DETERMINANTS OF BIRTHING SITE AMONG WOMEN IN ENDO WARD, MARAKWET EAST SUB COUNTY, KENYA

BY

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2015

DECLARATION

Declaration by the Candidate

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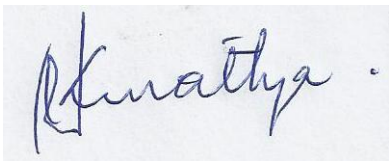
Declaration by Supervisors

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



18th May, 2015

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DEDICATION

I would like to dedicate this work to all women of child bearing age in Marakwet East Sub County to whom safe motherhood for all is a possibility, yet it has remained a formidable challenge. I would also like to dedicate this work to my family for their unwavering support through this demanding academic journey.

ABSTRACT

The decisions that women make when choosing a birthing site play a significant role in determining the maternal and neonatal health outcomes. According to World Health Organization, more than 90% of all maternal mortalities occur in the less developed countries where deliveries are often conducted by unskilled birth attendants. Kenya seems not to be on track to achieve the Millennium Development Goal No.5, which had set a target of reducing maternal mortalities by three quarters between 1990 and 2015, by increasing uptake of hospital delivery services. The percentage of women who deliver in hospitals in Marakwet district is a dismal 28% compared to the national average of 44%. Recognizing that the single most important factor to reducing maternal deaths is through hospital delivery, this study sought to find out what factors influence the choices of birthing site among women in Marakwet East Sub County. The objective of the study was to explain the socio-demographic, socio-cultural and healthcare system factors that influence the women's choice of birthing site in Endo Ward, Marakwet East Sub County. The study was guided by two complementary models namely the Health Belief Model and Socio-Behavioural Theory by Andersen (1968). A descriptive survey design was used. The target population comprised mothers who had previously delivered. A total of 186 mothers were interviewed. Three focus group discussions were conducted with mothers below 20 years of age, mothers above 45 years of age and married men respectively. In-charges of two health facilities and two traditional birth attendants participated in key informant interviews to yield in-depth qualitative data on the determinants of birthing site. Multistage cluster sampling was used to select women who had delivered previously, and purposive sampling was used to select FGD participants and key informants. An interview schedule, key informant guide and FGD guide were used to collect socio- demographic, socio-cultural and healthcare systems factors, which influence the choice of birthing site. The study found that age, level of education, level of income and occupation were the major demographic factors affecting choice of birthing site. Socio-cultural factors identified include rituals performed in the birthing process, disposal of the placenta and rituals in the post partum period. Healthcare system factors affecting the choice of birthing site included distance, cost, quality of care in the facilities, and the gender of the healthcare providers. In conclusion, multiple factors, including socio-demographic, socio-cultural and healthcare system factors, play a role in determining the choice of birthing site in Endo Ward. The study recommends that social behavioural change communication should be utilized to address socio-cultural barriers to the utilization of hospital as birthing site.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF MAPS

LIST OF PLATES

LIST OF ABBREVIATIONS

ANC	-	Ante-Natal Care
CBRA	-	Community Birth Referral Agents
DHIS	-	District Health Information Systems
FGD	-	Focus Group Discussion
HIV	-	Human Immunodeficiency Virus
ICPD	-	International Conference on Population and Development
IREC	-	Institutional Research and Ethics Committee
KDHS	-	Kenya Demographic and Health Survey
KIHBS	-	Kenya Integrated Household Budget Survey
KII	-	Key Informant Interview
MDG	-	Millennium Development Goals
MMR	-	Maternal Mortality Ratio
MTRH	-	Moi Teaching and Referral Hospital
MUSOM	-	Moi University School Of Medicine
NACOSTI	-	National Commission for Science, Technology and Innovations
NCPD	-	National Council for Population and Development
NGO	-	Non Governmental Organization
SCHMT	-	Sub County Health Management Team
TBA	-	Traditional Birth Attendant
UNFPA	-	United Nations Populations Fund, (formerly United Nations Fund for Population Activities)
WHO	-	World Health Organization

OPERATIONALIZATION OF TERMS

Birthing site - A place where a woman delivers a baby.

Household - A domestic unit consisting of one or more people who live in the same dwelling and also share at meals or living accommodation.

Sub County - decentralized units through which County governments of Kenya provide functions and services

Ward - An administrative unit comprising of two or more locations (formerly referred to as a Division).

ACKNOWLEDGEMENTS

First and foremost I would like to thank God the Almighty for his gift of good health and his guidance through this rigorous process of academic research. Secondly I would like to express my sincere gratitude to my supervisors Prof. Harrison Maithya and Dr. Benard Sorre for their continued guidance in the entire process. Were it not for their supervisory support and advice, this academic journey would have been extremely difficult. Further, I wish to acknowledge the unconditional support accorded to me by my family as my concentration was focussed on this work. Lastly I wish to acknowledge the efforts of all other persons not mentioned here but helped me in one way or the other during the research process.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The process of delivery, considered by many people as a normal physiological process, may lead to serious complications, which can result in maternal death. Access to quality care during delivery seems to be the crucial factor in explaining the disparity in maternal mortality and morbidity between developing and the industrialised world. An estimated 75 percent of all maternal deaths can be averted if women received timely and appropriate medical care through hospital deliveries (Mati, 2010). In the technical consultations of safe motherhood initiative held in Cairo in the year 1994, it was emphasized that having a health worker with midwifery skills present at child birth, backed up with transport in case of emergency referral is perhaps the most critical intervention for making motherhood safe.

The targets set at the International Conference on Population and Development+5 (ICPD+5) was to have more than 80% of deliveries assisted by skilled birth attendants globally by 2005, 85% by 2010 and 90% by 2015. Later on, the Millennium Development Goals were adopted to guide developing nations on how to reduce maternal mortality. More particularly, it was emphasized that skilled attendance at delivery is an important indicator in monitoring progress towards Millennium Development Goal 5. This Millennium Development Goal is aimed at reducing the maternal mortality ratio by three quarters between 1990 and 2015, through ensuring that at least 90% of pregnant women deliver in health facilities (Millennium Development Goals Report, 2013).

High rates of obstetric complications have been found amongst seemingly normal pregnant women delivering at home. This is due to the problem oriented mentality, where women assume that they can deliver at home unless they have an already diagnosed problem (Garber *et al*., 1994; Carter, 2010). This confirms the fact that even in an apparently normal pregnancy, life-threatening complications may arise and lead to death if prompt interventions by a skilled birth attendant are not carried out. Skilled birth attendance is viewed as a remedy which can overcome this challenge (Titaley *et al*., 2010).

Developing countries experience the greatest burden of high maternal mortalities. Of the more than 500,000 maternal deaths which occur in the world annually, more than 90% occur in the less developed countries particularly in Sub-Saharan Africa and Asia (WHO PMNCH Fact sheet, 2011). There is a correlation between the high maternal mortalities in the less developed countries and the birthing site: low utilization of hospital delivery services. Considering that birth complications often come in form of emergencies, it is expected that deliveries are conducted by skilled birth attendants who can execute life-saving interventions when complications arise. In addition to professional attention, it is expected that mothers deliver their babies in an appropriate setting, where life-saving equipment and hygienic conditions can also help reduce the risk of complications that may cause death or illness to the mother and/or child (Wanjira *et al*., 2011).

Studies in Tanzania showed that in home births conducted without a trained attendant, the perinatal mortality was higher than that for hospital or dispensary births with trained attendants (Walraven *et al*., 1995; Lwelamira & Safari, 2012). This further underscores the importance of choosing to deliver in hospitals. Like other developing

countries, hospital delivery services are still underutilized in Tanzania and Kenya yet this presents a critical opportunity towards achieving safe motherhood and improved newborn health.

In Kenya, the average proportion of mothers who deliver in hospitals is 44%. The percentage of hospital deliveries in Marakwet East is at 28% (KNBS and ICF Macro, 2010). With the low utilization of hospital delivery services in Marakwet East Sub County, it makes Marakwet women a particularly vulnerable group whose health seeking behaviour needs to be studied and explained. This study, therefore, sought to understand the factors that influence women's choice of birthing site in Marakwet East Sub County. The information obtained may be used to help in the development of interventions to improve the use of delivery care services and ultimately achieve the goal to reduce the high rates of maternal mortality and morbidity in Marakwet East Sub County.

1.2 Problem Statement

Despite numerous campaigns to increase uptake of hospital delivery services in Kenya, skilled birth attendance is still low. The situation is particularly worse for marginalized communities, including those in Marakwet East Sub County. The Sub County ranks far below the national health survey indicators, with only 28% of the women delivering in hospitals compared to the average national index which is at 44% (KNBS and ICF Macro, 2010). A closer examination of the two sub counties in Marakwet reveals a glaring difference in utilization of hospital delivery services. For instance, for the Financial Year 2012/2013, the quarterly utilization of hospital delivery services were 47.7%, 39.1%, 44.9%,35.8% (Marakwet West) and 21.8%,

15.8%,12.5%, 7.5% (Marakwet East) for quarter 1, quarter 2, quarter 3 and quarter 4 respectively (DHIS, 2013).

There is a consensus by healthcare providers that maternal deaths can be prevented if all deliveries are overseen by skilled birth attendants in a health care facility (Fournier *et al*., 2009; WHO PMNCH Fact Sheet, 2011), but this may not be realized in most parts of the rural settings in Kenya, including the study area, where most women deliver at home under medically inadequate conditions. The underlying reasons as to why most women in Endo Ward deliver at home have not been fully investigated and documented. Previous studies focused on maternal mortality *per se* but have not addressed the reasons for not choosing health care facilities as birthing sites. Whereas health professionals have identified that health care facilities are ideal for deliveries, the factors that influence the choice of birthing site in Endo ward is a knowledge gap, which the study sought to fill.

1.3 Objectives of the Study

The main objective of the study was to identify and describe the factors that influence women's choice of birthing site. More specifically, the study sought to:

1) Identify the socio-demographic factors that influence women's choice of birthing site in Endo Ward.
2) Describe the socio-cultural factors that influence women's choice of birthing site in the Ward.
3) Describe the healthcare systems factors that influence women's choice of birthing site in Endo Ward.

1.4 Research Questions

1. What are the socio-demographic factors that influence women's choice of birthing site in Endo Ward?
2. What are the socio-cultural factors that influence women's choice of birthing site in the Ward?
3. What are the healthcare systems factors that influence the women's choice of birthing site in Endo Ward?

1.5 Significance of the Study

This study is significant at two levels. First is at the practical level and secondly in terms of academic or scientific contribution to the existing body of knowledge. At the practical level, the birthing site has remained a major challenge for health care service providers in the study area. Many expectant women have lost their lives out of obstetric complications that would be prevented if they delivered in health care facilities. Thus, the study is useful in providing information on the underlying reasons as to why women do not choose hospital as birthing site. The study highlights the influence of socio-cultural factors on health seeking behavior that has been poorly understood and consequently, largely ignored in most intervention strategies. Clinicians, health care service providers, and development agencies are thus likely to benefit from the study findings.

Considering the low utilization of hospital as birthing site in Marakwet East Sub County, this study sought to find out the underlying reasons.

Further, the Kenya government is exploring various strategies to be on track to achieve the Millennium Development Goal 5 (MDG 5), which is aimed at improving

maternal health by reducing the maternal mortality ratio (MMR) and increasing the proportion of births conducted by skilled health personnel. Recognizing that the single most important factor to reduce maternal deaths is through hospital delivery, this study sought to find out what factors influence women in Marakwet East Sub County to opt for home delivery as opposed to the safer option of delivering in a hospital. The study thus may provide empirical data that can be used by the government and other stakeholders for policy level information, communication and education.

From a theoretical perspective, this study is useful in two ways. First, little is known and documented on the socio-cultural factors that influence choices of birthing site among expectant women in Kenya. Similarly, the few studies in Kenya focus on the general trends in maternal mortality *per se*, rather than choices of birthing sites especially for marginalized communities (Fotso *et al*., 2009; Carter, 2010). This is a knowledge gap that the study sought to fill. Secondly, the study provides database for further research in the area of reproductive health in general and birthing site in particular.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

In this chapter, the researcher presents reviewed literature from previous studies on the factors that influence the choice of birthing site. The various sections of the chapter have been reviewed under the following themes:

1. Debate on the choice of birthing site,
2. Factors influencing the choice of birthing site,
3. The socio-demographic factors affecting the choice of birthing site,
4. The socio-cultural factors influencing the choice of birthing site,
5. The healthcare systems factors affecting the choice of birthing site,
6. Birthing site and maternal mortality, and
7. Hospital deliveries and maternal mortality.

The chapter ends with a theoretical and conceptual framework that guided the study.

2.2 Debate on the choice of birthing site

The view of healthcare providers on an ideal birthing site is mixed. Some consider pregnancy as always associated with risk and hospital delivery is recommended for all pregnant women. This is based on the assumption that even in an apparently normal pregnancy, complications may arise hence it is difficult to predict the course of pregnancy and labour. These complications often arise without warning and this makes hospital more suitable for delivery because of emergency preparedness. In this case, hospitals are considered ideal because trained staffs are available and life saving

drugs can be administered to a woman in labour if complications arise. Further, problems can be diagnosed earlier by use of available equipment hence the service provider can organize for a means of referral to a higher level facility (Pardeshi *et al*., 2011).

Proponents of the second view suggest that home delivery might be safe for women with a low-risk profile and when supervision is made by skilled birth attendant. In this category, women who attend ante-natal care and no abnormality is detected are considered fit to deliver at home if a skilled birth attendant is present. This is favourable in situations where domiciliary care is possible. The service providers in this category have gone through formal training and are either retired practitioners or private practitioners. They carry sterile equipment for conducting deliveries as well as drugs which are used to handle common emergencies which can arise during labour. Further, a means of transport should be available in case of emergency referral cases. This can be done through liaison with a nearby health facility or providing a private ambulance.

A third view is in the middle and sees the place of delivery as a joint judgement between healthcare providers and clients. The healthcare provider considers the overall health status of the client then discusses with the client and a joint decision is reached. The client is counselled and is able to share her opinions on her preferred birthing site. The healthcare provider is expected to educate the client by providing adequate information to enable the client to make an informed choice regarding a birthing site. The client is, therefore, seen to make a choice based on the information shared by the healthcare provider.

In contrast, the first view assumes that labour is only ever normal in retrospect (i.e. all labour should be considered a complication), whereas the second one says that most labours are normal and should be treated as such (Mahdi *et al*., 2010). Across these views, the critical factor to consider when choosing a birthing site is availability of a skilled birth attendant. In most developed countries, domiciliary midwives are available to go and conduct deliveries at home. This contrasts sharply with most developing countries, where the skilled birth attendants are only found in health facilities hence the emphasis for women to deliver in those facilities.

In Kenya, the government recommends health facilities as the ideal birthing site because that is the only environment where a skilled healthcare provider is guaranteed. Sterile medical equipment are also available as well as drugs which can be used to manage labour and its' complications which may arise.

2.3 Birthing site and maternal mortality

The World Health Organization defines a maternal mortality as 'the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.'

Recent estimates suggest that more than 500,000 women die annually of pregnancy and birth related complications and more than 90% of those deaths occur in less developed regions particularly Africa and Asia (WHO, 2011). In Kenya the maternal mortality was at 488/100,000 live births (KNBS and ICF Macro, 2010). This points to an increasing trend considering that it was 414/100,000 live births according to the KDHS survey of 2003. The causes of maternal death are similar for women

worldwide: obstetric hemorrhages, hypertensive disorders in pregnancy, obstructed labours and abortion related complications.

Majority of maternal deaths that occur are preventable or avoidable. There is consensus that these deaths can be prevented if deliveries are overseen by skilled birth attendants. One indicator for measuring the progress towards achieving safe motherhood is the proportion of births attended by skilled health personnel. The objective is to ensure that by 2015 at least 90 percent of the births worldwide are attended by skilled health personnel (WHO, 2011). Progress towards this objective will help reduce Maternal Mortality Ratio (MMR).

2.3.1 Hospital deliveries and maternal mortality

Three core health sector strategies are identified within the maternal health community as critical for reducing maternal and early neonatal deaths. These include comprehensive reproductive health care; skilled care for all pregnant women, especially during delivery; and emergency obstetric and newborn care for all women and infants with life threatening complications (Magoma, 2010).

