THE UTILIZATION OF SKILLED DELIVERY ATTENDANCE FROM MATERNAL SHELTERS IN SAMBURU COUNTY, NORTH RIFT VALLEY, KENYA

BY

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DECLARATION

This research project is my original work and has not been presented for examination in any other university.

Signature _____ Date_____

Teresiah Wanjiku Kamau

This research project has been submitted for examination with my approval as a university supervisor.

Signature _____ Date _____

DR. Stevie M. Nangendo

DEDICATION

Special dedication to the almighty God for giving me the strength to carry out this research. To my sons, Martin Njoroge and Kennedy Njoroge, for their emotional support and encouragement throughout the research. To my parents for their great love for education.

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May God bless you all abundantly.

ABSTRACT

A report by the Kenya's Ministry of Health (2016) shows that Samburu County is one of the counties in Kenya with a high burden of poor maternal and child health outcomes, low coverage rates and large underserved populations. The quality of health care services in Samburu County was rated good but attendance on antenatal and post-natal clinics was too low. Most of the empirical evidence and arguments across the world suggest that maternal shelters save mothers and children's lives. However, little quantitative research has been conducted to assess the utilization of skilled delivery attendance from maternal shelters specifically in Kenya. This research sought to address this gap in knowledge. The study focused on the effect of the utilization of skilled delivery attendance from maternal shelters in Samburu County, North Rift Valley Kenya. The objectives of the study were to assess the level of community awareness of maternal shelter interventions in Samburu County: to determine the effectiveness of maternal shelter services in improving access to skilled delivery attendance in Samburu County and to establish the key factors influencing the utilization of maternal shelters among women in Samburu County. The methodology used in the study was a descriptive design; simple random sampling was used to identify the study respondents. The study found that 52% of the respondents were aware of maternal shelters, more than half of them reported that the services at the maternal shelters were effective and a majority 43% reported that it enhanced utilization of skilled birth attendance. The study concluded that maternal shelter awareness and effective services at the shelters enhanced utilization of skilled delivery attendance from maternal shelters. The study recommends that there is need to adopt a multi- sectorial approach to holistically address the factors that negatively influence maternal shelter utilization.

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ABBREVIATIONS

AMREF	-	African Medical Research Foundation
ANC	-	Antenatal Care
CDIP	-	County Development Integrated Program
CHVs	-	Community health volunteers
DHIS		District Health Information System
GDP		Gross Domestic Product
HIV	-	Human Immunodeficiency Virus
MDG	-	Millennium Development Goals
MMR	-	Maternal Mortality Rate
MWH	-	Maternal Waiting Home
NACOSTI	-	National Commission for Science, Technology and Innovation
PMEL	-	Partnership Management, Evaluation and Learning
RMNCAH	-	Reproductive Maternal Neonatal Child and Adolescent Health
SDG	-	Sustainable Development Goals
UN	-	United Nations
UNFPA	-	United Nations Fund for Population Activities
UNICEF	-	United Nations Children's Fund
WHO	-	World Health Organization

CHAPTER ONE: INTRODUCTION

1.0 Overview of the chapter

This study sought to examine the utilization of skilled delivery attendance from maternal shelters in Samburu County, North Rift Valley, Kenya. This chapter presents the background of the study, statement of the problem, purpose of the study, research objectives, research questions, and scope of the study, significance of the study, assumptions and operational definition of terms.

1.1 Background to the study

Maternal shelters, or maternal waiting homes, are domestic homes built close to a health care facility that has availability of emergency obstetric care, antenatal services and skilled birth attendants like nurses, doctors or mid-wives with basic midwifery skills (Sialubanje *et al.*, 2015). The same is echoed by Nabudere *et al.* (2012) who define maternal shelters as residential facilities that presents swift access to a medical centre that has ability to offer emergency child delivery services. According to Sialubanje *et al*. (2015), pregnant mother with life threatening child-birth complication and those who stay long distances from hospitals stay in maternal shelters to await child birth and are taken to the nearest hospital just before delivery or promptly if presented with delivery difficulties. Maternal shelters have been endorsed by World Health Organization as an all- inclusive constituent platform that provide affordable link for women to skilled birth attendance and minimise pregnancy related deaths and maternal indisposition (Lori *et al*., 2013).

