiting homes.

Despite of the fact that there has been a tremendous decline in global maternal mortality rate by 34% as from the year 1990 to 2008, the state of Zimbabwe has been experiencing an increase in maternal mortality rate of 283 deaths per every 100,000 births in the year 1994 and in the year 2010 the mortality rate was 960 deaths per every 100,000 births. The high mortality rate has been attributed to eclampsia, puerperal sepsis, malaria infection, obstructed labour as well as postpartum hemorrhage. According to ZMPMS (2007) notes, successful prevention as well as treatment strategies which have been adopted so as to eradicate the diseases and reduce the maternal mortality rate by approximately 46%. With regard to ZMPMS (2007), the maternal or neonatal deaths were attributed to delivery of newborns outside the medical facilities. It also considered the maternity waiting facilities as health institutions and recommended that all pregnant women in Zimbabwe should be allowed to stay at the maternal health facilities for three weeks before delivery as well as 3 days after their successful delivery.

The study conducted in the state of Ethiopia by Kelly et al., (2010), found that the local community support as well as their acceptance of maternal waiting homes led to reduction of maternal death rate. Nonetheless, the study failed the intervention by Mramba et al (2010) which established that most women in Kenya would seek approval from their husbands before they go to the maternal waiting homes, designating the prominence of community as well as family supports, notwithstanding of whether the involvement was much initiated by the external organizations or communities. Culture here was on the role of decision makings that solely depends on the men even though there was not the one affected. However, the women can be prevented by their men from utilizing the maternal waiting homes and when the husband does not support a woman going to the Maternal waiting homes, women will not go on their own.

2.4 Distances from Homesteads and Utilization of Maternal Waiting Homes

The maternal mortality in developing countries arose because of many women unable to access the skilled birth attendants and facilities. WHO had endorsed the maternal waiting homes as a key cog of all-inclusive package to reduce the maternity morbidity and mortality? In maternal waiting homes the mother can rest and be monitored by the skilled attendant till giving birth. WHO (1996) argues that the use of maternal waiting homes as the closest residential facilities to the healthcare facilities have the potential to minimize distance barrier among near term pregnant women to access the services offered by the competent birth attendants at the MWHs. The maternal waiting homes were just temporary shelters for the pregnant due mothers. Maternal waiting homes were the facilities within the reach of the health care or hospitals where the near term pregnant women stay before their delivery so that they can get access to emergency obstetric maternal care. Maternal waiting homes are often used by near term pregnant women in the rural areas or those who are vulnerable to obstetric complication so as to minimize the distance barrier as well as the duration taken to reach to the medical facilities (Stekelenburg et al., 2006; Bhutta et al., 2009; Lonkhuijzen, et al., 2012). In Bangladesh, Rahaman et al, (1982) found out that the key determinant of health care service utilization was the geographical distance between the homes of the near term pregnant women and the medical facility. For Abbas and Walker (1986) the key determinant of effective utilization of maternal waiting homes was physical accessibility of maternal healthcare services.

Various academicians as well as scholars have found out that proximity of healthcare services, especially in the third world nations; play a fundamental role in determining effective utilization of the medical facilities for instance (Stock, 1983; Airey, 1989; Paul, 1991). In Turkana West Sub County women have to traverse plateau terrain so as to reach and get access to obstetric medical services, the deferment can be substantial in case the near term pregnant women experiences a hurdle with rapid inception and any delay may cause a fatal complication to the women.

2.5 Upkeep Cost and Utilization of Maternal Waiting Homes

It is believed that effective utilization of health facility is a complex behavioral phenomenon. Chowdhury, Chakraborty, Bari and Akhter (2004) in their study carried in Bangladesh showed that several empirical studies relating to preventive as well as curative services have found that the use of maternal medical healthcare facilities were related to availability affordability of services, quality of services provided, social structure, personal attributes of each user as well as their health belief. Every human being in his or her habitation needs basic and necessary need to make him or her comfortable. Pregnant women were not exceptions to the rule, staying in the maternal waiting homes without basic best upkeep demoralizes them from being hosted. During the stay in MWH, pregnant women had access to antenatal healthcare services. In addition, the women often visited the healthcare facilities to get the antenatal healthcare education about neonatal healthcare, pregnancy as well as giving birth. The maternal healthcare facilities were visited regularly by the doctors, nurses and traditional midwives. In addition, a part from the care given to them by skilled birth attendants they were also provided with other services such as food, water and firewood. These services were as well as good as provision of skilled birth attendants and access to health facility. Upkeep cost was another factor that affects utilization of Maternal waiting homes. Although there was a kitchenette, clean water and utensils was lacking in the MWHs for near term pregnancy women to utilize during their stay at the facilities. Zimbabwe had achieved greater impact in utilizations of the maternal waiting homes depending on procurement of commodities including foods and nutritional items for the pregnant women staying in the homes. The Japan Government donations as well as the central emergency respond fund have been used to re-establish 66 Maternal waiting homes as well as developing policies aimed at providing all service suppliers with key gen on functioning measures for Maternal waiting homes. In the establishment of the maternal waiting homes, it was a

comprehensive policy that all the district, rural and mission hospital must have a functional home to cater for neonatal healthcare services as well as obstetric emergency situations. Moreover, the comprehensive package consisted of EmNOC suppliers and strengthening referral system. According to the ZMPMS (2007), analysis report, there was an increase in the usage of maternal health facilities (by 200%) established in the 22 hospitals supported by a comprehensive packages as from the month of November, 2009 to April, 2010. Nonetheless, not all the medical facilities provided the satisfactory services due to financial shortages.

According to the findings of Sambe (1990), near term pregnant women preferred staying at their homes to staying in the maternal health care facilities due to lack of food as well as lack of medical attendance. This implied that there was no special budget for the upkeep, general supplies and security management in relation to the administration and management.

2.6 Culture and Utilization of Maternal Waiting Homes

According to Spencer (2008), 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 hubbies before using the healthcare 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 mens' role as well as the connection between maternal attendants and the patients.

2.7 Theoretical Framework

Indeed to account for the utilization of the maternal waiting homes there had been few studies with models to have been proposed. Many studies used the case study to develop the research and arrive at conclusion. To ensure effective utilization of maternal waiting homes, the three key categories (prevention services, inpatient services as well as outpatient services) ought to enlist effective cooperation among community members as well as maternal healthcare service providers. Hitherto, the study assumption was that the Ministry of Health as well as other maternal healthcare service providers knew their resources demands based on effective planning of the number of patients who demanded the services.

2.8 Economic Theory

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 Centaury, 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 healthcare issues, particularly, application of analytical techniques in healthcare research services. According to Devlin and Parklin (2007), 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 healthcare 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 healthcare 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 good s 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 healthcare sector as a result of shortages of medical resources which are used in provision of healthcare services. However, due to rapid population growth and rising healthcare challenges, there has been a continuous demand on provision of better healthcare 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 healthcare status in a society is normally determined by their ability to comprehend the concept of medical pricing mechanism, return on investment of healthcare technological adoption the healthcare facilities, medical equipment as well as facilities, the benefit cost, and effectiveness of medication programmes. These necessitate application of the concept of economic in healthcare sector so as to address the long term healthcare goals which ensure the existence of healthy nation for instance, provision of affordable maternal healthcare 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 healthcare 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 healthcare services to its citizens. Spending on healthcare 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 healthcare 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.