Political commitment to maternal and newborn health has historically been low, however, and most women in developing countries do not receive these recommended aspects of care. This could be attributed to low funding for Ministry of Health, which translates to poor quality of services hence some people may opt to seek health care services elsewhere. For instance, the allocation to the Ministry of Health in Kenya for the financial year 2013/2014 was about 7% which is less than 15% that Kenya committed itself to by being signatory to the Abuja Declaration (WHO, 2001).

Maternal mortality remains high in the developing world and contrasts sharply with the low levels of maternal mortality in the developed countries. Comparison of the lifetime risk of maternal death in the developed countries (1 in 8000) and in Sub-Saharan Africa (1 in 22) and Asia (1 in 59) presents a gloomy picture of global disparities in maternal health. Addressing these inequities by increasing women's access to reproductive health services-including skilled and emergency care at delivery must be a priority, particularly if the world is to achieve Millennium Development Goal 5 (MDG 5) on improving maternal health (WHO PMNCH Fact sheet, 2011).

Ante-natal care (ANC) visits constitute one of the few times women in many resource-poor settings seek care for their own health, and this presents an important opportunity to help women prepare for birth, as well as inform them about pregnancy-related complications, and the advantages of skilled delivery care. Several studies show that women who attend ANC are more likely to seek skilled delivery care (Danforth *et al*., 2009; Lwelamira & Safari, 2012). Nevertheless, at least 20% of all women who attend ANC four times or more in Sub-Saharan African and in Asian countries do not seek skilled delivery attendance. The complex factors underlying the disconnect between high utilization of ante-natal care and low use of skilled birth attendance in these two regions where over 85% of all global maternal deaths occur are poorly understood and documented (Idris *et al*., 2006).

2.4 Factors influencing the choice of birthing site

Multiple factors singularly and/or combined influence the choice of birthing site. Past studies have shown that education, socioeconomic status, urban or rural residence, proximity to health clinic, age, mass media exposure, quality of care received at

clinic, parity, village opinion of the clinic, and ethnicity can all impact a woman's access or decision to go to a health facility and receive adequate care for delivery (Ali, *et al*., 2008; Kesterton *et al*., 2010; Kruk *et al*., 2010). These factors are variable by culture, and have different degrees of influence in different contexts. In this study, the researcher broadly classified these factors into socio-demographic factors, socio-cultural factors and healthcare systems factors.

2.4.1 Socio-demographic factors affecting the choice of birthing site

The socio-demographic factors include: age, marital status, level of education, occupation of the woman and/or the husband, size of the household, and head of household. Several socio-demographic factors have been found to influence the choice of birthing site. In a study done in Nepal, the socio-demographic factors affecting the choice of a birthing site included ante-natal care attendance, literacy level of women, family income and the employment status of the woman. Few ante-natal visits, low literacy levels, low family income and unemployment were associated with home births (Rajendra *et al*., 2004). Similar findings were reported in Bangladesh (Shabnam *et al*., 2011). In contrast, household wealth was determined to be the most important variable in access to health care in a study conducted in India (Kesterton *et al*., 2010).

A study carried out among women in a semi-urban settlement in Zaria, Northern Nigeria identified a strong correlation between home deliveries by unskilled birth attendants and the following three factors: low education levels among women, unemployed husbands and first pregnancy before 18 years. Contrary to expectation, the study found that for mothers whose husbands had gone through formal education, they were less likely to deliver in hospital. Also, ANC attendance was not associated

with higher hospital delivery rates (Idris *et al*., 2006). The reasons behind this finding are not clear because mothers who attend ante-natal care visits are expected to have received health messages on the need to deliver in the health facilities.

A study in Rwanda found that for women in male-headed households, a higher proportion of births took place in a health facility compared to women from female-headed households. The results further showed that women living in urban areas are more likely to deliver in a health facility with trained health personnel rather than at home without skilled assistance. Urban areas typically have better access and availability of health facilities. It also found a strong association between birth order and use of health care services. Compared to the first child, subsequent children are more likely to be born at home without professional assistance rather than at a health facility (Anuja *et al*., 2008; Umurungi, 2010).

Curiously, the study found that women in formal employment were less likely to deliver at a health facility, compared to non-employed women. In line with expectation, likelihood of seeking delivery assistance in a health facility increased with increasing level of education of the woman. In addition, a woman whose husband had educational attainment above the primary level was more likely to deliver in a health facility (Anuja *et al*., 2008).

The above study findings are, in many ways, in agreement with cross-sectional survey findings in Tanzania where low education levels, low income levels and few ANC attendances, were associated with home deliveries (Danforth *et al*., 2009; Lwelamira & Safari, 2012). Women with secondary education and above were two times more likely to deliver in a health facility compared to those with primary or no formal education. Likewise, women from high income groups were two times more likely to

deliver in a health facility compared to those from low income groups. The frequency of attendance to ante-natal care services was also a significant predictor of the place of delivery. Women who had at least four ante-natal care visits during their last pregnancy were nearly two times more likely to deliver in a health facility in their most recent birth compare to those never attended.

A study in western Kenya using a cross-sectional survey on women who had recently delivered showed that maternal age of more than 30years, having delivered more than five times, and having gone to school for less than 8 years were associated with home deliveries (Van Eijk *et al*., 2006). Further, the study showed that 80% of women deliver at home. However, this study did not provide the socio-cultural dimension to explain why the women chose to deliver at home.

2.4.2 Socio-cultural factors influencing the choice of birthing site

In a study done in Indonesia, one socio-cultural factor that influenced the use of traditional birth attendants (TBAs) was advice by other family members such as the older sister, parents, or husbands to use their services. Also, a long-time tradition in the community of using the services of traditional birth attendants, who had been the only delivery service providers for many years before the National Health System started, was also mentioned as a reason for community members using the services of TBAs during childbirth. There was a perception that delivery is a natural rite of passage for women, and therefore, home delivery was preferred unless complications occurred or someone told them to deliver at health facilities. It was also reported that being part of the community, speaking the local language, living in the community, and sharing the same culture meant that TBAs developed the feeling of trust in the community (Titaley *et al*., 2010).

In Tanzania, among the Maasai and the Watemi ethnic groups, the husbands make a choice of where the wife should deliver. Some Maasai women reported that they shy away from hospital delivery because they perceive vaginal examinations as painful and could damage the baby. The Watemi women say that it is dehumanizing for a male healthcare provider to perform a digital vaginal examination and this makes most women to choose home deliveries because all traditional birth attendants are women. Thus in this community, gender influences the choice of birthing site. In addition, the community holds a strong belief that the woman should resume normal responsibilities of caring for the other children and household chores as soon as possible (Magoma *et al*., 2010). This appears contrary to a belief among most communities in Kenya who exempt postnatal mothers from handling items belonging to the husband and other family members because they are considered to be unclean during the postpartum period (Carter, 2010). Further, perceptions about the 'naturalness' and safety of home delivery is an obstacle to convincing women in the two ethnic groups of the importance of skilled delivery care in all cases.

Although the women, TBAs and elders from both communities were aware of the potential risks of delivering at home, they believed that delivering at health facilities is beneficial only for women with known complications; hence those for whom no complications had been identified were expected to deliver at home. Some also believed that complications were a punishment from God resulting from transgressions like infidelity before or during pregnancy and complications would still happen regardless of the birthing site. This is because they were considered to result from curses from the elders, hence the women were supposed to confess such transgressions otherwise they would die together with their attendants during labour. All women who died during labour were believed to have committed adultery and

brought shame to their families. Such cultural beliefs contributed to the low utilization of hospital delivery services (Magoma *et al*., 2010).

Among the Akamba of Kenya, a combination of factors makes home delivery attractive. Many women opt for birthing at home because they consider it comfortable in a familiar environment, because they view it to be convenient and inexpensive. Further, birthing is believed to be normal if a woman is allowed to labour, because pain endurance is an important element of motherhood and it is a fulfilling experience (Maithya, 2009).

A study that used key informant interviews with TBAs and hospital staff in Malindi revealed that many Swahili and Giriama women consider it a taboo to prepare for birth anywhere because they believed it would result in misfortunes like a still birth. The preparations mentioned included buying clothes, purchase of birthing supplies like razor blade, setting aside money for delivery and deciding on where to deliver. Also it was considered harmful to guess the sex of the baby or give a name or a gift to the unborn baby. This discouraged them from making individual birth plans, including delivery at a health facility (Carter, 2010).

2.4.3 Healthcare systems factors affecting the choice of birthing site

Multiple healthcare systems factors are believed to influence the choice of birthing site. Researchers in Indonesia found that distance from a clinic and availability of money had the greatest influence on birthing site, but other subjective factors such as misunderstanding the role of midwives also affected decisions. Also the flexibility of the method of payment by the TBAs enabled them to attract more women for delivery services. It was also easier for the mothers to access services from the TBAs because

they were found within a short distance. Some rural villages had more than ten TBAs compared to one village midwife who offered domiciliary care. For some community members, village midwives were also perceived as too young and inexperienced whereas TBAs were more mature, patient and caring (Titaley *et al*., 2010).

A study in Nepal (Bolam *et al*., 1998) and another among Pakistani women (Ali *et al*., 2008), identified low availability of female healthcare providers to be a significant barrier to health services utilization. In health facilities where men attend to women during delivery, most women opted to deliver at home. Most mothers were more comfortable delivering under the supervision of female healthcare providers. This implies that healthcare staffing patterns, in terms of gender (males and females), may influence the utilization of health facility delivery services.

Mahdi *et al*., (2010) conducted a cross-sectional study in Basra to find out reasons why women chose hospital or home deliveries. The most frequent reason given for preferring a hospital delivery was that the hospital was safe and secure. The safety and security was from a medical point of view in the sense that if anything went wrong they would be saved before the situation got out of hand. The hygiene of hospitals was another reason given by the women. The main reasons reported by women who delivered at home for preferring home delivery were social support and privacy. They reported that women were accompanied by women who offered support and encouragement. Fear of surgical interventions and repeated examinations at hospitals was another concern of the women who preferred home delivery. Also some women had an unplanned home delivery as a result of quick labour or the security situation did not allow transfer to hospital (Mahdi *et al*., 2010).

A research conducted in Mali showed that proximity to a health facility with a maternity and availability of a means of transport played a key role in determining where a pregnant woman will choose to deliver (Preslar, 2010). One limitation of this study is that it focussed, almost exclusively, on housewives thereby failing to capture the views of wives who had other occupations. Other factors reported included availability of medications in hospital, ability to resolve problems that arise, fewer risks and the hospital was considered as a good environment. The findings of this study were consistent with the findings of other studies in Ethiopia and Nigeria (Nigussie *et al*., 2004; Awoyemi *et al*., 2011; Olatunde *et al*., 2011).

In Tanzania, one research concluded that village opinion of a clinic, discussion with husband, advice obtained during ante-natal consultations, and knowledge of pregnancy risk factors were all closely tied to place of delivery (Kruk *et al*., 2010). In yet another study in Tanzania conducted among the Watemi and the Maasai, women reported some cases of verbal abuse from health care providers and being forced to take a bath soon after delivery and put on hospital uniforms, which discouraged them from using hospital delivery services in future. They also reported that the healthcare providers were rough when carrying out examinations on them. Further, the healthcare providers during the ante-natal visits did not share information on the need to deliver in hospital (Magoma *et al*., 2010).

A study carried out in Kenya found that some of the Akamba women prefer delivery at home because they fear caesarean sections in hospital, which they perceive to weaken their bodies. Other women prefer hospital delivery because of the perceived health benefits associated with modern health care including equipment availability and medicines to deal with emergencies (Maithya, 2009). Similar findings were

reported from a cross-sectional study in Malindi, which identified fear of episiotomies and Caesarean Sections in hospital as some of the reasons why women deliver at home (Carter, 2010).

A study conducted in western Kenya showed that the choice of delivery is not simply influenced by low levels of knowledge about place of delivery; on the contrary, personal, social, economic, and logistical barriers matter. Moreover, some women consciously (because of their preferences or the preferences of significant others) make the decision to go against the advice of the providers. The major health system factors, which reduce utilization of hospital delivery services include few wards and beds; rude, slow, and negligent health care providers; costly delivery services and maternity supplies; and unreliable electricity and water supply (Naanyu *et al*., 2011).

From a study done in Malindi, using key informant interviews with TBAs and hospital staff, lack of money for delivery services and long distance to the facility featured prominently as a deterrent to utilization of hospital delivery services. Cases of physical and verbal abuse on women who did not follow instructions during birth were also mentioned by the Swahili and Giriama women (Carter, 2010).

2.5 Theoretical Framework

The study was guided by the Health Belief Model (HBM) developed by Rosenstock, Hochbaum, and Kegels in the 1950s and advanced by Becker and colleagues in the 1970s and 1980s. According to this theory, the behaviour of an individual is influenced by the following factors: Perceived susceptibility (an individual's assessment of their risk of getting the condition), perceived severity (an individual's assessment of the seriousness of the condition, and its potential consequences),

perceived barriers (an individual's assessment of the influences that facilitate or discourage adoption of the promoted behaviour) and perceived benefits (an individual's assessment of the positive consequences of adopting the behaviour). Other factors which play a role include demographic variables, socio-psychological variables, perceived efficacy, cues to action, health motivation, perceived control and perceived threat.

In relation to this study, women's choice of birthing site may be determined by factors associated with the conditions of the individual women themselves, or those beyond their control – influence of the therapy management group or other ecological factors that they may not be in position of control. Perceived susceptibility in this context means the likelihood that a woman may suffer from an adverse outcome following the choice of birthing site. This is also influenced by the perceived severity – the individual's assessment of an adverse health outcome/complication. The perceived barriers are the hindering factors that prevent women from accessing safe deliveries while the perceived benefits are the individual's positive benefits of choosing a safe birthing site which culminates in healthy outcomes for both the mother and the baby. Being a theory of decision making, it also guides the researcher on how to approach and analyse women's decisions depending on their situations. For instance, one may have low level of education, but is married in a family that encourages health seeking behaviour in a health care facility. The reverse may also be true.

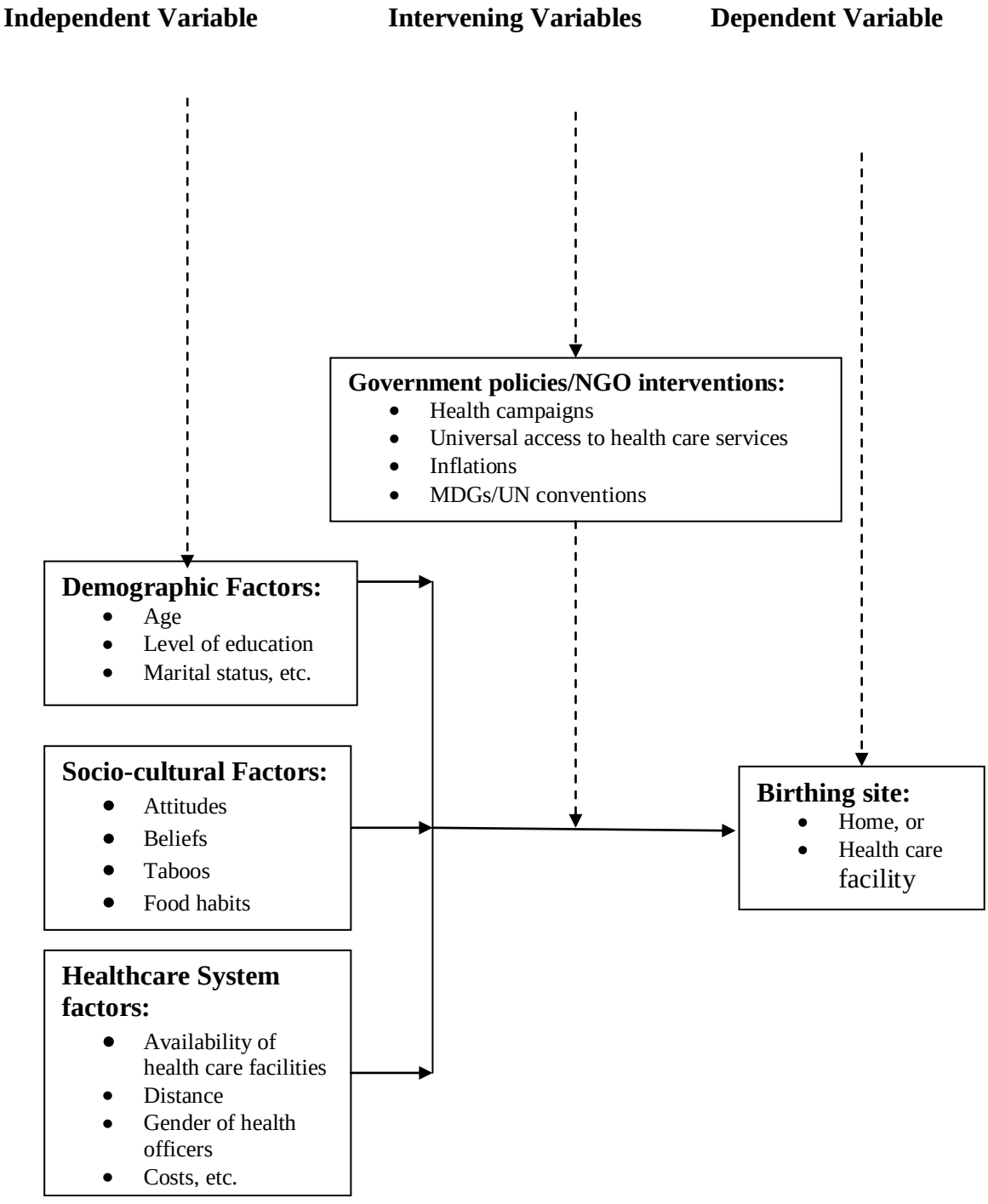
The other theory utilized in the study is the Socio-Behavioural Theory by Ronald Andersen (1968). According to Andersen, usage of health services is determined by three factors: predisposing factors, enabling factors, and need factors. They include different predisposing factors like age, gender, religion, global health assessment,

prior experiences with illness, formal education, general attitudes towards health services, knowledge about the illness while enabling factors include availability of services, financial resources to purchase services, health insurance and social network support. In addition to the predisposing factors and enabling factors, this model includes need factors: perception of severity, total number of sick days for a reported illness, total number of days in bed, days missed from work or school, help from outside for caring. This model also puts emphasis on the health seeking behaviour within a political-economic context.

In the context of this study, the predisposing factors are captured under socio-demographic factors influencing the choice of birthing site while the enabling factors are captured under healthcare systems factors that influence the choice of birthing site. The need factors (perceptions) have been captured under the socio-cultural factors influencing the choice of birthing site.

From the foregoing literature review, the researcher sought to fill the following gaps:

- Why is high ANC attendance not associated with higher hospital delivery rates? (Idris et al., 2006).
- Socio-cultural factors have often been left out.
- Previous studies focused on housewives only so what about other occupations?
- Studies are equivocal on the role that level of education plays regarding the choice of birthing site, this study sought further insight.



Source: Researcher's construction

Figure 2.1: The Conceptual Framework

According to this conceptual model, the three factors which influence the decisions that women make regarding a birthing site are socio-demographic factors, socio-cultural factors and healthcare system factors. Socio-demographic factors under study include, but are not limited to, the characteristics of the individual women. They include their age, marital status, occupation, level of education, household size, head of household and even the number of deliveries. The socio-cultural factors include the role of the therapy management group (TMG), cultural beliefs, attitudes, taboos and food habits. The healthcare system factors are the technical ones, which include the availability of health care facilities, staff and their level of expertise, the distance to them, costs involved, the experiences/stories by those who have used the services, reaction of the medical staff to patients, among others.

The researcher argues that the three factors work in combination to influence the decision of the expectant women to deliver either at home or from a health care facility. However, this influence may either be reinforced or undermined by the intervening variables. For instance, an illiterate woman who is also poor may be supported by an NGO to be taken to hospital for delivery when she would otherwise not go. This is in the same way the current free maternal health care services announced by the Government would encourage those women who feared the costs involved to go and deliver from health care facilities.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

In this chapter, the study design is explained, followed by a detailed description of the study area, the target population, sampling procedure, methods of data collection and the techniques that were employed to analyse and present data.

3.2 The Study Design

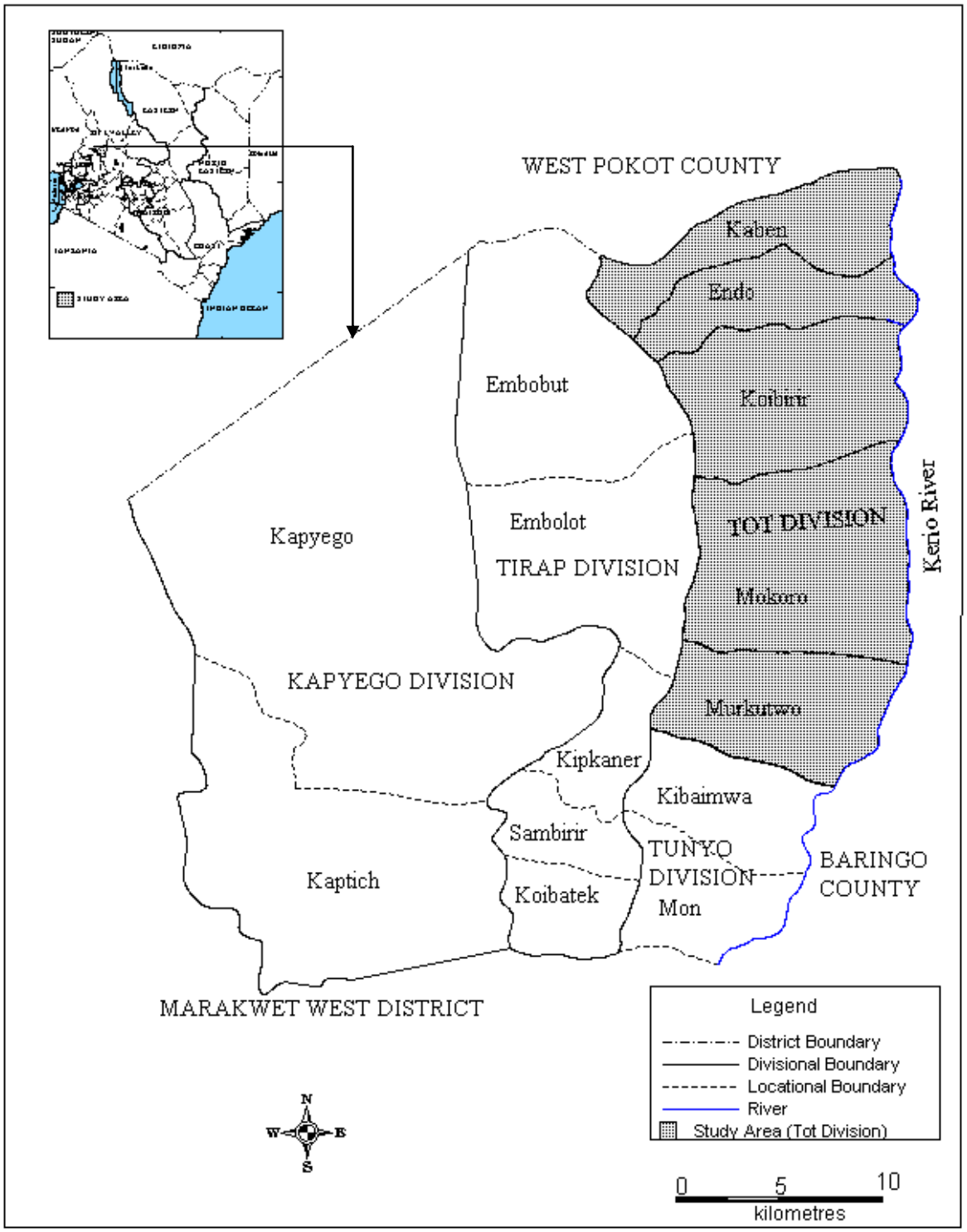
The study used a descriptive survey design. This design allowed the researcher to select a few respondents from the target population and engage them for information on issues of interest to the study. This design also allowed the researcher to access respondents' opinions without manipulating their responses.

3.3 The Study Area

The study was conducted in Endo Ward, Marakwet East Sub County, Kenya. Marakwet East Sub County and Marakwet West Sub County were split from the former Marakwet District. Marakwet District is bordered by West Pokot District to the North, Baringo to the East, Keiyo and Uasin Gishu Districts to the south and Trans-Nzoia to the West. It covers an area of 1588 km square with a projected population of 191988 persons. Over half of the population in Marakwet is poor, with 66.5% living in absolute poverty, the absence of enough resources to secure basic life necessities or a monthly adult equivalent of Ksh. 1,562 in rural areas, (Kenya Integrated Household Budget Survey, 2005/06). A combination of poverty, difficult terrain, harsh climate, poor infrastructure, and scanty public resources has left the area

lagging behind in terms of development. Endo Ward is found in the Kerio Valley and most of its residents are peasant farmers. They keep animals like cows, goats, sheep and chicken. They grow crops like mangoes, paw paws, bananas, cassava, green grams etc.

Endo ward is characterised by a poor road network, with no tarmac road in the entire ward. It also experiences prolonged drought with erratic rainfall which often destroys the existing roads. The common mode of transportation is motorcycles and walking on foot, both of which are not favourable for pregnant women going to health care facilities in search of hospital delivery services. Endo Ward has six healthcare facilities: one district hospital with no operating theatre, 2 government health centres and three dispensaries. The healthcare facilities are evenly distributed in the division but a low utilization of hospital delivery services has been a persistent challenge in the area.



Map 3.1: A map of Marakwet East District (Marakwet East Sub County) showing Tot Division (Endo Ward) as the study area.

3.4 The Target Population

The target population of the study comprised women who had delivered prior to the execution of this study. This is because women who had delivered are the persons who had been affected by the choices made regarding a birthing site. As opposed to other women who have never delivered, they have the experience of having delivered at a chosen birthing site.

3.5 Sampling Procedure

3.5.1 Sample Size

The sample size was calculated using the formula by Fischer (1985).

$$n = \frac{Z_{\alpha}^{2} PQ}{d^{2}}$$

Where

- **n** is the sample size
- **Zα** is the normal variate associated significance level α

(1.96 is the normal deviate associated with 95% confidence interval)

- **P** is proportion of estimated population if the target population if less than 10,000. The estimated population of women of childbearing age in Endo Ward was 5,927(KNBS and ICF Macro, 2010), hence the assumption that the number of women who had delivered before was less than 10,000. Also, the proportion of women who delivered in hospitals was 14 percent from DHIS 2012/2013 Financial Year, hence **P**=0.14.
- **Q = 1-P**

- **d** is the required level of precision / discrepancy

Therefore,

$$n = \frac{(1.96)^2 x 0.14 x 0.86}{(0.05)^2} = 185.01 \text{ (}\mathbf{186\ women}\text{)}.$$

Interview Schedule was used to interview 186 women.

3.5.2 Methods of Sampling

Multistage cluster sampling was used to select the specific respondents who participated in the study. The researcher identified the five locations in Endo Ward and used them as clusters. The specific respondents were then selected using simple random sampling which was proportionate to size of the population from each of the clusters. Numbers representing every household in the Community Health Strategy Household register (for each location) were written in pieces of paper, folded and mixed in a closed carton. The researcher then picked numbers representing households from each location and the mother in that household was selected as the respondent. The same procedure was followed until the sample size of 186 was reached. This method allowed for equal chance of inclusion and representation of the respondents in the target study population.

Purposive sampling, on one hand, was used to select the study area and was also used to select the key informants and Focus Group Discussion participants for the study. Two In-charges of health facilities and two traditional birth attendants were selected to participate as key informants. Three Focus Group Discussion (FGD) participants were selected; one among women who delivered before reaching 20years, another one among older women who delivered after attaining 45 years of age, and the last one

was among married men whose wives had given birth at least once. This method enabled the researcher to capture the views and experiences of the young women, elder generation of women and the married men.

3.6 Methods of Data Collection

3.6.1 Review of Secondary Data

This method was employed in the conceptual phase of the study and it informed the development of the research proposal. Secondary data were collected from various sources including books, printed journals, electronic journals, theses, dissertations and reports. The sources helped the researcher to identify gaps in knowledge and divergent opinions that other researchers have come up with regarding choices of birthing site. It also guided the researcher in deciding on the research methodology.

3.6.2 The Structured Interview

Data were collected using an interview schedule for respondents. The interview schedule contained straight forward questions which captured socio-demographic factors, socio-cultural factors and healthcare systems factors which influenced the choices women make regarding birthing site. The survey method was also suitable to collect both quantitative and some qualitative data around the study objectives.

3.6.3 Key Informant Interviews

Key informant interviews with two traditional birth attendants (TBAs), and two In-charges of health facilities were conducted using interview guides to collect in-depth qualitative data. This method was suitable because it gathered in-depth information from the TBAs and In-charges of health facilities (health care providers). It took the

form of face–to-face interview between the researcher and the key informant and this allowed for clarification and detailed explanations on various issues.

3.6.4 Focus Group Discussion

Focus group discussions were conducted with two groups of women: one with women who delivered after 45 years of age and another one with women who delivered when they were teenagers (before 20years). Women who delivered when they were teenagers but had exceeded 20 years at the time of FGDs were excluded. This was suitable because it was used to gain an in-depth understanding of variations or similarities in their choices of birthing site at the two extremes of reproductive ages for women. Also, married men whose wives had delivered before participated in one focus group discussion. A total of three focus group discussions were conducted. This allowed the researcher to understand the role of men in the choices that women make regarding birthing site.

3.7 Methods of Data Analysis

The study utilized both quantitative and qualitative methods of data analysis. Descriptive statistics were generated from quantitative data using SPSS Version 22. Frequencies, percentages, and measures of central tendencies are employed to present the data in the form of tables, graphs and charts. These statistics are used to summarize the characteristics of the respondents including age, gender occupation, marital status, and household size among other variables. Cross tabulations are also used to check for any association between birthing site, which is the dependent variable and the independent variables. Qualitative data were analysed by deriving

explanations and interpretation of the findings. The qualitative data are presented in narrative form by use of descriptions, quotes, narrations and summary statements.

3.8 Ethical considerations

Ethical review was done by the Institutional Research and Ethics Committee (IREC) at Moi Teaching and Referral Hospital (MTRH) and Moi University School Of Medicine (MUSOM) and it was approved before the execution of the study. A research permit was also obtained from the National Commission for Science, Technology and Innovations (NACOSTI) before commencement of the research. Permission was also sought from the county commissioner, county director of education, county director of health, sub county commissioner and the local administrators including the area chiefs and the village elders.

Verbal informed consent was obtained from the study participants before engaging them in the study and all the information obtained was kept confidential. The filled interview schedule, FGD data, Key Informant Interview data were kept safely in a lockable cabinet and no unauthorized person accessed them. Also, the privacy of the respondents was safeguarded by interviewing them in a private place when they were alone. Findings are reported without revealing identities of the individual respondents.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter comprises the analysis, presentation, interpretation and discussion of the findings resulting from this study. The analysis and interpretation of data was carried out in two phases. The first phase involved quantitative analysis of the data which was collected using the interview schedule. Data collected using the interview schedules were subjected to frequency counts. Percentages were also generated and presented in tables, graphs and charts. The second phase involved qualitative analysis of data collected using key informant interviews and focus group discussions. These data were used to complement the quantitative data collected using the interview schedule.

4.2 Socio-demographic characteristics of the respondents

Background information of the respondents gives a summary of the socio-demographic characteristics of the study participants sampled from the target population. In this study, the influence of socio-demographic factors on birthing site was captured as the first objective. A total of 186 respondents consented and participated in the study. The socio-demographic characteristics of the respondents are summarized in Table 4.1 below.

Table 4.1: Socio-demographic characteristics of the respondents

SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS	FREQUENCY , n=186	PERCENT
AGE (years)		
Less than20	12	7
20-29	90	48
30-39	61	33
40-49	17	9
50 yrs and above	6	3
LEVEL OF FORMAL EDUCATION		
Never went to school	27	15
Lower primary	19	10
Upper Primary	67	36
Secondary	36	19
Tertiary	23	12
University	14	8
MARITAL STATUS		
Married	148	79
Single (never married)	20	11
Separated/ Divorced	15	8
Widow	3	2
RELIGION		
Christian	185	99.5
Muslim	1	0.5
OCCUPATION (multiple response)		
Crop farming	97	52
Animal Farming	41	22
Mixed Farming	38	20
Formal employment	22	12
Casual Worker	15	8
Business	42	23
House wife	102	55
MONTHLY INCOME (Kshs.)		
Less than 2000	70	37
2001-5000	61	33
5001-10000	31	17
10001-15000	9	5
15001 and above	15	8
HOUSEHOLD SIZES		
Equal to or Less than 5	112	60
6-10	65	35
More than 10	9	5
HEAD OF HOUSEHOLD		
Herself	32	17
Husband	146	79
Father (Parents)	8	4

Findings from Table 4.1 above show that majority (81%) of the respondents' ages ranged between 20-39 years while the minority (3%) were those whose age was above 50 years.