2.9 Conceptual Framework

The conceptual framework demonstrated the association between the dependent and independent variable under investigation. In this study, the independent variables have been factors influencing while dependent variables was the utilization which the evaluation of maternal waiting homes was based on. The association between dependent and independent variables were moderated by culture while government policies were the intervening variables. The information is represented in Figure 1.

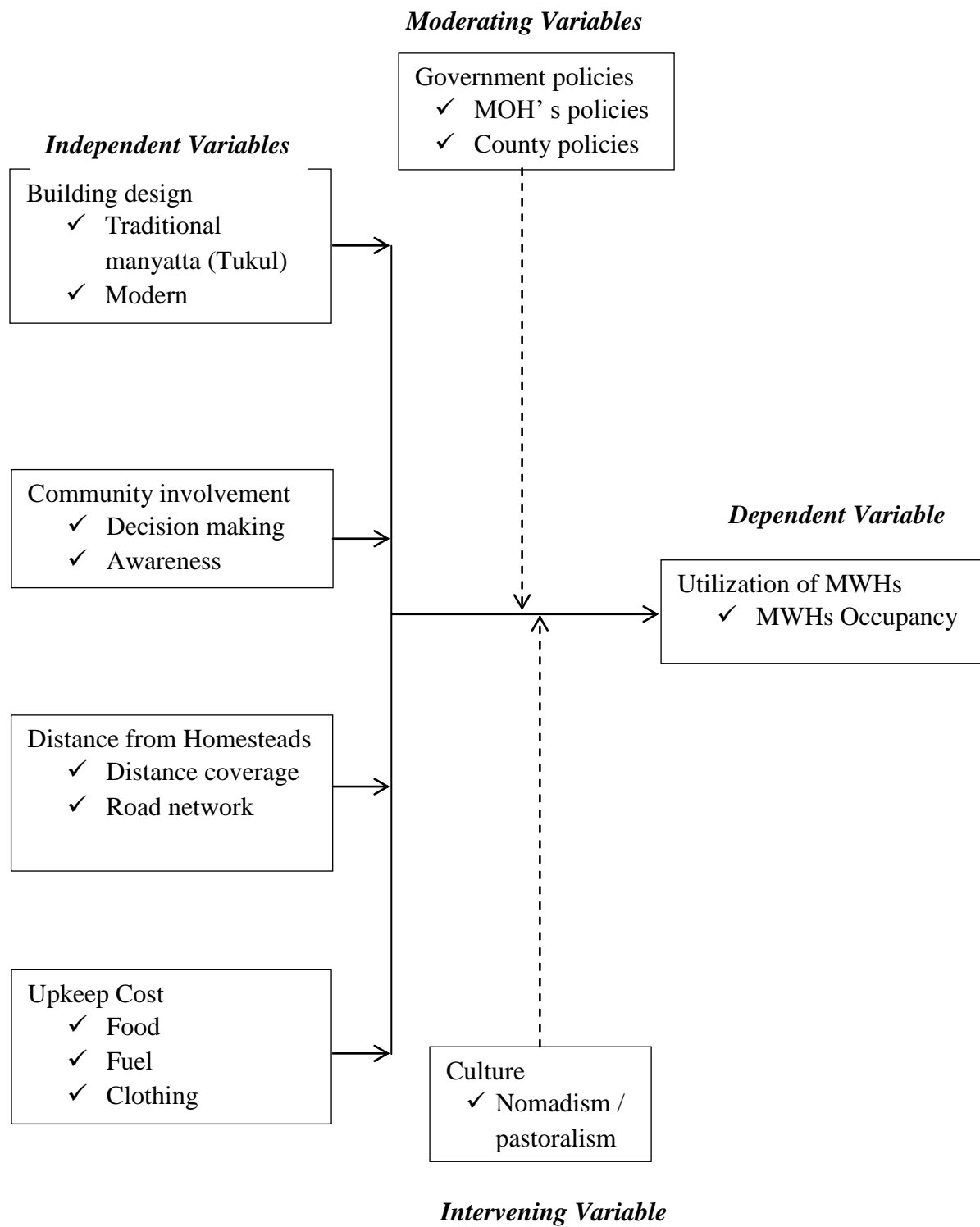


Figure 1: Conceptual Framework

2.10 Knowledge Gaps

A study by Mramba, Nassir and Kamanga in 2010 cited that as much as there is positive effect of maternal waiting homes to the community but there is still underutilization by the community. In Kenya, less than 10% of near term pregnant women used the maternal waiting homes. This indicates that despite the establishment of MWH to help reduce the gap between home deliveries to hospital deliveries by bringing closer the expectant mothers to the health facilities, communities still sigh away from utilizing the homes. Public awareness on the use and existence of maternal waiting homes was a key barrier which inhibits effective utilization of the facilities as almost 72% of the near term pregnant women were not conversant on the availability of MWHs and 95% of the women would consult their husband before visiting the maternal healthcare facilities (Mramba et al., 2010). In his research, Mramba and colleagues identified the factors that affect proper utilization of the maternal waiting homes however; there is no enough literature as culminate to that. Little study has been carried on the utilization of maternal waiting homes with limited literature available for reference.

Another study by Jillo, Ofware, Njuguna and Mwaura in 2015 on evaluating the impact of maternity healthcare facilities, concentrated on the significance of MWHs as having been reported to be effective in reducing mortality however the research did not look into the utilization of the homes recommending further studies on how these homes can be properly utilized in reducing mortality rate that they are intended to.

The studies on maternal waiting homes in Kenya are countable which have not opened up the area for more research leaving the problem of underutilization of the homes to persist. 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 is done on establishing how effectively and efficiently the homes are utilized to achieve this. It was revealed through the review 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 will help improve the utilization and occupancy of the maternal waiting homes. It was therefore, necessary to identify and explain the factors that influence the utilization of maternal waiting homes in Kenya through a case study of Turkana West Sub County through this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explained research methodology that was used in the research. This includes the research design adopted, targeted population, sample size and sampling procedures used, data collection instruments and procedures, validity and reliability of the instruments data analysis techniques, ethical considerations and operational definition of the variables.

3.2 Research Design

This study adopted descriptive design. With regard to Kohari (2004), descriptive research enables the researcher to describe the attributes of individuals within a social construct. It is also defined as a case survey which entails careful and completed observation as well as statistical analysis relationship between one unit and another (Kothari 2004). Borg and Gall (1989) describe descriptive research design as the characteristics of subject, opinions, preferences, attitudes as well as perceptions of individuals within a social construct.

3.3 Target Population

The target population for this study was Turkana West Sub county community which is served by the three existing and established maternal waiting homes in Turkana West Sub County namely; Lokangae, Oropoi and Natira. The main targeted respondents were categorized into three: 3 nursing officers in charge of maternity in the 3 health centers accommodating the Maternal waiting homes, 214 Community Health Volunteers (CHVs) and local administrators; 46 chiefs and assistant chiefs within the entire Turkana West Sub County.