In this study, age was viewed as a key variable influencing the birthing site because it is a predictor of life experiences that an individual has gone through. Therefore, cross tabulations were done to check for correlations between age and preferred birthing site. Two thirds of respondents whose age was less than 20 years preferred hospital as their birthing site while a third preferred home/TBAs. Slightly more than half of the respondents in the age bracket of 20-29 yrs preferred hospital as their birthing site. There was a shift in preference for respondents who were more than 30 years of age, with more than half having preferred home as birthing site. All respondents whose age was more than 50 years chose home as their birthing site. The cross tabulation findings are summarized in Table 4.2 below.

Table 4.2: Cross tabulation of age and birthing site

			Birthing site		
			Home	Hospital	Total
Age	Less than 20 yrs	Count	4(33%)	8(67%)	12
		% within birthing site	4.1%	9.0%	6.5%
	20-29 yrs	Count	41(46%)	49(54%)	90
		% within birthing site	42.3%	55.1%	48.4%
	30-39 yrs	Count	35(57%)	26(43%)	61
		% within birthing site	36.1%	29.2%	32.8%
	40-49 yrs	Count	11(65%)	6(35%)	17
		% within birthing site	11.3%	6.7%	9.1%
	50 yrs and above	Count	6(100%)	0(0%)	6
		% within birthing site	6.2%	0.0%	3.2%
Total		Count	97	89	186
		% within birthing site	100.0%	100.0%	100.0%

Phi=0.238, Cramer's V=0.238, Approx. Significance=0.033

Findings in Table 4.2 above show that age was influential with majority (54%) of respondents whose age was between 20 and 29 years of age choosing hospital as their birthing site. This may be attributed to the fact that most of the women in this group were delivering for the first time and the course of labour could not be predictable as for women who have had several deliveries at home hence they consider home deliveries to be safe because they have used it repeatedly. This may also be due to the argument that the bodies of the younger women have not matured and members of the community anticipate that they might develop complications during birthing. These findings are consonant with those of Umurungi (2010) in Rwanda who found out that because of improvements in educational opportunities for women in recent years, younger women might have an enhanced knowledge of modern health care services and place more value upon modern medicine. However, these findings are at variance with the findings of a study in Nigeria by Idris *et al*. (2006), which showed that in women who get their first pregnancy before 18 years are likely to deliver at home.

During one FGD, a participant had this to say about young women who deliver for the first time:

> …When a woman is pregnant with the first child, one prefers going to hospital (for birthing) because you don't know how your baby will be born and the body is not mature to allow the baby to pass through. This can make the baby die. [19 years old mother, FGD with women who delivered before 20 years, Endo Ward].

On the contrary, more than half of the respondents who had attained 30 years and above chose home as birthing site. The preference for TBAs with advancing age is due to the fact that women assume that their bodies are mature and can deliver with ease, as opposed to the younger women who may experience difficulties. The older

generation of women consider hospital delivery as an unnecessary medicalization of pregnancy and birthing perceive birthing as a normal process.

Further, the older women who have delivered before prefer home as the birthing site because they are used to the birthing process taking place at home. A similar finding was reported in a study in Rwanda which showed that birth order of the child influences the choice of birthing site (Anuja *et al*., 2008).

The level of education was another variable in the study and it was operationally defined using six categories namely: never went to school, lower primary, upper primary, secondary, tertiary and university level. Analysis in Table 4.1 indicates that most (85%) of the respondents had gone through some formal education while a few (15%) had never gone to school.

About 80% of the respondents had not gone beyond secondary school level of education. This is partly contributed by the fact that female circumcision is still widely practised in the area. When a woman has been circumcised, she is perceived to be a grown up and, therefore, she is married. This often dims the prospects of further schooling. Furthermore, the area is semi arid, which has led to high poverty levels hence most children drop out of school due to lack of school fees.

Cross tabulations were also done to check for correlations between the level of education and the choice of birthing site. The higher the level of education attained by the woman, the more likely for her to opt for delivery in a health facility; the reverse is also true. For instance, most of the women with no basic education preferred home delivery as opposed to hospital delivery (74% compared to 26%) while most of the women with university education preferred hospital delivery as

opposed to home delivery (93% compared to7%). Table 4.3 below summarizes the results.

Table 4.3: Cross tabulation of level of education and birthing site

			Birthing site		
			Home	Hospital	Total
Level of education	Never went to school	Count	20(74%)	7(26%)	27
		% within Birthing site	20.6%	7.9%	14.5%
	Lower primary	Count	13(68%)	6(32%)	19
		% within Birthing site	13.4%	6.7%	10.2%
	Upper primary	Count	40(60%)	27(40%)	67
		% within Birthing site	41.2%	30.3%	36.0%
	secondary	Count	16(44%)	20(56%)	36
		% within Birthing site	16.5%	22.5%	19.4%
	Tertiary college	Count	7(30%)	16(70%)	23
		% within Birthing site	7.2%	18.0%	12.4%
	University	Count	1(7%)	13(93%)	14
		% within Birthing site	1.0%	14.6%	7.5%
Total		Count	97	89	186
		% within Birthing site	100.0%	100.0%	100.0%

Phi=0.369, Cramer's V=0.369, Approx. Significance=0.000

Trends in Table 4.3 show that those women who had never gone to school were more likely to choose home delivery as opposed to hospital delivery. This may be due to ignorance and lack of awareness of the dangers that TBA deliveries portend to the mothers. Also majority of those who had attained primary education chose home as birthing site. Majority of women who had attained secondary, tertiary and university education preferred hospital as the birthing site with the greatest margin being noticeable among those who had attained university education. Generally, as the level of education increases, preference of hospital as a birthing site of choice increase

while choice of home/TBAs decreased. Key informant interviews confirmed the foregoing as one informant shared:

> I think that the level of education affects choice of place of delivery because for a woman who is educated, she knows the importance of delivering in hospital because she is aware of the dangers of delivering at home, unlike those who are not educated… Those who have gone to colleges, universities and secondary schools prefer to go to a greater hospital with more qualified staff. [In-Charge of a health facility, Key Informant, Endo Ward].

Evidently, as the level of education changes so does the preference of birthing site, with more educated women preferring hospitals compared with the less educated women who preferred TBAs. This may be accounted for by the fact that the more educated a mother is, the more aware of the risks associated with home/TBA deliveries and they become more receptive to the social behavioural change messages they receive from public health practitioners who emphasize on the need to embrace birthing in hospital among communities. Also more educated women are more amenable to social change as opposed to the less educated who remain strong adherents of the cultural practices in the community. The research concurred with a study done in six African countries, which showed that increased education influences service use by increasing female decision-making power, increasing awareness of health services, changing marriage patterns, and creating shifts in household dynamics (Stephenson, 2006). The above finding was reiterated in a focus group discussion where the following comment was made by one of the participants:

> A woman who has finished form four is able to remember the danger signs and problems which may arise from home delivery like spread of HIV and excessive bleeding; therefore they will prefer hospital because they know that safety measures will be undertaken. [18 years old mother, FGD with women who delivered before 20 years, Endo Ward].

The marital status of the respondents was an important variable which was investigated because the decision to deliver in a given birthing site is not a prerogative

of the mother in Marakwet community. The husband, the mother in law and other relatives of the husband influence the decision because they contribute in terms of material resources and social support. Majority of the respondents (79%) were married while the remainder were single (never married), separated, divorced or widowed. In Marakwet community marriage is considered an important institution and those who do not marry are not respected in the community. These findings were summarized with other socio-demographic factors in Table 4.1.

In an effort to check for the relationship between marital status and birthing site, cross tabulations were done. Slightly more than half (53%) of the married respondents preferred home/TBAs as their birthing site. Being a single mother was more likely to prefer hospital as birthing site. The study also found that more than half (53%) of the respondents who were separated/divorced preferred TBAs/home as birthing site. The findings are summarized in Table 4.4 below:

Table 4.4: Cross tabulation of marital status and birthing site

			Birthing site		
			Home	Hospital	Total
Marital status	Married	Count	78(53%)	70(47%)	148
		% within Birthing site	80.4%	78.7%	79.6%
	Single (never married)	Count	9(45%)	11(55%)	20
		% within Birthing site	9.3%	12.4%	10.8%
	Separated	Count	6(53%)	5(47%)	11
		% within Birthing site	6.2%	5.6%	5.9%
	Divorced	Count	2(50%)	2(50%)	4
		% within Birthing site	2.1%	2.2%	2.2%
	Widowed	Count	2(67%)	1(33%)	3
		% within Birthing site	2.1%	1.1%	1.6%
Total		Count	97(52%)	89(48%)	186
		% within Birthing site	100.0%	100.0%	100.0%

Phi=0.062, Cramer's V=0.062, Approx. Significance=0.950

Findings in Table 4.4 above show that over half (52%) of the respondents prefer home as birthing site. It also indicates that those who were married were more likely to prefer home as birthing site. This was shaped by the opinions of the husband, mother in-law and other relatives of the husband. Those who were single (never married) and those who were separated/divorced were more likely to prefer hospital as birthing site. More specifically, most of the single mothers in this category were delivering for first time hence the hospital was chosen because they had never experienced birthing before. This made it difficult to predict their course of labour. Those who were single had greater autonomy in decision making and control of resources hence preferred hospital as birthing site.

Religion was a key variable in the study. Almost all the respondents were Christians with catholic and protestant churches being the main ones. The religious background of the respondents added value to the study findings since one's religion shapes his/her perception of certain issues in life and to some extent it influences one's choice of birthing site or may have significant influence on people's attitudes, beliefs and values. Consequently, religion may serve as a catalyst or hindrance while choosing a birthing site.

In order to establish the relationship between religion and preferred birthing site, cross tabulations were done. More than half (52%) preferred home as the birthing site. The only respondent who was a Muslim preferred hospital as the place for delivery. The findings are summarized in Table 4.5 below.

Table 4.5: Cross Tabulation of Religion and Birthing Site

			Birthing site		
			Home	Hospital	Total
Religion	Christian	Count	97(52%)	88(48%)	185
		% within Birthing site	100.0%	98.9%	99.5%
	Muslim	Count	0(0%)	1(100%)	1
		% within Birthing site	0.0%	1.1%	0.5%
Total		Count	97	89	186
		% within Birthing site	100.0%	100.0%	100.0%

Phi=0.77, Cramer's V=0.77, Approx. Significance =0.295

Data from FGDs showed that predominant churches in the area are catholic, Africa Inland Church, and Pentecostal Assemblies of God and have no preference for any of the birthing sites hence do not influence their followers on where to deliver. There was only one Muslim respondent, which makes it difficult to generalize.

Occupation of the respondents was of great value to the study as the woman's level of income of was assumed to influence the choice of birthing site. The respondents gave multiple responses for occupation, where applicable, because the responses were not mutually exclusive. The design to capture the occupational status was adopted to help the researcher understand the relationship between the occupation of women and their preferred birthing site. The most common occupations mentioned were crop farming and housewives with more than half of the respondents engaging in any of the two. The area is fertile and supports growth of crops like mangoes, paw paws, cassava, green grams, oranges and water melon hence this was the main occupational activity. In Marakwet community women were assigned the responsibility of taking care if children in the family and this accounts for the fact that more than half of the respondents were housewives.

Animal farming and mixed farming were also practiced with the dominant livestock being goats and cattle. The area is hot hence goats and indigenous cattle thrive. About a quarter (23%) of the respondents participated in businesses like selling fruits in the market, selling clothes and hair dressing. Also a fifth of the respondents reported that they were engaged in formal employment and casual work. The proportion of women who were engaged in formal employment was small because most of the women in the area drop out of school due to lack of school fees or opt to be married after undergoing female circumcision. This denies them chances for further schooling which would earn them formal employment.

The level of income of the respondents was another socio-demographic variable that was assumed to influence the choice of birthing site. The level of monthly income of the respondents was coded into five categories ranging from no income to those with average monthly income of Kshs.15000 and above. Out of 186 respondents interviewed, nearly three quarter (70%) of the respondents earned less than Ksh.5000. as shown in Table 4.1. This is because most of the properties held by the family are owned and controlled by the husband and only 12% of the respondents were engaged in a formal employment.

In order to establish the correlation between the level of income of the respondent and the birthing site, cross tabulations were done. Those respondents who earned a lower monthly income of less than KES 5,000 were more likely to choose TBAs/home delivery as opposed to hospital as birthing site. The respondents who earned more than KES 5,000 were more likely to prefer hospital as birthing site. Table 4.6 below summarizes the findings.

Table 4.6: Cross tabulation of level of income and birthing site

			Birthing site		
			Home	Hospital	Total
Level of monthly income in Kenya shillings	Less than 2000	Count	44(63%)	26(37%)	70
		% within Birthing site	45.4%	29.2%	37.6%
	2001-5000	Count	32(53%)	29(47%)	61
		% within Birthing site	33.0%	32.6%	32.8%
	5001-10000	Count	15(48%)	16(52%)	31
		% within Birthing site	15.5%	18.0%	16.7%
	10001-15000	Count	3(33%)	6(67%)	9
		% within Birthing site	3.1%	6.7%	4.8%
	15001 and above	Count	3(20%)	12(80%)	15
		% within Birthing site	3.1%	13.5%	8.1%
Total		Count	97	89	186
		% within Birthing site	100.0%	100.0%	100.0%

Phi=0.242 Cramer's V=0.242, Approx. Significance=0.028

There was, generally, a noticeable trend in the choice of birthing sites and the level of monthly income. The group with low monthly income had higher preference toward TBAs than hospital. Those with a higher monthly income prefer to deliver in hospitals. This means that when women are economically empowered, they prefer hospital as birthing site. It also means that the woman's income overrides the income from other members of the family, for instance, the husband when it comes to decision making regarding birthing site. The role of income also featured during focus group discussion as captured in the following statement:

> …for somebody who is doing business or is in formal employment, and she has her money, she can't deliver at home, she prefers to go to hospital because it is not her class (status), therefore she will go to government or private hospital. If you rely on money from your husband, you may deliver at home when he does not give you the money. [18 years old mother, FGD with women who delivered before 20 years, Endo Ward].

From the statement above, the amount of money that a woman earns is associated with the social status, which influences the choice of birthing site. For instance, a woman who has money is able to choose either a private or a government hospital that

she considers fit for her peers. As the level of income increased, preferences of birthing sites shifted toward hospital. This may be due to availability of money to use for transport and to pay for the maternity services as they deliver in the hospital. This finding is consistent with the findings of a study done in Nepal which showed that family income influenced place of delivery, (Rajendra *et al.*, 2004). This study specifically explored the role that the monthly income earned by the woman plays in regard to the choice of birthing site.

The size of the households was another demographic variable considered in the study. The respondents were asked to state the number of members in their household. Majority (65%) of the households consisted of less than five members. Households whose members were between 6 and 10 were (35%) while households whose membership was more than 10 were 5%.This is clearly outlined in the Table 4.1.

Further, the researcher sought to find out the relationship between household size and the preferred birthing site by using cross tabulation. Majority, (61%) of the respondents whose households were equal to or less than five preferred hospital as birthing site. Conversely, more than 70% of the respondents whose households had six or more members preferred TBAs/home as birthing site. Table 4.7 below presents the findings:

Table 4.7: Cross tabulation of Household size and birthing site

			Birthing site		
			Home	Hospital	Total
Household size	less than5	Count	43(39%)	68(61%)	111
		% within Birthing site	44.3%	76.4%	59.7%
	6 -10	Count	50(71%)	20(29%)	70
		% within Birthing site	51.5%	22.5%	37.6%
	more than 10	Count	4(80%)	1(20%)	5
		% within Birthing site	4.1%	1.1%	2.7%
Total		Count	97	89	186
		% within Birthing site	100.0%	100.0%	100.0%

Phi=0.328, Cramer's V= 0.328, Approx. Significance= 0.000

The household size is a predictor of per capita disposable income. Families with large household sizes are associated with bigger financial burden, which affects the choice of birthing site directly or indirectly. When the family resources are shared among household members, the per capita allocation diminishes with the increase in the size of the household.