3.4 Sampling Size and Sampling Procedure

A sample size is a subset of the population to which researcher intended to generalize the results. In selecting the maternal waiting homes, a purposive sampling method was used to select three established Maternal waiting homes within Turkana west Sub County, in which the respondents were the 3 nursing officer In-charge of maternities at the 3 health facilities hosting the Maternal waiting homes. According to Turkana County Development Profile (2013), the Sub County has 12 locations and 34 sub locations therefore a total of 46

administrators combining both chiefs and their assistants. Amref (2016) noted that the sub county has 214 CHVs.

In sampling local administration and community health workers within Turkana West Sub County, the numbers of respective respondents were obtained by calculating the sample size from their total population by applying Yamane’s formula (1967)

$$n = \frac{N}{1 + N(e)^2}$$

Where: n= desired sample size

N= target population and

e= probability of error (i.e., desired precision e.g. 0.05 for 95% level of confidence)

This were necessary because the techniques gave all the respondents equal chances of being selected into the sample

Thus applying Yamane’s formula sample size for local administration was;

$$n = 46/1+46(0.05)^2$$

n= 41 local administrators.

The sample size for CHVs by application of Yamane’s formula was;

$$n = 214/1+214 (0.05)^2$$

n= 140 CHVs

Table 3. 1: Sample Size

Category of Respondents	No of Respondents
In – charge (Facility and Maternity)	6
Local Administration (Chiefs & Ass. Chiefs)	41
CHVs	140
Total	187

3.5. Data Collection Instruments

Primary data on factors affecting utilization of Maternal waiting homes for this research were collected from the in-charges and nursing officers' in-charge of maternities in the three health facilities adjacent to the three maternal waiting homes, Chiefs, Assistants Chiefs and CHVs in the Sub County using structured questionnaire which was self-administered. The researcher used qualitative as well as quantitative data which were collected from the field during the study. The Researcher also used the pre-recorded secondary data from the three maternal waiting homes.

3.6 Validity of the Instruments

According to Golafshani (2003), validity is used to measure how factual the results obtained from a particular research are. The research items and questions in the questionnaire were developed in manner that was representation of all dimensions of each variable in the research. The researcher consulted the supervisor as well as other professionals in the field of this study so as to enhance the content and face validity of the research questions.

3.7 Reliability of the Instruments

According to the statement of Golafshani (2003), reliability is defined as the ability of a research instrument to generate consistent outcomes in similar conditions. It is also defined as the ability of the research instruments to generate the same outcomes through a repetitive. When conducting this study, the researcher made used half split technique so as to determine the reliability of instruments of data collections.

3.8 Data Collection Procedures

The data were collected using questionnaires was self-administered or used as interview guides to the respondents who were not able to self-administer them.

3.9 Methods of Data Analysis

The data that were collected systematically arranged and coded through the use of statistical tool (SPSS version 22) which has a full set of statistical tests and helped spot data entry errors or unusual data points. The interview schedules have been analyzed using content analysis. Descriptive statics such as mean, frequency as well as standard deviation were used to explain the utilization of maternal waiting homes.

3.10 Ethical Issues

The researcher obtained authority from the managements of the Maternal Waiting Homes before carrying out the research in the respective facilities. Consent of the prospective respondents were first sort and obtained and the intention of carrying this research was explained to sustain their confidence and the questionnaires were also distributed to specific participants who had interest to participate in filling the questions. The researcher obtained data collection permit from the relevant authorities such as NACOSTI and the researcher's academic institution before conducting this academic researcher. The researcher assured the respondents of the confidentiality of all their personal details and the information obtained from them was strictly to be used for academic purposes only.

3.11 Operational Definition of Variables

The Table 3.2 lists the definition of variable as will be used in the study.

Table 3. 2: Operational Definition of Variables

Research Objectives	Independent Variable	Indicators	Measurement Scale	Research Approach	Type of Statistics
To establish how the building designs influences the utilization of maternal waiting homes.	Building design	Traditional and modern	Ordinal Likert scale	Qualitative	Descriptive
To evaluate how the community involvement influences the utilization of maternal waiting homes.	Community involvement	Knowledge of existence, Homes acceptance	Ordinal Likert scale	Qualitative	Descriptive
To assess how distances influences the utilization of maternal waiting homes.	Distance	Distance from homesteads	Ordinal/Nominal Likert scale	Qualitative	Descriptive
To determine how upkeep costs influences the utilization of maternal waiting homes.	Upkeep cost	Increased occupancy	Ordinal Likert scale	Qualitative	Descriptive

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATIONS

4.1 Introduction

This chapter focused on data analysis, presentation and interpretation based on the data collected from tool administered. It provides overview of the background information of factors affecting the utilization of maternal waiting homes in Turkana West Sub County in Kenya. These sections are based on the six independent variables which include upkeep costs, building design, culture, community involvements and distance.

4.2 Questionnaire Return Rate

The researcher administered a total of 187 questionnaires to the respondent in the three set of maternal waiting homes in the research namely In-charges, administration officers (Chiefs and Assistant Chiefs) and CHVs. 139 of the questionnaires were returned which accounted for 74% return rate.

Table 4. 1: Questionnaires Return Rate

Respondents	No. Administered	No. Returned	Return Rate
In-charges	6	6	3.21
Local Administration	41	37	19.79
CHVs	140	96	51.34
Cumulative	187	139	74.34

The response rate (74%) was representative and was adequately as it was above fifty percent. According to Mugenda (2003), the response rate which is above 50% is considered adequate statistical analysis as well as reporting of the findings. Furthermore, a response rate of sixty percent is regarded as good while a response rate above 70 percent is regarded as excellent for reporting of the findings. Hence, the response rate of this study was within the acceptable limits.

4.3 Demographic Characteristics of the Respondents

The respondents' personal information gathered in this study included gender, age, position in the community for the local administrators and the period of time the respondent has worked in or with the respective Maternal Waiting Homes in case of In-Charges and CHVs.

4.3.1. Distribution of Respondents by Gender

The study participants were also asked to indicate their gender and the findings are as presented in Table 4.2.

Table 4. 2: Distribution of Respondents by Gender

Respondent	Frequency	Percentage
Male	96	69
Female	43	31
Total	139	100

From the findings, 69% of respondents were males and 31% females. This implied that that most of the healthcare attendants were male.

4.3.2 Distributions of Respondents by Position within the Maternal Waiting Homes

The study's participants were also requested to indicate their position in the maternal waiting homes and the findings are as shown in table 4.3

Table 4. 3: Distributions of Respondents by Positions

	Frequency	Percentage
In Charges of facilities	3	2.16
Nursing Officers for Maternity	3	2.16
Community Health Volunteers	96	69.06
Local Administrators	37	26.62
Total	139	100.00

According to these findings, most of the respondents 4.32% were the facility in-charges and nursing officers for the three MWHs in the sub county and 69.06% were the CHVs. This indicates that most of the respondents had knowledge of maternal waiting homes and therefore could be relied upon to present comprehensive and in-depth information.

4.3.3 Distribution of Respondents by the Duration of Working in the Maternal Waiting Homes

The study also sought to establish how long respondents (In charges and deputies) have worked at the maternal waiting homes.

Table 4. 4: Distribution of Respondents by Duration of Working at the Maternal Waiting Homes

Duration	Frequency
Less than year	1
Between 1- 3 Years	3
Over 4 years	2
Total	6

From the findings, 2 of the respondents have worked in the maternal waiting homes for over 4 years, 3 of the respondents have worked in the maternal waiting homes between 1-3 years and only 1 of the respondents has worked in the maternal waiting homes for less than a year. This illustrates that most of the respondents in this category of in-charges and nursing officers have worked in the maternal waiting homes for more than 1 year and therefore have accumulated substantial knowledge on the operation of the maternal waiting homes and were able to give accurate information.

4.4 The Utilization of the Maternal Waiting Homes

The study applied general Yamane’s formulae to determine the results in the utilization of maternal waiting homes in Turkana west Sub County. The researcher also computed the multivariate regression analysis through the use of SPSS version 21. The regression analysis enabled the researcher to determine the association between the dependent and independent variables.

The result of regressions analysis were interpreted based on the following $\beta =$ A measure of how strongly each independent variable influences the dependent variables $t =$ statistic is the coefficient divided by its *standard error* and: $p =$ determined by F statistic, is the probability of getting a result as extreme as the one you are getting in a collection of random data in which the variable have no effect.

4.4.1 Model Summary

The model summary is as illustrated in Table 4.5

Table 4. 5: Model Summary

Model	R	R Square	Adjusted square	R. std. error of the estimate
1	0.925	0.855	0.759	0.505

4.4.2 ANOVA Results

Table 4. 6: ANOVA Results

<i>Model</i>	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
1 Regression	3	8601.161		4300.581	8.899
Residual	3	1449.671		483.224	0.0547
Total	6	10050.833			

The four independent variables that were studied explain only 92% of the factors that influences the utilization of the maternal waiting homes as represented by the R^2 . This therefore, means that there are also other factors though not studied in this research that contributes to 8% of the factors that influences utilization of maternal waiting homes. Consequently, further research should be conducted to investigate the other factor (8%) that affects the utilization of maternal waiting homes.

4.4.3 ANOVA of the Regression

The significance value is 0.00 which is less than 0.054 thus the model is statistically significant in predicting how building design, community involvement, upkeep cost, distance from homesteads, culture and government policies affects the utilization of maternal waiting homes. The F critical at 5% level of significance was 3.20. Since F calculated (value = 8.899) is equal to the F critical this shows that the overall model was significant

4.5 Coefficient of Determination

Table 4. 7: Coefficients of determination

Model	Unstandardized Coefficient		Standardized Coefficients	T	Sig
	B	Std. Error	Beta		
1 (Constant)	1.192	0.505	4.107		
Building design	0.107	0.893	0.107	3.082	0
Community involvement	0.235	0.765	0.505	3.139	0
Upkeep costs	0.358	0.642	0.105	3.545	0
Distance	0.091	0.909	0.091	3.096	0
Culture	0.149	0.850	0.149	3.117	0
Government policies	0.059	0.941	0.059	3.016	0

Table 4.7 shows the results of multiple regression analysis as was conducted to determine the extent to which the factors influencing the utilization of maternal waiting homes in Turkana West Sub County. From the SPSS generated table, regression equation become:

$$\frac{k}{k-1} \left(\frac{\sum_{i \neq j}^k cov(x_i, x_j)}{var(x_0)} \right) = \frac{k}{k-1} \left(1 - \frac{\sum_{j=1}^k var(x_j)}{var(x_0)} \right)$$

K	6
Sum of Var	2.312906
Var	365.1389
A	1.192399

In accordance to the regression equation established, taking all factors into account (building design, community involvement, distance and upkeep cost (constant at zero, factors influencing utilization of MWHs will be 1.192. The data findings analyzed also shows that taking all other independent variables at zero, a unit increases in upkeep cost will lead to a 0.358 increase in the factors affecting the utilization of the maternal waiting homes in Turkana West sub county; a unit increase in community involvement will lead to a 0.235; a

unit increases in culture will lead to a 0.149; a unit increases in building design will lead to a 0.106; a unit increases in distance from homesteads will lead to a 0.091 while a unit increase in government policies will lead to a 0.059 increase in factors affecting the utilization of the maternal waiting homes. This infers that upkeep cost is the major contributor in influencing the utilization of maternal waiting homes. At 5% level of significance, upkeep cost, community involvement, building design, distance from homesteads, culture and government policies were all significant factors affecting the utilization of maternal waiting homes in Turkana West Sub County.

4.6 Analysis of Utilization of the Bed Capacity in the Maternal Waiting Homes

The respondents were requested to state whether there was a full bed capacity recorded in the three maternal waiting homes in Turkana West Sub County. The outcomes were as follows indicated in Table 4.8.

Table 4. 8: Analysis of Utilization of the Bed Capacity in the Maternal Waiting Homes

Health Facility	Capacity	Occupancy	Percentage
Lokangae	8	3	13.04
Oropoi	9	4	17.39
Natira	6	2	8.70
Total	23	9	39.13

According to the findings, respondents noted that Lokangae had occupancy of 3 beds out of 8, Natira had the occupancy of 4 out of 9 beds while Oropoi’s occupancy was 2 out of 6. The result indicates occupancy rate of 39.13% in the sub county which points to underutilization of the 3 maternal waiting homes.

4.7 Existence of Physical Recorded Evidence on the Attendance of Mothers in the three Maternal Waiting Homes

The respondents were requested to state whether there were any physical and tangible records on the attendance of expectant mothers or usage of the maternal waiting homes and the findings are as in table 4.9.

Table 4. 9: Existence of recorded evidence for the attendance

	Frequency	Percentage
Yes	128	92
No	11	8
Total	139	100

As illustrated in the Table 4.9, 92% of the respondents noted that maternal waiting homes have kept physical records of the attendance and usage of the homes. This proved that the record of utilization of the homes could be traced and provided accurate secondary source of information.

4.8 Analysis of Existence of the Maternal Waiting Homes near Established Health Facility

The respondents were requiring being able to identify if there is a MWH near some established healthy facilities in their communities.

Table 4. 10: Existence of the Maternal Waiting Homes near Established Health Facility

	Frequency	Percentage
Yes	107	77
No	32	23
Total	139	100

Table 4.10 indicates that 187 respondents identified that 3 maternal waiting homes exists within established healthy facilities in Turkana West Sub County.

4.9 Rating of the Usage of the Maternal Waiting Homes

The respondents were requested to state whether the utilization of the maternal waiting homes was highly satisfactorily, satisfactorily, neutral, unsatisfactorily or highly unsatisfactorily.