Per capita disposable income determines the preference for birthing site. A similar finding was reported from a study done in Rwanda where it was argued that women from larger households underutilize various health care services because of excessive demands on the time and available financial resources which are often overstretched (Umurungi, 2010). Those with higher per capita disposable income prefer hospital as birthing site while those with lower per capita disposable income prefer home as birthing site. This is because when a mother goes to deliver in hospital she will incur travel costs and hospital charges which are paid in cash as opposed to home where the TBAs will attend to them sometimes for free or on credit.

Another important variable which was investigated was the head of household. The data on the head of household provided valuable information on power differentials that come into play when making a choice of birthing site. More than three-quarters, (79%) of the respondents came from households headed by husband while the remainder were headed by women themselves and fathers to the women as shown in Table 4.1. The fathers to the women were heads of households in circumstances where the woman lived with the parents. This was common among teenage mothers.

Cross tabulations were also done to check if there is a relationship between the preferred birthing site and head of household. Slightly more than half ((54%) of women from households headed by husbands were more likely to prefer home as birthing site. About half (53%) of women who were heads of households (themselves) preferred hospital as birthing site. For women who came from households headed by their parents, majority (62%) preferred hospital as birthing site. Table 4.8 below summarizes the results.

Table 4.8: Cross tabulation of head of household and birthing site

			Birthing site		
			Home	Hospital	Total
Head of household	Herself	Count	15(47%)	17(53%)	32
		% within Birthing site	15.5%	19.1%	17.2%
	Husband	Count	79(54%)	67(46%)	146
		% within Birthing site	81.4%	75.3%	78.5%
	Father	Count	3(38%)	5(62%)	8
		% within Birthing site	3.1%	5.6%	4.3%
Total		Count	97	89	186
		% within Birthing site	100.0%	100.0%	100.0%

Phi=0.083, Cramer's V=0.083, Approx. Significance=0.530

Most of the households were male headed. In Marakwet community, men are considered to wield authority over women and they control family resources. Infact, men use the word *lagok* (which means children) to collectively refer to both wife and children. The households headed by women themselves were fewer and these categories comprised women who were either widowed, divorced, separated or were not married. The households headed by fathers (parents) were the least because this comprised women who had delivered as teenagers and still lived in the household with their parents.

From the cross tabulation findings above, majority of women who came from households headed by women themselves preferred hospital as the birthing site because they could make decisions by themselves without having to rely on the opinions of their husbands. Majority of women from households headed by the husband preferred home as birthing site because their preferences were shaped by the opinions of the husbands and the in-laws. Further, in male headed households the resources are controlled by the husband while the woman controls the resources in households where the woman herself is the head of household.

4.2.1 Respondents' choice of birthing site

Respondents indicated the birthing site which they chose. Slightly more than half (52%) of the respondents chose home as birthing site, as summarized in Figure 4.1 below:

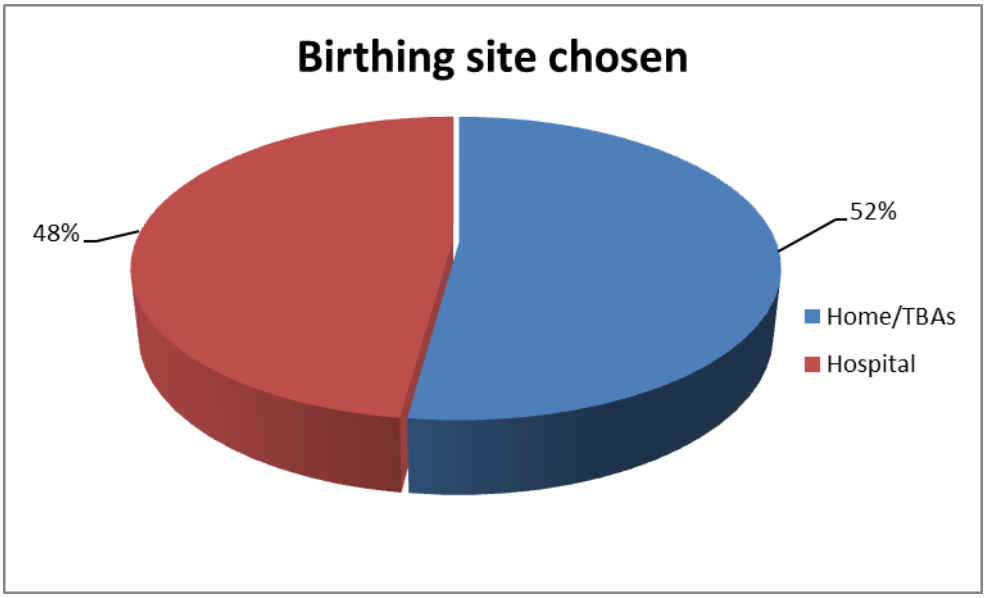


Figure 4.1: Respondents' choice of birthing site

4.3 Socio-cultural factors influencing the choice of birthing site

The second objective of the study was to find out the socio-cultural factors influencing women's choice of birthing site in the study area. According to the culture of the Marakwet community, when a woman becomes pregnant, they are supposed to visit the traditional birth attendant's house when they are four months pregnant. The visits then continue on a monthly basis. During these visits, the TBA examines the mother by palpating the abdomen to assess the 'position' and state of the baby in the uterus. The four-month threshold was chosen because the TBAs believed that it is at four months that they can be sure that a woman is pregnant, as captured by the following statement:

> When a woman comes for examination before four months, I cannot be sure that the big abdomen is a baby. Some women come and when you palpate there is nothing. But after four months, you can feel with your hands that there is something, and they can feel it moving sometimes. From then, they come after every month [63 years old TBA, key Informant, Endo Ward]

Once a woman is confirmed to be pregnant, the community has taboos, which serve as rules and regulations (norms) which guide the behaviour of the woman until she gives birth. For instance, they are supposed to stop having sex. The pregnant women are warned that if they have sex, the baby will be born covered with 'white dirt' that is believed to be the semen from the man. Such a woman faces social stigma because they perceive that she is promiscuous and that is why she had sex when she was pregnant. Similar cultural beliefs were reported in a study done in Tanzania where infidelity is believed to result in punishment from God. Also, curses from elders may lead to death of the pregnant woman and those who attend to her during birth (Magoma *et al*., 2010).

It is also considered a taboo for a pregnant woman to view a corpse. In this regard, a pregnant woman is not supposed to attend funerals or if they do, they are not supposed to view the corpse. It is believed that if they view the corpse the baby dies in the uterus or the baby will be born with congenital abnormalities.

It is forbidden for a pregnant woman to eat meat from a dead animal like a goat, cow, sheep, chicken and other edible animals. This is because it is believed that eating a dead animal harms the mother or baby in the uterus and leads to death. The only meat they are supposed to eat is from an animal and that has been slaughtered. The researcher argues that this is a norm to guard against eating meat from infected animals that is dangerous to her health and that of her unborn baby.

Traditional herbs are taken by pregnant mothers to ensure that she and her baby become healthy. These herbs were composed of traditional roots, which are boiled and the woman drinks on a daily basis. The community believes that these herbs make the woman strong so that she will have the energy for a normal delivery at birth.

At the same time it is believed to build blood as blood loss is anticipated at birth. They are also given special milk, *mursik*, sour milk mixed with blood to boost their immunity.

A special necklace is also worn by a pregnant woman with charms that the community believes that it confers protection to both the mother and the unborn baby. The charms are worn to guard the pregnancy from miscarriage and evil eyes. However, when the woman experiences labour pains, the necklace is removed so that the woman gives birth. The community believe that if it is not removed, the woman will not give birth due to obstruction. The foregoing was unanimously (93%) supported by informants who observed that the Marakwet community have traditional objects used by TBAs to assist in the birthing process. The photograph in plate 4.1 below shows the special necklace with a pouch containing charms worn by pregnant women.

Plate 4.1: Photograph showing the special necklace worn by a pregnant woman.

Concerning the birthing site, a pregnant woman is supposed to deliver in a *kobo kogo* (small house) or a kitchen. It is considered inconvenient to deliver in the main house because it is used by the husband, other family members and visitors. The therapy

management group is composed of mothers who have delivered before and the traditional birth attendant. Those women who have not delivered, but have been circumcised, are also allowed. This is because the women who have delivered before and those who have been circumcised are considered to be mature and accepted as adults. Those who have not delivered and those who have not been circumcised are viewed as children. The delivery is performed by the traditional birth attendant and the other members present only play a supportive role. The women who have delivered before and those who have been circumcised offer psychological support and encourage the woman in labour to endure the labour pain and to push during delivery. The men are relegated to the periphery in the birthing process, and are only supposed to provide resources and provide a conducive environment for birthing.

When the baby is born, the TBA uses a razor blade to cut the umbilical cord, and then waits for the placenta to come out, which she disposes while observing a culturally defined ritual. One FGD participant described it thus:

> The placenta is taken carefully by the TBA and laid in a specified manner; millet is spread along the way as she goes to dispose it. This will ensure that the woman does not become infertile. It is then laid in the bush, then milk is poured on it and left… It should not be buried. [51 years old woman, FGD with women who delivered after 45 years, Endo Ward].

In an interview with a TBA, similar explanation was provided thus,

> The placenta is taken to the bush, then held by the cut umbilical cord and laid as millet is spread on the ground...for a male child it is taken to the right hand direction from the house of birth and for a girl it is taken to the left hand direction. [59 years old TBA, Key Informant, Endo Ward].

In the ritual, the spreading of millet symbolizes fertility and a propagation of generations. The milk poured as libation is meant to appease the ancestors so that the child is protected from any harm. The right hand is associated with strength and

authority, while the left hand is associated with weakness and submission. That is why the placenta of a male child is taken to the right hand direction from the birthing site, and that of a female child is taken to the left hand direction of the birthing site. Data from the current study suggest that this ritual has not changed much. Thus 97% of the respondents observed that Marakwet community has taboos associated with the disposal of the placenta.

When the process of delivery is complete, a *leketio* (an abdominal belt) is tied to the abdomen to aid involution of the uterus and to guard the child from harm. The *leketio* is made of animal skin and cowrie shells as shown in the photograph below:

Plate 4.2: Photograph showing *leketio*

The woman is secluded in the house until six months and she is fed on special diet. Where possible, a goat is slaughtered for her, because the special diet is thought to make recovery faster. After seclusion, she goes through a cleansing ritual before interacting with other members of the community. The ritual involves taking a bath using boiled herbs. Alcohol is brewed and a drinking party held, then the post natal

woman is allowed to interact with other community members and the baby is allowed to be seen and held by other community members.

Female circumcision is also a factor that plays a role in determining where a woman chooses to deliver. For women who have undergone female circumcision, they choose to deliver under TBAs because often, the TBAs are the ones who performed the circumcision. On the contrary, if they chose to deliver in hospital, they fear that they will face stigma and prejudice from some staff in the healthcare facilities and this discourages them from choosing hospital as birthing site.

The nature of pregnancy is another factor that influences the choice of birthing site. It is noted that in the Marakwet community, there is a widely held belief that if a woman conceived out of wedlock, then she experiences a difficult labour, and it is requisite for the husband or age mates of the husband to perform a ritual to free the baby to be born. In a Key informant interview with a TBA, the following comment was made:

> If a woman gets pregnant out of wedlock, during labour and she will use her money to go to hospital and if the husband is angry with her, the baby will not come out until he spits saliva on her so that the baby can come out…but if that is not done, operation (Caesarean Section) will be performed on her. [63 years old TBA, Key Informant, Endo Ward].

When hospitals were set up in the study area, the community members were receptive and there were no implicit or explicit regulations discouraging the use of hospitals as birthing site. This means that the traditional socio-cultural beliefs were not obstacles to hospital delivery. Infact, according to one of the TBAs interviewed, hospitals became just one of the options of birthing site that the woman may choose when she wants to deliver. It also means that hospital delivery came with gains that attracted women to deliver in hospital. For instance, whenever there is delay in labour, drugs

are used to augment labour. It also reduces incidences of infection for the baby and the mother.

To complement the above socio-cultural factors, more aspects were elicited using statements that were to be rated by the respondents on a five point Likert Scale. The responses for these factors range from 1 to 5 where 1 = strongly disagree while 5= strongly agree. The mean is used to assess the scores. The closer the mean is to 5, the more it was agreed that the factor influences the choice of birthing site. The closer the mean is closer to 3, the less likely the factor is seen to influence the choice of birthing site. Further, the closer the mean is to 1, the more the extent of disagreeing with the statement.

Socio-cultural taboos associated with the disposal of placenta and presence of traditional objects used by TBAs to assist the birthing process were reported to influence the choice of birthing site. The argument that women who deliver from hospitals are socially stigmatized was strongly disagreed upon by most of the respondents. The findings are summarized in Table 4.9.

Table 4.9: Socio cultural factors and birthing site

Socio cultural factors	Mean	Std. Deviation	Rank
Marakwet community has taboos associated with disposal of placenta	4.94	1.104	1
The Marakwet community have traditional objects used by TBAs to assist birthing process	4.77	1.108	2
The birth order (whether first or subsequent) influences the choice of birthing site	4.37	1.378	3
Marakwet community has food habits which regulate pregnancy and birthing	4.32	1.393	4
The Marakwet community have preferred birthing sites (where births ideally occur)	4.31	1.419	5
The choice of birthing site is socially prescribed for the women in Marakwet community	4.22	1.559	6
Men (Husbands) have no role in the choice of birthing site	4.16	1.631	7
The birthing site chosen defines whether one is a true Marakwet woman (through circumcision and other rites of initiation)	1.92	1.729	8
The nature of pregnancy (out of wedlock, within marriage, planned or unplanned) influences the choice of birthing site.	1.87	1.807	9
Women who deliver from hospitals are socially stigmatized	1.54	1.909	10
There are cultural rites and rituals performed for those who deliver in otherwise places.	1.26	1.937	11

From Table 4.9, cultural taboos associated with the disposal of placenta was seen to be the major factor influencing choice of birthing site with a mean of 4.94. Presence of traditional objects used by TBAs to assist birthing process with a mean of 4.77 was ranked second in terms of the level of influence on the choice of birthing site. The factor with the least influence on the choice of birthing site was social stigmatisation of women delivering in hospital (mean 1.26).

From the foregoing discussion, the journey from conception to pregnancy is culturally prescribed and institutionalized, forming part of the daily life experiences of women.

This pressure influences women to act in accordance to the culture so that they are seen as normal. It is also clear that although the socio-cultural factors play a major role in influencing the choice of birthing site, but they don't operate in isolation; other factors contribute to the low utilization of hospital as birthing site. In the next section, I look at the healthcare systems factors, which influence the choice of birthing site in the study area.

4.4 Healthcare system factors influencing the choice of birthing site

The third objective of the study was to establish the healthcare system factors affecting the choice of birthing site in the area. It also covers the previous experiences that women had while giving birth in healthcare facilities. These experiences influence future choices of birthing site either negatively or positively. The main healthcare systems factors were operationalized into the presence or absence of healthcare facility, distance to the health facility, cost charged for maternity services in these healthcare facilities and whether the number of health facilities is perceived to be adequate to cater for the population in the study area. Other factors considered under this objective include the gender of the staff in the health facilities, quality of care, opinions on the services offered by traditional birth attendants and previous birthing experiences for both hospital and home deliveries.

4.4.1 Availability of health facilities offering maternity services

Respondents were asked to indicate whether or not there were any healthcare facilities in the study area. All the respondents indicated that health facilities were available in their area, majority being health centres and dispensaries.

Majority (69%) said that the health facilities were not sufficient to handle maternity cases in the areas, which resulted to long distance in accessing alternative health facilities. Thirty one percent of the respondents reported that healthcare facilities in the area are sufficient. This was summarized in the Figure 4.2 below.

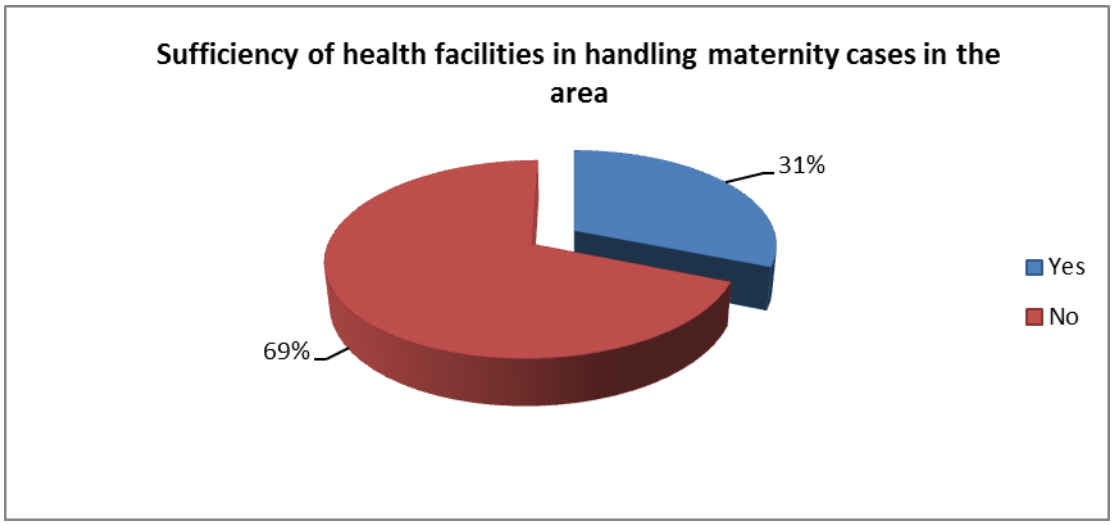


Figure 4.2: Sufficiency of health facilities in handling maternity cases

Findings from Figure 4.2 show that the respondents opined that the healthcare facilities available in Endo ward are not sufficient to handle maternity cases. The study area has 2 government dispensaries namely: Malkich dispensary and Chechan dispensary. The two dispensaries do not have delivery couches and they lack delivery sets which render them unable to offer maternity services. Further, stock outs of drugs were reported as a common occurrence. During data collection the researcher observed that Endo ward has only two government health centres namely: Kaparon health centre and Kabetwa Health Centre. The only Sub County hospital available in the area is Tot Sub County Hospital but it does not have a theatre for operations incase of a caesarean section. The study area also has three mission sponsored facilities namely: AIC Liter dispensary, Endo Mission Health Centre and Chesongoch Mission Hospital. These facilities are often underutilized by the women because they

charge between five hundred (KES 500) and two thousand shillings (KES 2,000) for a normal delivery, and most of the women in the study area cannot afford this.

The respondents also stated that these health facilities have fewer healthcare staff to cater for the maternal cases in the area. The two government dispensaries are run by one nurse each. Therefore, whenever the staff goes to look for supplies or attend training workshops and seminars, the facilities are closed. Kabetwa health centre and Kaparon health centre have only two nurses each. Tot Sub County Hospital, the largest health facility in the study area has no obstetrician, and only has one Medical Officer who doubles up as the Sub County Medical Officer of Health (SCMOH) and the Medical Superintendent. There are only two clinical officers and the maternity wing has three nurses. The health facilities in Endo ward are faced with staff shortage because it is a hardship area, which experiences a high staff turnover.

4.4.2 Distance of healthcare facilities offering maternity services

Majority of the respondents felt that most of these health facilities are far from their homes and the problem is made worse by poor road network and lack of comfortable mode of transport. The most common mode of transport in the area is motor cycles, which is risky for pregnant women, more so for women in labour. Respondents were asked whether distance influences the choice of birthing site and majority (90%) stated that distance influences the decision to use a health facility or not. Figure 4.3 summarizes the responses.

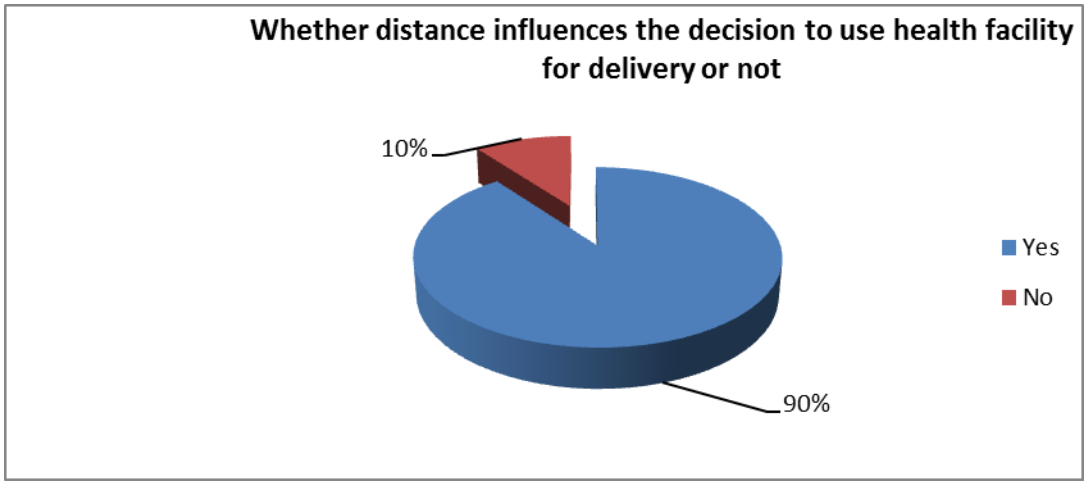


Figure 4.3: Influence of distance on choice of birthing site

When asked to explain how distance influenced their decisions to use health facilities, some of the reasons mentioned include poor road network as the main reason, which may contribute to delivering on the way before reaching health facilities. It was also indicated that abrupt labour may make one deliver at home as there are no motor vehicles especially at night to transport the pregnant mothers to the hospital. Further, the roads are uneven and steep hence four wheel drive vehicles are needed in order to access health facilities especially during rainy season. Similar findings were reported in studies carried out in Indonesia and Mali, which identified distance and availability of money as major determinants of birthing site (Titaley *et al*., 2010; Preslar, 2010).

4.4.3 Cost charged for maternity services

Another factor that had great influence on the choice of birthing site as per the respondents is cost. Majority (67%) of the respondents indicated that fees were charged for the maternity services and this was a major barrier influencing their use of health facilities as summarized on the Figure 5.3 below.

Two thirds of the respondents indicated that cost played a great role as most are poor and are unable to raise the fees charged in these health facilities. These findings are summarized in Figure 4.4.

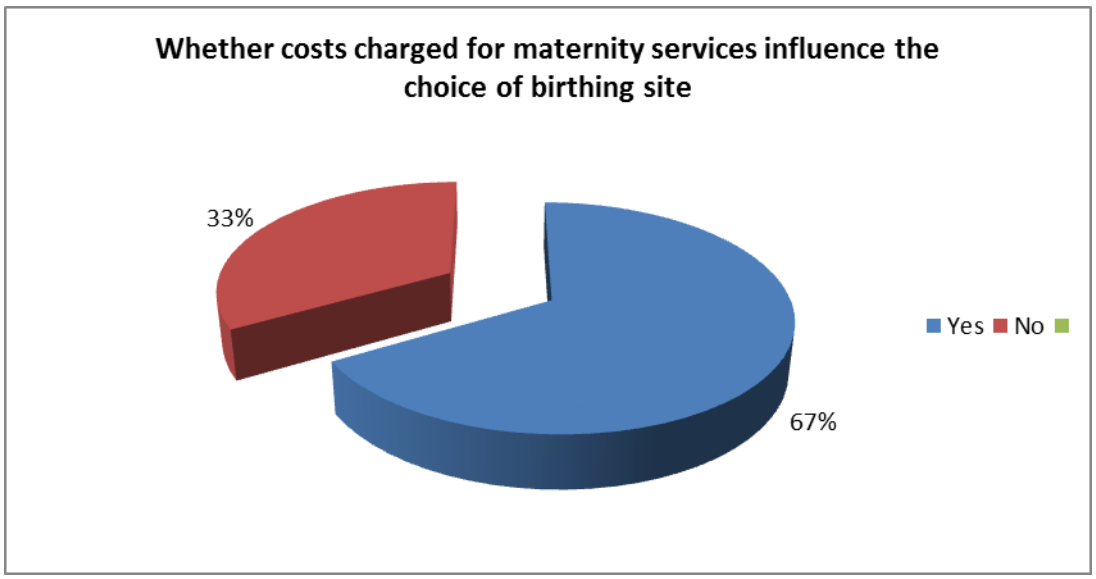


Figure 4.4: Influence of Cost on choice of birthing site

Although the study was executed when the government was implementing the policy on free maternity care, the respondents indicated that they were being charged between three hundred (KES 300) and five hundred shillings (KES 500) in government dispensaries and government health centres for the maternity services and this was a major barrier influencing their use health facilities as birthing site. In the Mission sponsored facilities, they reported that they are charged between five hundred and two thousand shillings per normal delivery. For a caesarean section, it was reported that the amount charged in Chesongoch mission hospital is more than ten thousand shillings (KES 10,000). The respondents reported that the fees charged at the hospital made them to choose home as birthing site.

4.4.4 Age and gender of the healthcare providers

The age of the healthcare provider also has an influence on the choice of birthing site among the older women. Those women shy away from hospital delivery because they fear being attended to by young staff in the hospitals. This featured prominently in the qualitative data as depicted by the following statement:

> Here in Marakwet, the older women fear to go to deliver in hospital but for those who are young and literate, they prefer to deliver in the hospital. Majority of the older ones fear going to hospital because they think that it is shameful to be delivered by young healthcare staff who are the age mates of their children.[37 years old married man, FGD with married men whose wives had delivered, Endo Ward]

From the foregoing statement, it is clear that the older women are unlikely to deliver in hospital if the staffs working in maternity are young. It is also plausible to infer that the older women are more likely to deliver in hospitals if the staffs working in maternity are older. This is influenced, in part, by a socio-cultural norm that one's child or an age mate of your child is not supposed to see them naked. Women consider it to be shameful.

The gender of the healthcare providers was also identified as a contributing factor when choosing a birthing site. The women prefer to deliver in hospital if the healthcare workers in the maternity are female. This affects the choices especially for the older women whose children are of a similar age group to the male healthcare staff. The statement below attests to this observation:

> …For a pregnant mother in labour, when she finds that there is a male doctor in the hospital, she can fear to go there, she has to ask for a female health care provider to deliver her because the male doctor may be the age of her child and that is shameful. [49years old woman, FGD with women who delivered after 45 years, Endo Ward].

The findings above are consistent with other studies in Nepal and Pakistan that identified low availability of female healthcare providers to be a significant barrier to health services utilization. In health facilities where men attend to women during delivery, most women opted to deliver at home. Most mothers were more comfortable delivering under the supervision of female healthcare providers (Bolam *et al*., 1998; Ali *et al*., 2008).

4.4.5 Opinions of respondents about services offered in hospital

The researcher asked the respondents to give their opinions about the services offered in hospital as birthing site. Opinions were thematically coded as having skilled staff, prompt and good services, safety, hospital hygiene, availability of equipment, newborns being monitored frequently, mothers being handled with respect and counselling being done to mothers during labour. Prompt and good services were the highest (73%) and presence of skilled staff was the lowest as shown in Figure 4.5.

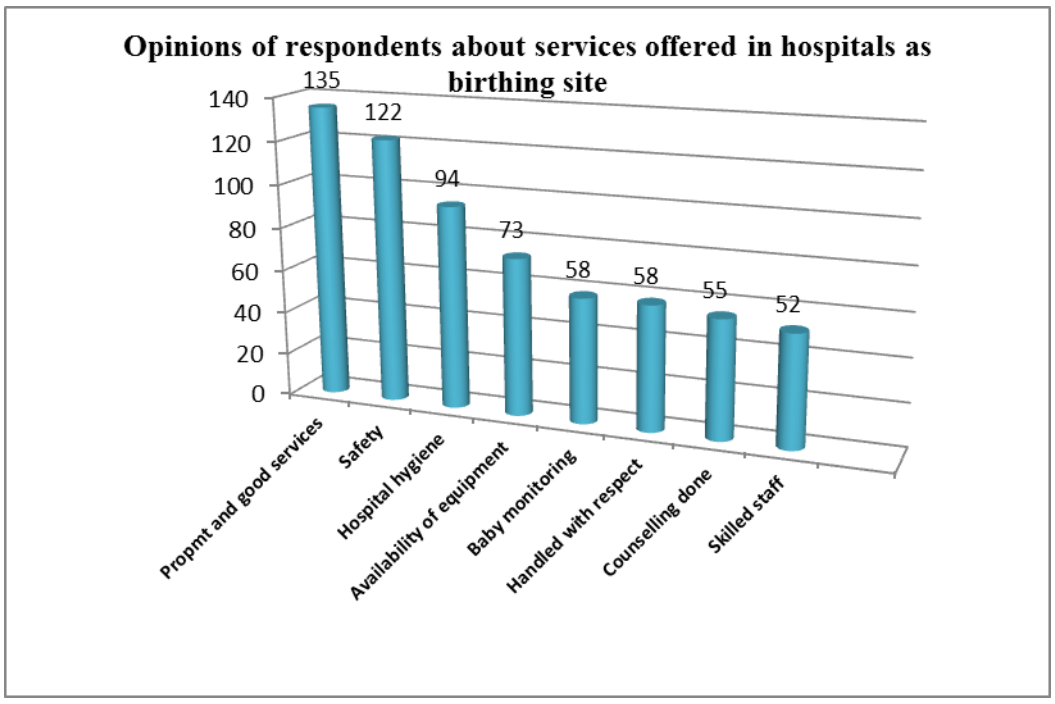


Figure 4.5 Opinions of respondents about services offered in hospital as birthing site

Respondents reported that when women go to deliver in health facilities they want to be attended to quickly and offered support during labour because they are in great pain. Safety was also noted as a key factor that prompted women to use hospital as a birthing site. Two thirds of the respondents reported that they prefer hospital because if anything goes wrong the staff in hospitals would be able to manage them because drugs are available.

About half (51%) of the respondents who preferred hospital as their birthing site also reported that their choice is influenced by the high level of hygiene in health facilities. The equipment used in hospitals are perceived to be clean because they are sterilized and the staffs wear gloves while handling patients. The wards are also cleaned with disinfectants hence they are able to control the spread of infection. Further, the staff in the hospital wore clean clothes and their bodies were perceived to be clean. Similar findings were reported in a study carried out in Basra which found that safety, security and good hygiene played a key role in attracting women to deliver in hospital (Mahdi *et al*., 2010).

Availability of equipment in the health facilities was also reported as a factor that attracted women to choose hospital as birthing site. These include delivery sets, delivery couches, examination light and others, which are used to save the lives of mothers if complications arise. Other equipment mentioned include those that are used if delivery becomes difficult, for instance a vacuum set.

Another factor which was reported as attracting women to deliver in hospital was frequent monitoring of the baby. This included the baby being monitored frequently during labour, and even after delivery. In this case a fetoscope is used to auscultate the foetal heart rate throughout labour. This allays fears that something could be getting wrong with the baby during and after the birthing process.

Being handled with respect by the healthcare staff and provision of counselling services in the hospital were also seen to attract women to choose hospital as birthing site. It was reported that women like to be talked to politely and handled in a kind manner when they are in labour. They also reported that they needed to be counselled and educated on how labour progresses, instructions on what to do at every stage and to be given feedback after every examination. In one focus group discussion, one woman had this to say about being handled with respect while in labour:

> …When a doctor shouts at me in hospital, for example, when they cut me (episiotomy) and I refuse to be sutured, I will not go to deliver there again. They have to understand that it is not good to abuse a woman in labour. It is because of pain which makes women behave as they do. [19 years old mother, FGD with women who delivered before 20 years, Endo Ward].

The lowest was availability of trained staff in the health facilities, who will oversee the process of delivery. They reported that it is not mandatory for a specialist to be present but even a nurse with basic midwifery skills may suffice.

4.4.6 Reasons for low utilization of hospital as birthing site

Another dimension of the study was to find out the reasons for low utilization of hospital as birthing site. Respondents were asked to give their opinions on what they thought could be the reasons for low utilization of delivery services in the study area. Long distance to the health facility and expensive costs incurred at the hospital were

the highest while fear of babies being exchanged was the lowest as presented in Table 4.10.