Table 4. 11: Rating of the usage of maternal waiting homes

	Frequency	Percentage
Highly satisfactorily	7	5.04
Satisfactorily	10	7.19
Neutral	28	20.15
Unsatisfactorily	63	45.32
Highly unsatisfactorily	31	22.30
Total	139	100.00

As illustrated in the Table 4.11 above 60% of the respondents confirmed that the MWHs were underutilized by the community with 22.3% indicating that they were highly underutilized. 20.15% of the respondents were neutral, 7.19% of the respondents were satisfied with 5.04% being highly satisfied that the maternal waiting homes were being utilized. Overallly this indicates that the majority of respondents were in agreement that the homes are underutilized.

4.10 Analysis of Number of Births Recorded in the area of Operations for the Community Health Volunteers and Local Administrators

The respondents were to state the births recorded in their area of operation for the last six months.

Table 4. 12: Analysis of Number of Births Recorded

	Frequency	Percentage
Less than 5	90	49.72
Between 5 – 10	51	28.18
Between 11 – 15	30	16.57
Over 15	10	5.53
Total	181	100.00

As illustrated in the above table, 90 respondents noted that there was less than 5 births in the healthy facilities and homes, 51 respondents recorded between 5 -10, 30 respondents recorded between 11 – 15 and 10 respondents recorded over 15 in their area of operations.

4.11 Analysis of Births that were Delivered in the Hospital and at Homesteads

The respondents were to state how many of the deliveries were delivered in the hospital and those that were delivered at home.

Table 4. 13: Analysis of Births that were delivered in the Health facilities and Homesteads

	Frequency	Percentage
Health facilities	102	73.38
Homesteads	37	26.62
Total	139	100.00

According to the findings, 102 respondents acknowledged the deliveries in the health facilities while only 37 respondents noted the deliveries at the homesteads. The finding shows high usage of health facilities for deliveries.

4.12 Analysis of the awareness of the existence of maternal waiting homes by the Community within their areas

The respondents were to indicate whether they know the existence of the maternal waiting homes within their areas.

Table 4. 14: Analysis of the Awareness of the Existence of Maternal Waiting Homes in the Community

	Frequency	Percentage
Yes	32	23.02
No	107	76.98
Total	139	100.00

Table 4.8 shows that 107 respondents being 76.98% ascertained that awareness of the existence of maternal waiting homes among the communities they serve is low. Only 23 respondents making 23.02% confirmed their communities being aware of the existence of the maternal waiting homes. Therefore the majority of the community intended to be served by the maternal waiting homes do not know of their existence which is also a factor affecting the utilization of the maternal waiting homes.

4.13 Analysis of the Number of Deliveries Supported by each Maternal Waiting Home in Turkana West Sub County

Maternal waiting homes are meant to be used by the expectant mothers in order to receive the services of deliveries by the skill midwives. Respondents were to ascertain the number of deliveries in the homes.

Table 4. 15: The number of Deliveries Supported by each Maternal Waiting Homes

	Frequency	Percentage
Lokangea	7	30.43
Natira	5	21.74
Oropoi	11	47.83
Total	23	100.00

From the findings the number of utilization is less than 50% of the bed capacity which shows that the utilization is affected.

4.14 Analysis on the opinion of the Respondents as to the Factors Influencing the use of Maternal Waiting Homes in the Community

The respondents were to state the factors that influences the utilization of the maternal waiting homes in sub county.

Table 4. 16: Factors Influencing the use of Maternal Waiting Homes in the Community

	Frequency	Percentage
Building Design	14	10.07
Community Involvement	33	23.74
Upkeep Costs	51	36.69
Culture	13	9.35
Distance from Homesteads	21	15.11
Government policies	7	5.03
Total	139	100.00

From the findings, 14 of the respondents cited that building design affects the utilizations, 33 of the respondents cited community involvement, 51 of the respondents cited upkeep cost, 13 of the respondents cited culture, 21 of the respondents cited distance from homesteads and 7 of the respondents cited government policies as source of underutilization of the maternal waiting homes in Turkana West sub county.

4.15 Analysis of Greatest Challenges among the Community on Usage of Maternal Waiting Homes

Respondents were required to state the greatest challenges that the population they serve face in the usage or utilization of the homes. The responds was as follows in the table below.

Table 4. 17: Analysis of Greatest Challenges among the Community on Usage of Maternal Waiting Homes

	Frequency	Percentage
Building design	14	10.07
Community Involvement	33	23.74
Upkeep costs	51	36.69
Culture	13	9.35
Distance	21	15.11
Government policies	7	5.03
Total	139	100.00

As illustrated in Table 4.17, 14 respondents said that building design, 33 respondents noted as community involvement, 51 respondents noted that it's the upkeep costs, 13 respondents said that it is culture, 21 respondents said that it is distances from homesteads that are greatest challenges that the community in Turkana west sub county faces in the usage of the homes. While only 7 cited government policies as a cause of challenge on utilization of the homes

4.16 Respondents opinion on the factors influences Utilization of Maternal Waiting Homes

The study's participants were further requested to indicate their agreement level on various statements on relating to factors influencing the utilization of maternal waiting homes in Turkana West Sub County. The responses were place in five likert scale; where 1 symbolizes strongly disagree, 2 symbolizes disagree, 3 symbolizes neutral, 4 symbolizes agree and 5 symbolizes strongly agree.

Table 4. 18: Factors Influencing the Utilization of Maternal Waiting Homes

	Mean	Standard
Building design	3.80	0.05
Community involvement	3.60	0.25
Upkeep costs	4.4	-0.55
Culture	4.0	-0.15
Distance	3.60	0.25
Government policies	3.70	0.15

As illustrated in the table 4.12 the respondent strongly agreed that upkeep costs relates to the utilization of the MWHs (mean = 4.4), and that the distance plays key role in usage of the maternal waiting homes (mean= 3.60). In addition, the respondents agreed that community involvement to coordination of the utilization (mean = 3.6), then also building design is important in order to utilize the homes (mean=3.80). Other intervening and moderating variables that respondents identified which also affects the utilization of the homes including culture (mean=4.0) and government policies (mean= 3.70) respectively. This implies that the upkeep cost relates to the effective utilization of the maternal waiting homes.

CHAPTER FIVE

SUMMARY OF THE FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary, discussions, conclusion and recommendations on the utilization of maternal waiting homes in Turkana West Sub County based on community involvement, culture, upkeep costs and building design. The relationship of each of the objective and the empirical data from the literature review is briefly presented as the researcher concludes and gives recommendations for further research.

5.2 Summary of Findings

The summary of findings summarizes each of the findings under each of the objectives of the study. The study sought to establish the extent to which the identified factors influenced the utilization of maternal waiting homes in Turkana West Sub County.

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. This factor even defeats the purpose for these homes which is to bring the pregnant women closer to health facilities for hospital

deliveries. The study revealed that each of the five factors identified contributes to the underutilization of the maternal waiting homes in Turkana West Sub County and must be addressed sufficiently in order for full utilization of maternal waiting homes.

5.2.1 Influence of Upkeep Cost on the Utilization of Maternal Waiting Homes in Turkana West Sub County.

The study revealed that the waiting homes designs involved a provision for cooking with some equipped with cooking gas cylinders which had long time run out of cooking gas. The expectant women who use these homes are expected to meet the cost of refilling the gas, buying and preparing their own food. Therefore, in short the expectant women are only provided with a place to camp in during the period they are due to deliver without anything to do with food to consume while staying at the MWH. These extra costs prevent the women from using the homes as their cost of stay are not met by the facilities attached to these homes or the government. From the study through interview, the cost of upkeep is viewed by the community as an extra burden hence limits the utilization of the homes. The finding further portrays that the utilization of the maternal homes can be improved through provision of other basic needs like source of water, food and fuel that are in constant need to be well coordinated to meet the upkeep needs. The study depicts that for proper utilization of the maternal waiting homes a consideration on how to meet the upkeep cost must be put in place to encourage their full utilization to achieve reduction of infant mortality and improved maternal health care for which they are established.

5.2.2 Influence of Building Design on the Utilization of Maternal Waiting Homes in Turkana West Sub County.

From the findings, building design has quite affected the utilization of the MWHs. The study shows that large population of the community is not conversant with the modern housing that the maternal waiting homes are, however, in most cases the homes are designed in similarity to the traditional tukuls used by the community. For example, the floor made of cement finish provided a challenge to the users as when water pours on the floors it stagnates unlike their earthen floors where such water spillage dissolved into the ground. Even though the designs imitated the traditional tukuls, the users still became uncomfortable and complained of the house being hotter than the tukuls. The design has incorporated the use of grass and makuti over the iron roofing sheets to give the houses a cooling effect and to convince the expectant women to adapt to staying in these homes. It's also held among the turkanas that the

traditional houses are constructed by women and this culture greatly affected the stay of expectant women to these modern houses constructed by men. therefore the findings summarizes that to promote the utilization of the maternal waiting homes then the building designs must be modified to suit what is accepted in the community.

5.2.3 Influence of Culture on the Utilization of Maternal Waiting Homes in Turkana West Sub County.

The study depicts that the most dominant factor that contributes to the underutilization of the maternal waiting homes culture. The turkana culture is so conservative in nature and prevents adaptation to usage of homes. The culture is translated into various forms as from women making decision on where to stay, what to eat and the entire upkeep. The findings summarizes that all decision as where to stay must be sole decision of the man. Conclusively, the study indicated that conservative cultural practices are affecting the utilization of the maternal waiting homes where it prevents expectant women from staying away in exclusion from the rest of their families and family livestock. Cultural change among the pastoral communities is very necessary to allow full acceptance of usage of the maternal waiting homes in meeting the intended health improvement objectives.

5.2.4 Influence of Community Involvement on the Utilization of Maternal Waiting Homes in Turkana West Sub County.

The study revealed that the key stakeholders in the utilization of the maternal homes are the community and that they are supposed to be involved in planning and establishment of these homes to create the much needed awareness of the existence of these homes. From the findings of this study, the decision to put up these homes and their construction is done without consulting with the would be user community hence no involvement and clear expectations from them. The finding summarizes the ways of promoting awareness of the homes through ownership, decision making and sustainability by the community to include: implementation process which satisfy all the community while ensuring maximum participation of all the community. Finally, the study indicated that community involvement through the “baraza” awareness and other forums that must be put in consideration to build the ownership among them and acceptance for use by expectant women.

5.2.5 Influence of Distance on the Utilization of Maternal Waiting Homes in Turkana West Sub County

The study revealed that due to the nomadic nature of the community, the migratory populations occasionally moves far from the service delivery points being the established health facilities and the maternal waiting homes becomes more far from where the expectant mothers live. Distance was cited as a barrier to access of these homes particularly due pastoral lifestyle of the community which is used to moving from one place to another for search of the pastures and waters for their animals and themselves. The findings summarizes that unless the family has the fixed abode then the distance still remains a challenge to address with the poor infrastructure in the areas. The distance limits the usage of the homes since at times the maternal waiting homes gets far away from the reach of the users when user migrate to several kilometers away in search of pasture and water a period during which these homes are underutilized or not utilized at all due to distance.

5.3 Discussions

The study revealed that all of the maternal waiting homes lacked necessary social upkeeps facilities for the expectant mothers. Also the study established that all the homes had the modern house space with provision of kitchen area which was to be improvised by the mothers for their general cooking activities. However, it lacked the basics like utensils and food to cook. Therefore, the modern house just provided an empty space and the expectant mothers are expected to carry their own utensils and food for their use during their stays in the maternal waiting homes as they wait to delivery. However, the findings also indicated that maternity waiting homes cannot be considered as just mere physical facilities and hence it is not possible for them to function without other necessary components. Instead, they can be considered as key components in a larger more comprehensive chain of necessities including foods, water, fuel and bedding. These components must be of high quality and sufficient to ensure the effective running of the waiting homes.

In the study carried out in Tanzania indicated that user satisfaction and utilization of the maternal waiting homes depended mostly on the services and goods provided. Winful (1994) explained that food expenditures were very high and in vases where food was availed women protested the unacceptability of the food in terms of quality and quantity. In the three homes in this studied the women provided their own food, cooking fuel and utensils.

The study revealed that the homes have no allocation of budget to run its upkeep activities. Apart from the gas “meko” bought by the donors who established the homes and which had since run out in the three facilities under the study, there was no any other kind of support in terms of upkeep to the expectant women using the homes. They are each to fend for themselves. The study noted that the upkeep cost can only be realized if there is a set budget that must be a precise replication of the services to be delivered as supplies and of the pecuniary means available. The supplies of the bedding and food give all level of an opportunity to utilize thus reducing the fear of the unknown in using the maternal waiting homes. Herschderfer et al (2012) emphasize that the costs related to operation and construction of the maternal waiting homes should be financed fully by the government, donors and community themselves.

From the finding, it can be summarized that community involvement has been under looked by the donors and the government as far as the establishment of these homes are concerned yet the community is expected to utilize the homes as a health care intervention in reducing home based deliveries which in turn reduces infant mortality rates and improves maternal health care. Also the study established that respondents who were key community figures were fully aware of the existence of the maternal waiting homes while the larger population of the community did not know of the existence of the homes yet they were expected to be using them. WHO (1996) notes that word of mouth has in fact, been shown to be the best way to increase the acceptability and use of health services. The study only shows that the awareness of the community depends much on the provisional of all services and basic needs. Provisional of the service and basic needs stands as a stimulant to the community in utilization of the homes. Maternal waiting homes could be utilized to full capacity when the community involvement and support is put in consideration in terms of planning and implementation. Therefore, decision makers within the community, be it elders, politicians, religious leaders, women themselves, local leaders, husbands, teachers, and women themselves, ought to be consulted and involved in establishing and ensuring of consistent daily operations of these homes.