Table 4.10: Reasons for low utilization of hospital as birthing site

Responses	**Frequency n=186**	**Percent (%)**	**Rank**
Long distance	108	58	1
Expensive costs	101	54	2
Lack means of transport	17	9	3
Fear of HIV testing	16	9	4
Stigma related to Female Circumcision	9	5	5
Harsh staff in facilities	5	3	6
Fear of episiotomy and other procedures	3	2	7
Fear of babies being exchanged	2	1	8

Long distance is the leading contributor for low utilization of hospital as birthing site. This is because the health facilities offering maternity services are far apart. The average distance that a client has to travel before reaching a health facility is about 6 kilometres. Due to difficult terrain in Endo Ward, travelling for 6 kilometres is very hard, especially for a pregnant woman.

The second most influential factor leading to the low utilization of hospital as birthing site is expensive costs. In government health facilities the charges for normal delivery was between three hundred and five hundred shillings. In Mission sponsored health facilities, the fees charged for normal delivery ranges between five hundred and two thousand shillings. In some cases the patients have to purchase supplies like gloves and cotton wool for themselves when they are not available in the health facilities due

to stock outs. The respondents reported that when these charges are added to transport costs, they become expensive.

Thirdly, lack of means of transport was reported as a challenge which leads to low utilization of hospital delivery services. The area has poor roads which become impassable often when it rains. Also the area requires four wheel vehicles to ease transport because of the poor state of roads. Further, all government facilities in Endo ward do not have an ambulance. The ambulances, if available would be used to carry mothers in labour so that they can deliver in hospitals.

Fear of HIV testing was mentioned as the fourth contributing factor towards low utilization of hospital as birthing site. It was reported that HIV testing is a mandatory test for all pregnant mothers as a strategy to reduce mother to child transmission of HIV. Therefore some respondents fear that they might turn positive when tested and that would make them stressed.

The fifth factor reported was stigma related to female circumcision. It was reported that for women who have undergone female circumcision, they would be stigmatized and this discouraged them from going to deliver in hospital. This was considered worse when the health worker was not circumcised herself.

Sixth was harsh staff who abuse pregnant mothers in the hospital. It was stated that there were some staff in hospital that use abusive language while handling women during labour. Some women reported that they had heard of some women being subjected to physical abuse like being slapped or pinched during delivery. Findings of this study concur with a study done in Malindi where cases of physical and verbal

abuse on women who did not follow instructions during birth were also mentioned by the Swahili and Giriama women (Carter, 2010).

Fear of episiotomy and other procedures like caesarean section also contributed to the low utilization of hospital as birthing site. This was particularly more common among women who had undergone female circumcision hence the passage for the baby was not adequate. Some respondents perceived that sometimes doctors perform caesarean section even when it is not necessary. This finding is consistent with other studies carried out in Kenya and another in Basra that identified fear of surgical interventions and repeated examinations at hospitals as another concern of the women who preferred home delivery (Maithya, 2009; Mahdi *et al*., 2010).

Lastly, a few (1%) respondents stated that they fear to deliver in hospital because they thought that babies might be exchanged. One of the respondents reported having heard of instances when babies were exchanged in hospital and stated that the only way to be sure is to deliver at home. Therefore they prefer to deliver at home under TBAs.

4.4.7 Opinions of respondents on TBAs/ home as birthing site

Respondents were required to give their opinions about why women prefer the services offered by TBAs during delivery. The responses were categorized as TBAs having been trained, women being handled in a friendly manner during delivery, peer influence, presence of TBAs nearby and readily available, and TBAs being less costly. TBA being less costly was reported by most respondents and peer influence was reported by the least respondents, as presented in Figure 4.6.

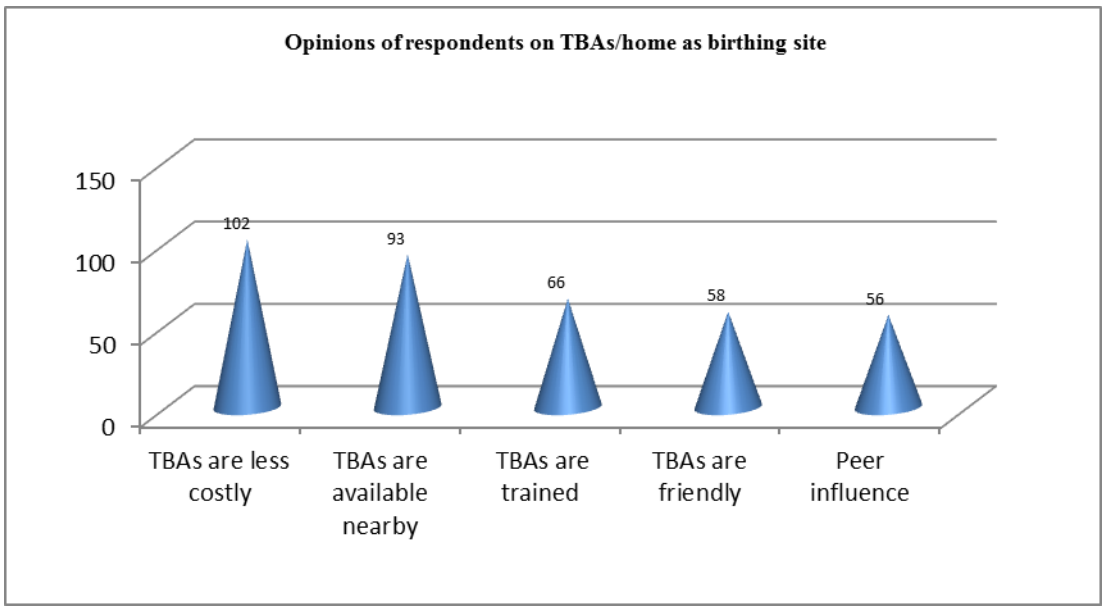


Figure 4.6 Opinions of respondents on TBAs/ home as birthing site

TBAs are less costly when they assist a woman to deliver. It was reported that after delivery they charge between two hundred and five hundred Kenya shillings, payable in instalments. Also TBAs accept payment in kind. For instance, after conducting a delivery, they may be given a kilogram of sugar, grain or any other token. This flexibility in the mode of payment attracted women to deliver at home under TBAs.

The second most influential factor was availability of TBAs. The respondents indicated that their choice of TBAs was influenced by presence of TBAs nearby, who are easily available and accessible as compared to health facilities. TBAs were available in every village and they can be accessed at any time of the day. Moreover, they reported that the TBAs are willing to stay throughout with the woman in labour until the time she delivers.

Thirdly, the respondents indicated that TBAs were traditionally trained and hence experienced to help achieve safe deliveries. The TBAs are believed to have gone through a traditional training through apprenticeship. They were mentored by the

older TBAs who had practiced for longer periods and hence they are conversant with the process of delivery.

About a third (31%) of the respondents reported that TBAs handle mothers in a friendly manner. The TBAs were reported to be gentle while handling the clients and they use kind words to encourage the women to go through the delivery process. The respondents reported that deliveries by TBAs occur in a familiar environment which makes the women to remain relaxed. They reported that the TBAs also describe their own experiences during labour as a way of encouraging women during labour.

About one third (30%) of the respondents indicated that TBAs are approved by peers. The respondents stated that they discuss with their peers who share their past experiences in labour. This earned them acceptance to the group without any stigmatization that would befall them if they chose not to follow their advice. They reported that the peer group consider those who do not deliver under TBA as cowards.

4.4.8 Perceived or real risks associated with TBAs/home as birthing site

Factors affecting choice of home/TBAs as birthing site are diverse in the area. The respondents were asked to outline perceived or real risk factors, which they thought affected their choice of home/TBAs as birthing sites. To establish the rank of the most influential factors affecting home/TBAs as birthing site in the area, the frequency of each response was determined from the interview schedules. Fear of contracting HIV/other infections and excessive bleeding were reported most frequently and poor nutrition for the baby was the least as summarized in Table 4.11.

Table 4.11: Perceived or real risks associated with Home/TBAs as birthing site:

Responses	**Frequency n=186**	**Percent (%)**	**Rank**
Contracting HIV and other infections	92	49	1
Excessive vaginal bleeding	89	48	2
Death of mother	75	40	3
Prolonged labour	38	20	4
Retained placenta	37	20	4
Inability to handle complications	28	15	5
Birth asphyxia	7	4	6
Cold environment for baby	6	3	7
High fever	5	3	7
Severe abdominal pain	4	2	8
Unsutured episiotomy	2	1	9
Poor nutrition for baby	1	0.5	10

Fear of contracting HIV and other infections when TBAs conduct deliveries at home was noted as the leading factor discouraging home/TBAs as a birthing site. The respondents reported that the TBAs do not have sterile equipment while conducting deliveries. This can lead to spread of HIV and other infections if the tools for delivery had previously been used on an infected individual.

Risk of having excessive vaginal bleeding after delivery was also noted as an important factor making the choice of home/TBAs less favourable as a birthing site because most of TBAs had no expertise in dealing with such emergencies. It was also stated that TBAs do not have emergency drugs which can be used to stop excessive vaginal bleeding. Further the TBAs are not able to repair local tears which are another cause of excessive bleeding after delivery.

Fear of dying was associated with home/ TBAs as birthing site. The respondents reported that a woman is likely to die if a complication arises because TBAs are not

trained on how to save live in emergency situations. Also if obstructed labour is experienced, the TBAs are not able to carry out caesarean section. Therefore, this may result in the death of the mother.

The fourth factors were prolonged labour and retained placenta. A fifth of the respondents reported that when a woman delivers under a TBA, labour might be prolonged because the TBAs do not have drugs used to augment labour. Also it was reported that the placenta might fail to separate and come out. In both cases the TBAs do not have the technical skill of handling these cases.

Inability to handle complications when they arise was the fifth risk reported by the respondents. It was said that whenever complications occur, TBAs have to refer the patients to hospital because they don't have the capacity to handle them. This is because they have not gone through any formal training in emergency obstetric care. Further, they don't have equipment to execute live saving interventions when emergencies arise.

Difficulty in initiating breathing for the baby (birth asphyxia) was given as one of the risks associated with home/TBA deliveries. This is because TBAs do not have tools to monitor the progress of the baby during labour, for example, the fetoscope, which is used for auscultation of the foetal heart during labour. Also, they have not been trained on how to use this monitoring equipment. If the baby is not monitored during labour, it may develop breathing problems at birth, which may result in brain death.

Cold environment and high fever were the seventh risks associated with TBAs/home as birthing site. The respondents reported that TBAs do not provide warm clothing to cover the baby after birth hence the babies would feel cold. Also, because of poor

hygiene practices, the babies might get infections which result in high fever. When micro-organisms enter into the baby's body during or after birth, the baby gets sick and may develop a high fever.

The eighth risk associated with TBAs/home as birthing site was severe abdominal pain. It was stated that TBAs have no drugs to control pain and hence could make labour intolerable. Also TBAs are unaware of non-pharmacological methods of pain relief during labour, for instance, rubbing the back which reduces pain during labour.

The last two factors reported were the assertions that TBAs do not suture episiotomy and the baby would not get adequate nutrition. They reported that the TBAs do not have the suture sets and were not trained to suture the episiotomy. Also it was mentioned that the TBAs give babies herbs and start feeding them with animal milk before they reach six months. This was not able to meet the nutritional requirements for the baby, and the herbs may harm the babies.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMENDATIONS

5.1 Introduction

This section brings together all dimensions of this study based on objectives and the research questions, objectives and logical presentation of findings. It gives a summary of the key findings from the study and draws conclusions by making inferences from the study findings. Lastly the researcher makes recommendations on strategies that can be implemented to increase use of hospital as birthing site.

5.2 Summary of the findings and conclusion

The gist of the study was to describe the socio-demographic, socio-cultural and healthcare system factors that influence the choice of birthing site for women in Endo Ward, Marakwet East Sub County. Birthing site was operationally defined as place of delivery and categorized as either hospital or home (TBAs). In some areas of Kenya, traditional birth attendants (TBAs) are still highly regarded in many communities and are usually the first point of contact for pregnant women for care. Despite the tremendous resources invested in training TBAs over the past two decades, evidence suggests that they have not reduced maternal mortality. They lack proper training and equipment to handle most deliveries, which in turn have imposed high risk to the women.

Traditional birth attendants have always been part of the community's life as they play a critical role in assisting expectant women in rural areas where proper health services are often lacking. They are easily available and accessible and generally

cheaper than health facilities. However, home/TBA deliveries expose mothers and their babies to risks that could culminate in death and should be avoided or improved through health education especially, now that the Government's free maternity care policy is in place.

The utilization of hospital delivery services in Marakwet East Sub County is particularly low and this study has served to offer a deep insight into the underlying socio-demographic, socio-cultural and healthcare system factors that have contributed to this sad predicament. It has taken a wider perspective of investigating the matter by examining the factors through a socio-cultural theoretical lens.

The first objective of the study was to describe the socio-demographic factors that influence the choice of birthing site in Endo Ward. From the study, it was found that the socio-demographic factors which influence the choice of birthing site include age, level of education, occupation and level of monthly income, marital status, size of household, and head of household. There was a noticeable trend with respect to the respondents' age. As the age of the respondents increased, so does the birthing site of choice shift towards home as birthing site. The vice versa was also true with majority of the young respondents opting to deliver in hospital. Therefore, the older women should be targeted during behavioural change campaigns, aimed at improving the utilization of hospital as birthing site.

The level of education also influenced the choice of birthing site. The higher the level of education attained by the women, the more likely they were to choose to deliver in hospitals. Those who had never gone to school were more likely to choose home as birthing site. This implies that women empowerment through education will help in improving the proportion of women who choose hospital as birthing site.

Regarding the size of household, women from larger households are more likely to choose home as birthing site due to the strain exerted on the available resources. On the contrary, those with households with fewer members were more likely to opt for hospital as birthing site. This implies that the per capita resource allocation influences the choice of birthing site.

Basing on the above findings, age, level of education and household size were considered key factors influencing the choice of birthing site in Endo Ward, Marakwet East Sub County. These findings have thus addressed the first research question of the study which asked; what are the socio-demographic factors that influence the choice of birthing site in the study area?

The second objective of the study was to describe the socio-cultural factors that influence the choice of birthing site in the study area. The socio-cultural factors that influence the choice of birthing site include rituals performed during birth, during disposal of the placenta and in the post-natal period. The study also found that there were food habits prescribing the care given to a pregnant woman throughout to the post natal period. TBAs have been associated with community tradition as key players in the birthing process. This was noted to be rooted in Marakwet culture because they are involved in rituals performed during birth. Despite the fact that socio-cultural factors were reported to influence the choice of birthing site, the researcher concluded that they work in collaboration with socio-demographic and healthcare systems factors. Thus, the findings and conclusion on the second objective answer the second research question: what are the socio-cultural factors that influence women's choice of birthing site in the Ward?

The third objective of the study was to describe the healthcare system factors, which influence the choice of birthing site in the study area. The healthcare system factors have been broadened to cover availability of health facilities, staffing patterns, quality of care, costs charged and the distance covered by the service seekers. The salient factors that influenced the choice of birthing site include the age and gender of the healthcare providers, the manner in which they handle pregnant mothers during labour and the amount of money charged as maternity fees. Other factors include lack of transport and delayed referral of women with obstetric complications to health facilities, inadequate staffing in the health facilities, coupled with a high staff turnover because the area is a hardship zone.

Basing on the key findings described above, the researcher concludes that an interplay of multiple factors influence the choice of birthing site in the study area. This presents an opportunity where interventional community programs can be designed to improve utilization of hospital delivery services among the women.

5.3 Recommendations

Considering the underutilization of hospital delivery services in Endo Ward, the researcher makes recommendations at two levels. The first level addresses practical/ policy recommendations while the second level addresses a gap that the researcher has identified to be filled through further research.