The findings also depicts that culture and community involvement is almost the same as due to very conservative traditions then women are relegated on the peripherals in decision makings even with the matters affecting their very own lives. The respondents indicated that women perceived their husbands to be the conclusive authority for accord to pursue health recommendation and where and when to use the health care amenities. Hence, findings

established that the underutilization is not only due to the distance of the homes from where they live but also related to the perceptions and beliefs of the community through the significant decision making influenced by traditions, system of society and religious leaders. Women who are the users of these homes, ones relegated to the peripherals in the line of decision making on usage of the homes they shy away from using them. The migratory culture of movement from one place to the other for search of pastures also affects the utilization of the homes. The women have no choice as they ought to move with their families whenever the need to shift arises. Haile (2012) notes that decision making regarding obtaining care on maternal health problems is within women domain, although they can be influenced by religious leaders and husbands. Traditional practices that are considered harmful attributed to low educational levels as well as awareness on general and maternal health that can be considered as key features of nomadic communities.

In the event of moving from one place to the other then the issues of distance crops up which limits the accessibilities to maternal waiting homes. Bousery et al (2009) explains that he nomads are the most affected as they roam around looking for pasture and water for their animals and there are no proper mechanisms to meet their health care needs. The findings established nomadic life which is probabilistic in nature is difficult in determining at what time the mother will experience the labour pains or deliver. So is the lack of proper public infrastructure within the areas that hinders the accessibilities of the facilities. Lawson et al (2003) notes that lack of proper transport system, poor road infrastructure and lack of communication network in most of developing countries negatively impact on maternal health.

The four variables in this study can be related to the economic theory approach in the theoretical framework. With the scarce resources available to health sector, establishment of sufficient health facilities are hampered and where they are established, coping up with demand become a challenge. Different established health facilities having maternal waiting homes have different ways of executing out their plans in order to maximize on the utilization of the homes. Therefore they will require different approach to different levels of utilization in relation to prevailing economic, cultural, social and administrative situations. However, the study revealed that through an approach that ensures the constant supply of basic commodities to the homes, the expectant women will be motivated to use them often increasing their utilization rates.

5.4 Conclusions

Based on the above review of findings, the study made the following conclusions;

5.4.1 Influence of Building Design in Utilization of Maternal Waiting Homes in Turkana West Sub County.

From the findings, it can be concluded that most maternal waiting homes are constructed in modern ways. These designs gives the buildings new looks different from what the community is used to have as their shelter. In addition, the study concludes that building design is also factors that enhance the underutilization of the maternal waiting homes in Turkana West Sub County. The findings further conclude that the building design must relate in design and look to those that the community is used to and should in construction incorporate the use of local materials and community is allowed to participate in the construction process. The study concludes that building design to a greatly influence the utilization of the maternal waiting homes and must be well addressed before putting up the homes.

5.4.2 Influence of Culture in Utilization of Maternal Waiting Homes in Turkana West Sub County.

From the findings it can be concluded that the community's culture is so conservative where women are relegated in decision making hence even those concerning their health issues, their decisions are fully influenced by men. The study also noted that small number of women adamantly refused to stay in the maternal waiting homes in order to care for their other young children as the culture fully delegates that responsibility fully to women. The pregnant women are either, prevented by their husbands from staying in these homes or by themselves decides not to stay in the homes as this alienates them from the rest of their families yet they are the ones supposed to be caring and perform house chores for their families. To salvage this, there is need to educate or create awareness among the community of importance of utilizing the maternal waiting homes by expectant mothers when they are due for deliveries.

5.4.3 Influence of Upkeep Cost in Utilization of Maternal Waiting Homes in Turkana West Sub County.

The study revealed that all the maternal waiting homes have a provision for cooking with “meko” for cooking provided by the establishing authorities. However, study also revealed

that there was no budget allocation for the fuel ones it runs out and the available empty gas cylinders were not refilled with the cooking gas after first usage. The improvised external kitchen using firewood fuel was created by the expectant mothers' for cooking. The expectant mothers often seek for assistance within the maternal waiting homes. When joined by their relatives to support them in home chores the rooms became too small in sizes to accommodate all of them meaning the expectant mothers could not host their care givers in the homes. The finding summarizes that full-fledged supply of basic needs, beddings and budget to run the homes is essential for their full utilization.

The study also notes that provision of food to the homes assist in directly cutting the cost of staying in the homes therefore, prevents expectant women from choosing not to stay in the maternal waiting homes due to the concerns of taking foods away from their homes. This is noted in the study that it is mainly concern to limited resource settings communities like it is in Turkana West Sub County.

5.4.4 Influence of Distance in Utilization of Maternal Waiting Homes in Turkana West Sub County.

The study revealed that due to the life styles of the community, the distances between the expectant mothers and the homes fluctuates at different times of the year due to migratory behavior of the community which turn depends on the seasons and weather pattern that affects the availability of pasture and water. Hence, the study noted that where the families relocate to at the time one of its member is expectant determines how easy or difficult it becomes in accessing the homes hence this affects their utilization of the homes. When they relocate to places far away from the homes, coupled with impassible road networks, the maternal waiting homes remains unused and they revert to home based deliveries which establishment of maternal waiting homes is to discourage while encouraging hospital based deliveries. Study concludes that distance is a major factor affecting the utilization of maternal waiting homes in Turkana West Sub County.

5.4.5 Influence of Community Involvement of Maternal Waiting Homes in Turkana West Sub County.

The study concludes that for acceptance and to use the homes the community involvement and awareness is a key factor that must be encouraged before putting up the homes. The community must be involved in the planning, establishment and running of these homes so that they share the ownership and get encouraged to allow their loved ones who are expectant

to stay in the homes away from the rest of the families' members. The study also noted that through proper awareness, other factors such as upkeep and culture can be resolved by the community themselves by allowing a culture change to allow the expectant women to stay in homes and provide for them their upkeep need. Through awareness, the confidence to use the homes is built among the community hence improves the utilization of the homes.

The study findings conclude that there is a need to consult the community in terms of planning, implementation and running of the maternal waiting homes established in the community for full utilization.

5.5 Recommendations

Based on the above key findings, this study made the following recommendations;

- i. The community needs to be sensitized to understand the importance of mothers or expectant women utilizing the maternal waiting homes.
- ii. From the study, it is evident that upkeep cost is rated highly among the factors influencing the utilization of the maternal waiting homes. The governments both at national and county levels and non-governmental organizations should devote enough resources to ensure that there are adequate supplies of basic needs and commodities in these homes to encourage their use for full utilization by the communities.
- iii. Though conservative culture is fading away slowly, there is still a need to create awareness among men of the Turkana community to embrace the maternal waiting homes project for the health of their women. As within the maternal waiting homes they are taught how to maintain their health, planning for their children and other health educations.
- iv. The design for maternal waiting homes needs to incorporate the usage of local construction material to give the homes a familiar look and resemblance to traditional tukuls but meeting the standards to encourage their usage in the communities.

5.6 Suggestions for further studies

As indicated in the findings and conclusions made in this project, it is clear that the landscape is changing as the utilization of the maternal waiting homes are concerned. Factors that have been considered in the past may not apply in our world today and in the future. Adaption of maternal waiting homes is one of the interventions on improving maternal health care geared towards zero maternal deaths. It is therefore important for a study to be undertaken on the

emerging trends in usage of maternal waiting homes and how better to improve the concept of the homes, their usage and acceptance among the intended users.