5.3.1 Practical / Policy Recommendations

Basing on the findings of the study, the researcher recommends that:

1) The government should undertake measures to improve health sector through construction of more health care facilities, improve roads for easy access and provide adequate maternity equipment with proper staffing of these and available facilities. A theatre should be set up in Tot Hospital so that Caesarian Section services are available. Also, maternity waiting homes can be built next to the hospitals so that when mothers approach their delivery dates, they can be accommodated at the hospital in readiness for delivery.
2) The government should equip and train TBAs with new skills so that they take up a new role of referring clients to deliver in health facilities rather than conducting deliveries themselves. TBAs will be expected to advocate for professional health care provision and work in partnership with skilled attendants. They should be transformed into Community Birth Referral Agents (CBRAs) who play a complementary role in reproductive health, tasked with promoting social behavioural change by sharing health messages and offering advice and referral services to the health facilities. This will consequently improve the quality of prenatal, deliveries and postnatal care for women within the community which would greatly reduce maternal and perinatal morbidity and mortality.
3) The government should offer performance based incentives to the TBAs which is pegged to the number of women they refer to deliver in hospital. Out of the maternity reimbursements that the government has undertaken to pay to the health facilities for every delivery, a small incentive could be set aside for the specific referring TBA. This will serve as a motivation for the TBAs to embrace their new role.
4) The government, through Ministry of Health, should develop locally applicable strategies to improve care for pregnant women by supporting community based

midwives who attend to the women in their own homes through domiciliary care by skilled birth attendants. These Community based interventions may fast track the achievement of millennium development goal 5 (MDG 5) of reducing maternal mortality by 75%, through improving coverage of skilled birth attendance, are to be achieved by 2015.

5) The public health and reproductive health departments should step up campaigns to the community to embrace government-provided medical services. This can be done through public barazas and using community health volunteers to spread the messages to all households.

5.3.2 Recommendation for Further Research

In order to complement the findings of this study, the researcher would like to make the following recommendation for further research:

1) To do more research on the traditional methods used by TBAs during deliveries and medicinal plants administered to pregnant women in order to establish scientific evidence that supports the possible benefits or determine the detrimental effects of such herbal remedies. This could create a good partnership between ethno-medicine and biomedicine by embracing beneficial herbal medicines and practices in the hospital set up.

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APPENDIX I: INTERVIEW SCHEDULE

Dear Respondent,

My name is Abraham Rono, a student at Moi University, School of Arts and Social Sciences, pursuing a masters degree in Medical Anthropology. I am currently conducting a research on *Determinants Of Birthing Site Among Women In Endo Ward, Marakwet East Sub-County* as part of the requirements. I will ask you questions about choices that women make about a birthing site. This information will be useful in developing strategies towards making delivery safe. The survey will take approximately 30 minutes. Whatever information you give will be kept strictly confidential.

Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this survey since your views are important.

Yours sincerely,
Abraham Rono.
Tel: 0723169521

DEMOGRAPHIC DATA

1. Location of residence?
   1= Kaben Location
   2= Endo Location
   3= Koibirir Location
   4= Mokoro Location
   5= Murkutwo Location

2. Age? 1= < 20yrs
   2=20-30yrs
   3=30-39yrs
   4=40-49 yrs
   5= > 50yrs

3. Level of formal education?
   1= Never went to school
   2=Lower Primary (Std1-3)
   3= Upper primary (Std 4-8)
   4= Secondary
   5= Tertiary college
   6= University

4. Marital status?
   1= Married
   2= Single
   3= Separated/ Divorced
   4= Widow

5= Other (Specify) _____

5. Religion?

1= Christian
2= Muslim
3= Hindu
4= other (specify) _____

6. Occupation? (Circle all that apply)

1= Crop farming
2= Animal farming
3= Formal employment (Salaried)
4= Casual worker
5= Business
6= Housewife
7= Other (specify) _____

7. Level of monthly income for the woman in Kenya shillings? (approximate)

1=None
2= <2,000
3=2,001-5,000
4=5,001-10,000
5=10,001-15,000
6= >15,001

8. (a). Household size ……Members?

(b) Do you have children?

1=Yes
2=No

(c) If Yes, how many?.....

(d) For each child where did you deliver from and why?

Child No.	Tick Yes or No		Reason for delivery in the given birthing site
	Hospital (Tick)	Home (Tick)	
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

In all these places of delivery, can you comment on whether you were satisfied with the services you received or not.

Satisfied? 1=Yes
2=No

Explain your answer

…….....
……...
……..

(e) Are you the Head of household?

1=Yes
2= No

If No, who?.....

PART B: SOCIO-CULTURAL FACTORS AFFECTING CHOICE OF BIRTHING SITE

9. Using the score of 1= Strongly Disagree, 2=Disagree, 3=Not Decided, 4= Agree, and 5= Strongly Agree; How would you rate the influence of socio-cultural factors on the choice of place of birth?

No.	QUESTION	SD	D	ND	A	SA
9 (a).	The nature of pregnancy (out of wedlock, within marriage, planned or unplanned) influences the choice of birthing site					
(b)	The choice of birthing site is socially prescribed for women in Marakwet community					
(c)	Men (Husbands) have no role in the choice of birthing site					
(d)	The birthing site chosen defines whether one is a true Marakwet woman (through circumcision/ other rites of initiation)					
(e)	The birth order (whether first or subsequent) influences the choice of birthing site					
(f)	Women who deliver from hospitals are socially stigmatized					
(g)	The Marakwet community have preferred birthing sites (where births ideally occur)					
(h)	There are cultural rites and rituals performed for those who deliver in otherwise places					
(i)	The Marakwet community have traditional objects (e.g herbs) used by traditional birth attendants (TBAs) to assist in the birthing process					
(j)	The Marakwet community has taboos associated with the disposal of the placenta					
(k)	Marakwet community has food habits which regulate pregnancy and birthing					

10. Do you have any comment on social and cultural aspects that I may not have captured, yet crucial determinants of birthing sites?

……
……
……

PART C: HEALTHCARE SYSTEMS FACTORS AFFECTING THE CHOICE OF BIRTHING SITE

11. (a) Do we have any healthcare facility (hospital, health centre, dispensary, clinic, nursing home) within this division that offer maternity services?
1= Yes
2 = No

b) If yes, how many such facilities do you know of? …….

12. (a) How far are these healthcare facilities from your home? ……Km.

(b) Do they charge for the services offered? 1= Yes 2= No

(c) Can the distance and the cost involved, if any, influence one's decision to use or not to use such facilities?
1= Yes (Explain)

……
……
……

2= No (Explain)

……
……
……

(d) Using every 10 women who deliver in this location, how would you rate the use of the available healthcare facilities for delivery?

1= 0-25%
2= 26-50%
3=51-75%
4= 76-100%
Why?
……
……
……

(e) Are the available health facilities sufficient to handle maternity cases in the division?
1= Yes
Explain……
……
……
2= No
Explain……
……
…….

13. Are there adequate medical staff in the healthcare facilities to assist women who require maternity services?
1= Yes 2= No
Comment on your response
……
……
……

14. (a) How would you compare services offered by medical staff in these healthcare facilities with those offered by TBAs?
……
……
……
(b) Do you think the response given in 24 (a) above may influence where one would seek maternity services: either healthcare facility or TBAs? Explain.
1=Yes
Explain……
……
…….
2=No
Explain……
……
……

15. (a) Can you name some of the perceived or real experiences that prevent most of the women from attending healthcare facilities for maternity services?
1)……
2)……
3)……..
4)……..

(b) Can you name some of the perceived or real risks associated with services provided by TBAs?
1)……..
2)……..
3)……..
4)…….

(c) In your own opinion where would you advice one to seek maternity services from?
1= Health care facilities (Explain)

……
……
……

2= Traditional Birth Attendants (Explain)

……
……
……

3= Other (Explain)

……
……
……

16. Is there any recommendation/ suggestion that you would wish to make with regard to issues that we have discussed so far?

……
……
……

Thank you for your participation.

APPENDIX II: KEY INFORMANT INTERVIEW GUIDE

Dear Respondent,

My name is Abraham Rono, a student at Moi University, School of Arts and Social Sciences, pursuing a masters degree in Medical Anthropology. I am currently conducting a research on *Determinants Of Birthing Site Among Women In Endo Ward, Marakwet East Sub-County* as part of the requirements. I will ask you questions about choices that women make about a birthing site. This information will be useful in developing strategies towards making delivery safe. The survey will take approximately 30 minutes. Whatever information you give will be kept strictly confidential.
Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this survey since your views are important.

Yours sincerely,
Abraham Rono.
Tel: 0723169521

1. The demographic factors that influence women's choice of a birthing site in Endo

Ward. Probe the following:

- Age
- Sex
- Level of education
- Marital status
- Occupation
- Level of income
- Religion

2. The socio-cultural factors that influence women's choice of birthing site in the

Ward. Probe the following:

- Attitudes
- Beliefs
- Taboos
- Food habits

3. The healthcare systems factors that influence the women's choice of birthing site in Endo Ward. Probe the following:

-Distance

- Availability of healthcare facilities

- Costs

-Gender of healthcare providers

THANK YOU!

APPENDIX III: FOCUS GROUP DISCUSSION GUIDE

Dear Respondent,

My name is Abraham Rono, a student at Moi University, School of Arts and Social Sciences, pursuing a masters degree in Medical Anthropology. I am currently conducting a research on *Determinants Of Birthing Site Among Women In Endo Ward, Marakwet East Sub-County* as part of the requirements. I will ask you questions about choices that women make about a birthing site. This information will be useful in developing strategies towards making delivery safe. The survey will take approximately 30 minutes. Whatever information you give will be kept strictly confidential.
Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this survey since your views are important.

Yours sincerely,
Abraham Rono.
Tel: 0723169521

1. The demographic factors that influence women's choice of a birthing site in Endo

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- Age
- Sex
- Level of education
- Marital status
- Occupation
- Level of income
- Religion

2. The socio-cultural factors that influence women's choice of birthing site in the

Ward. Probe the following:

- Attitudes
- Beliefs
- Taboos
- Food habits

3. The healthcare systems factors that influence the women's choice of birthing site in Endo Ward. Probe the following:

-Distance

- Availability of healthcare facilities

- Costs

-Gender of healthcare providers

THANK YOU!

APPENDIX IV: IREC APPROVAL LETTER

INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE (IREC)

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

MOI UNIVERSITY
SCHOOL OF MEDICINE
P.O. BOX 4606
ELDORET
Tel: 33471/2/3

Reference: IREC/2013/125
Approval Number: 0001035

14th August, 2013

Abraham Kipkemboi Rono,
Moi University,
School of Medicine,
P.O. Box 4606-30100,
ELDORET-KENYA.

INSTITUTIONAL RESEARCH & ETHICS COMMITTEE
APPROVED
14 AUG 2013
P.O. Box 4606 ELDORET

Dear Mr. Kipkemboi,

RE: FORMAL APPROVAL

The Institutional Research and Ethics Committee have reviewed your research proposal titled:-

"Determinants of Birthing Site among Women in Tot Division, Marakwet East Sub County, Kenya."

Your proposal has been granted a Formal Approval Number: **FAN: IREC 1035** on 14th August, 2013. You are therefore permitted to begin your investigations.

Note that this approval is for 1 year; it will thus expire on 13th August, 2014. If it is necessary to continue with this research beyond the expiry date, a request for continuation should be made in writing to IREC Secretariat two months prior to the expiry date.

You are required to submit progress report(s) regularly as dictated by your proposal. Furthermore, you must notify the Committee of any proposal change (s) or amendment (s), serious or unexpected outcomes related to the conduct of the study, or study termination for any reason. The Committee expects to receive a final report at the end of the study.

Sincerely,

PROF. E. WERE
CHAIRMAN
INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE

cc:
	Director	-	MTRH
	Principal	-	CHS
	Dean	-	SOM
	Dean	-	SPH
	Dean	-	SON
	Dean	-	SOD

APPENDIX V: NCST RESEARCH AUTHORIZATION

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams: "SCIENCETECH", Nairobi
Telephone: 254-020-241349, 2213102
254-020-310571, 2213123.
Fax: 254-020-2213215, 318245, 318249
When replying please quote

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: NCST/RCD/12A/013/110

Date: 16th September, 2013

Abraham Kipkemboi Rono
Moi University
P.O.Box 3900-30100
Eldoret.

RE: RESEARCH AUTHORIZATION

Following your application dated *28th August, 2013* for authority to carry out research on "***Determinants of birthing site among women in Tot Division, Marakwet East Sub-County, Kenya,***" I am pleased to inform you that you have been authorized to undertake research in **Elgeyo Marakwet County** for a period ending **31st December, 2013.**

You are advised to report to **the County Commissioner, the County Director of Education and the County Coordinator of Health, Elgeyo Marakwet 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.

SAID HUSSEIN
FOR: SECRETARY/CEO
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Copy to:

The County Commissioner
The County Director of Education
The County Coordinator of Health
Elgeyo Marakwet County.

APPENDIX VI: LETTER OF PERMISSION FROM COUNTY COMMISIONER

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

COUNTY COMMISSIONER'S OFFICE,
ELGEYO-MARAKWET COUNTY,
P.O. BOX 200-30700
ITEN

Telephone: (053) 42007
Fax : (053) 42289
E-mail: ccelgeyomarakwet@yahoo.com
ccelgeyomarakwet@gmail.com

When replying please quote
PUB/CC/24/2/7
Ref. .....

23rd September, 2013
Date .....

The Deputy County Commissioner,
Marakwet East Sub County,
P.O. Box 281,
KAPSOWAR.

RE: RESEARCH AUTHORIZATION – ABRAHAM KIPKEMOI RONO

The above named has been authorized to undertake research on "Determinants of birthing site among women in Tot Division, Marakwet East Sub County for a period ending 31st December, 2013.

Accord him necessary assistance.

COUNTY COMMISSIONER
ELGEYO MARAKWET COUNTY.

M. K. LILAN
For: COUNTY COMMISSIONER
ELGEYO MARAKAWET.

c.c. County Director of Education,
ELGEYO MARAKWET.

MKL/sjk

APPENDIX VII: LETTER OF PERMISSION FROM COUNTY DIRECTOR OF EDUCATION

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
STATE DEPARTMENT OF EDUCATION

Telegram:.....
Telephone: Iten 0202646437/38
When replying please quote
Email: cdeelgeyomarakwet@gmail.com

THE COUNTY DIRECTOR OF EDUCATION
ELGEYO MARAKWET
P.O. BOX 214 – 30700
ITEN.

Date: 23/09/2013

REF: CDE/EMC/T/26/VOL.I/23

ABRAHAM KIPKEMBOI RONO
MOI UNIVERSITY
P.O. BOX 3900-30100
ELDORET.

RE: RESEARCH AUTHORIZATION.

Following your request application dated 15th September, 2013 for permission to carry out research on ***"DETERMINANTS OF BIRTHING SITE AMONG WOMEN IN TOT DIVISION, MARAKWET EAST SUB-COUNTY,*** you are allowed to undertake your research for a period ending 31st December, 2013.

COUNTY DIRECTOR OF EDUCATION, ELGEYO MARAKWET, P. O. Box 214, ITEN.

SABINA ARONI
COUNTY DIRECTOR OF EDUCATION
ELGEYO MARAKWET.

COPY TO:
1. NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION.
2. SUB-COUNTY DIRECTOR OF EDUCATION-MARAKWET EAST DISTRICT.

APPENDIX VIII: LETTER OF PERMISSION FROM DEPUTY COUNTY COMMISIONER

REPUBLIC OF KENYA
OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND COORDINATION OF NATIONAI GOVERNMENT

Telegrams: "Districter" Kapsowar
Telephone: 053-361555
Fax: 053-361555
E-mail:dcmarakweteast@gmail.com

DEPUTY COUNTY COMMISSIONER
MARAKWET EAST SUB COUNTY
P.O BOX 281
KAPSOWAR
DATE: 19th September, 2013

When replying please quote;
REF: MRKE PUB 24/1/VOL.1/85

ALL CHIEFS
ENDO WARD

RE: PERMISSION TO CONDUCT RESEARCH

The Institutional Research and Ethics Committee of the Moi University, School of Medicine has authorized Mr Abraham Kipkemoi Rono to carry out a research on ***''Determinants of Birthing Site Among Women in Tot Division, Marakwet East Sub County, Kenya''***

The research is to be carried out in Tot Division for a period of 1 year and is expected to expire 14th August 2014.

Kindly accord him the necessary assistance.

T.O.OTUNGA
FOR DEPUTY COUNTY COMMISSIONER
MARAKWET EAST SUB COUNTY

CC

ABRAHAM K.RONO
P.O.BOX 3 – 30100
ELDORET