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Zimbabwe Demographic and Health Survey 2010-11

APPENDICES

Appendix 1: LETTER OF TRANSMITTAL

Paul Oduor Oyoko
University of Nairobi
P.O Box 30197,
Nairobi.
April 28th, 2017

The Facility In-Charge

Dear Sir / Madam,

REF: REQUEST FOR ACADEMIC CASE STUDY RESEARCH

I am a student at the University of Nairobi undertaking a Master of Arts degree in Project Planning and Management. I have complemented my coursework and currently conducting a project research as part of fulfillment of the course.

I am conducting a research on Factors Influencing Utilization of Maternal Waiting Homes in Turkana West Sub County. I am kindly seeking an opportunity to conduct the research in your facilities maternal waiting home as one of the case study. All the data collected for this study will be treated with utmost confidentiality and will solely be used for the academic purposes. Any assistant accorded to me will be highly appreciated.

Thank you in advance.

Yours faithfully,

Paul Oduor Oyoko

L50/66287/2013

2. Do you have a physical recorded evidence for the attendance of mothers in the home?

a) Yes []

b) No []

If No, why? -----

3. Have the maternal waiting homes been recording full bed use?

a) Yes []

b) No []

4. If No, kindly specify maximum number ever recorded? -----

5. How do you rate the usage of the MWH?

a) Highly satisfactory []

b) Satisfactory []

c) Neutral []

d) Unsatisfactory []

e) Highly Unsatisfactory []

6. In your own view, what do you think are the factors influencing the utilization of maternal waiting homes in this facility?

SECTION C: FACTORS OF UTILIZATION

The following relate to effects of factors influencing utilization of maternal waiting homes. Making your choices based on the statements and using Likert scale (Where: 1 – Strongly Disagree, 2 – Disagree; 3 – Neither; 4 – Agree; 5- Strongly Agree) Tick appropriately according to the extent with which agree or disagree with the statement.

Statements	1	2	3	4	5
Has culture influenced the utilization of maternal waiting homes in Turkana west sub county					
Building design has influenced the utilization of maternal waiting homes					
Community involvement and awareness is greatly affecting the utilization of maternal waiting homes					
Upkeep costs and maintenance is hindering the utilization of MWHs					
Government policies are the moderating agents to the utilization of MWHs					

10. Do you have any suggestions that would improve the relevance, dissemination, utilization and impact of MWHs?

.....

.....

.....

Thank you

Appendix 3: QUESTIONNAIRE 2 – FOR LOCAL ADMINISTRATORS AND COMMUNITY HEALTH VOLUNTEERS

Dear Respondent,

This questionnaire is meant to collect data for academic research paper on **Factors Influencing Utilization of Maternal Waiting Homes in Kenya, Turkana West Sub County** and you have been identified as one of the respondents. You are kindly requested to take a few minutes to respond to this questionnaire honestly and exhaustively. Please note that information supplied is purely for academic research purposes and will be treated with utmost confidentiality.

Instructions: Kindly fill in the spaces provided or tick inside the boxes as appropriate.

SECTION A: BACKGROUND INFORMATIONS

1. Gender

- a) Male [] b) Female []

2. What is your position?

a) Chief []

b) Ass. Chief []

c) CHV []

3. Which is the nearest health facility to you with?

4. Does the facility in 3 above have maternal waiting home?

a) Yes []

b) No []

If No, which is the nearest facility to your area with maternal waiting home?

SECTION B: ANALYSIS OF FACTORS INFLUENCING UTILIZATION

1. How many births have been recorded in your area of operations in last 6 months?
 - a) Less than 5 []
 - b) 5 – 10 []
 - c) 11-15 []
 - d) Over 15 []

2. Of the numbers indicated in 3 above, how many were;
 - a) Delivered in hospital?
 - b) Delivered at home?

3. Is the population you serve aware of the existence of maternal waiting home in the facility mentioned in number 4 in Section A?
 - a) Yes []
 - b) No []

4. Of the number that were delivered in the hospital how many used the maternal waiting home -----

5. In your own view, what do you think are the factors influencing the use of maternal waiting homes among the population you serve?

6. In the population you serve, which is greatest challenges they report on usage of MWHs
 - a) Lack of awareness of existence of the home []
 - b) Building design of homes []
 - c) Distance from their homes []
 - d) Upkeep cost within the homes []

7. The following relate to effects of factors influencing utilization of maternal waiting homes. Making your choices based on the statements and using Likert scale (Where: 1 – Strongly Disagree, 2 – Disagree; 3 – Neither; 4 – Agree; 5- Strongly Agree) Tick appropriately according to the extent with which agree or disagree with the statement.

Statements	1	2	3	4	5
The building designs MWHs compared to traditional mayattas (tukuls) hinders the usage of maternal waiting homes					
Lack of involvement of the community in establishment of MWHs greatly affects their utilization by the community					
The distances travelled to reach the MWHs have greatly contributed to low usage of the facilities.					
Upkeep costs and maintenance within MWHs is hindering their utilization.					
Government policies on hospital deliveries has encouraged the use of MWHs					
If upkeep cost is met by facilities with the MWHs the use of the utilization of the homes will improve.					
Culture of the Turkana community hinders the use of MWHs					

8. What would you like to be done to improve the utilization of MWHs in Turkana West Sub County?

.....

.....

.....

Thank you

Appendix 4: RESEARCH AUTHORIZATION LETTER



UNIVERSITY OF NAIROBI ODeL Campus

Your Ref:

Our Ref:

Telephone: 318262 Ext. 120

Main Campus
Gandhi Wing, Ground Floor
P.O. Box 30197
N A I R O B I

13th May, 2017

REF: UON/CEES/NEMC/26/033

TO WHOM IT MAY CONCERN

RE: PAUL ODUOR OYOKO - REG NO L50/66287/2013

This is to confirm that the above named is a student at the University of Nairobi College of Education and External Studies, School of Continuing and Distance Education, Department of Extra- Mural Studies pursuing Masters of Art in Project Planning and Management.

He is proceeding for research entitled "**factors influencing utilization of maternal waiting homes in Kenya.**" Case of Turkana West Sub-County.

Any assistance given to him will be highly appreciated.




DR. JOHN MBUGUA
COORDINATOR
OPEN AND DISTNACE LEARNING PROGRAMMES

Appendix 5: RESEARCH PERMIT



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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

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

Ref. No. **NACOSTI/P/17/46014/17345**

Date: **14th June, 2017**

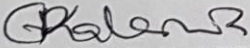
Paul Oduor Oyoko
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***“Factors influencing utilization of maternal waiting homes in Kenya: Case of Turkana West Sub County,”*** I am pleased to inform you that you have been authorized to undertake research in **Turkana County** for the period ending **13th June, 2018.**

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

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


GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Turkana County.

The County Director of Education
Turkana County.



FACTORS INFLUENCING UTILIZATION OF MATERNAL WAITING HOMES IN KENYA: A CASE OF TURKANA WEST SUB-COUNTY

by Paul Oduor Oyoko

Submission date: 12-Aug-2018 02:03AM (UTC-0400)

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