According to Satti et al. (2013), among the strategies that can address the geographic breach in obstetric services between women in rural areas with limited access to equipped health facilities and urban areas where the services are unavailable is maternal shelters. The same is echoed by Abdulkadir (2015) who states that the World Health Organization also view maternal shelters as important components of maternal care especially where women stay far away from health care centres and with poor means of communication. Donor organizations and governments have reached a consensus that maternal shelters located near health facilities that are managed by skilled birth attendants are the best means that can reduce maternal mortality (Lori *et al*., 2013). However, according to Quansah (2013), despite such interventions, estimates show that remote rural environments experience high maternal mortality because health systems in most health facilities are inadequate.

United Nations members in 2000 adopted the Millennium Declaration which set eight Millennium Development Goals. Among the goals, maternal mortality reduction by two thirds featured as goal number five (Baral *et al*., 2010). According to UNICEF (2015), the same was adopted in the current Sustainable Development goals with an aim to minimise maternal mortality ratio to below 70 per 100,000 live birth as set in SDG 3. In many parts of the world however, maternal mortality is still relatively high in spite of commitment set out in both the MDGs and SDGs (UN, 2013). Globally, the current maternal mortality prevalence is 800 deaths of women in the child bearing age (15-49 years) every day and in every death another 30 women suffer from debilitating injuries as a result of maternal-related complications (WHO, 2015). Today, maternal mortality indices around the world have shown marginal reduction with only 45% reduction being achieved at the culmination of the MDGs in 2015 (UNICEF, 2015).

Satti *et al.* (2013) states that one of the major health concerns in developing countries is childbirth related mortalities. In their study, Lori *et al*., (2013) nearly 99% of the world's deaths resulting from pregnancy- related difficulties happen in developing countries. According to Lori *et al*. (2013), poor health systems, inadequate skilled birth attendants and high fertility rate prevalence attribute to this. For instance, Asia, despite having recorded very fast growth globally in the recent decades, carries the global deaths burden of 60% of new- borns, 34% of children below five years and more than 40% of maternal deaths each year (Anderson *et al.*, 2011). In their study, Alemayehu & Mekonnen (2005) states that statistical estimates indicate that China, India, Afghanstan, Indonesia, Pakistan and Bangladesh all from Asia in 2008 were among the ten topmost states with the highest global maternal mortalities.

According to Mazalale *et al.,* (2015), the world's uppermost maternal mortality ratio of 500 deaths in every 100,000 live births is in Sub-Saharan Africa. Uganda for instance, suffers about 13% of her disease burden from pregnancy related causes as shown in a study by (Nabudere *et al*., 2012). Additionally, (UN, 2013) reported that close to 3000 women die annually in Zimbabwe while giving birth resulting to the country losing about 1.2% of their GPD each year as a result of maternal related complications. Similarly, according to Alemayehu & Mekonnen, (2005) Ethiopia, reported rise in maternal mortality ratio from 673 deaths/ 100,000 live births in 2005 to 676/100,000 in 2015. Mwangome *et al.* (2011) in their study show that that in sub-Saharan Africa, very few childbirths are conducted by qualified health care workers with basic midwifery skills.

According to Wangalwa *et al*. (2012), Kenya's estimated maternal mortality ratio of 488 women per 100,000 live births shows that the maternal and neonatal health inclination is a reflection of other countries in sub-Saharan African. According to the Kenya Demographic and Health Survey of 2014, this trend has remained so in the last ten years. KDHS, 2014 further states that 14% of Kenyan women in the age of 15 to 49 years die each year due to pregnancy related illnesses (Government Press, 2014). The UNFPA, 2014 maternal annual report showed that 98% of all maternal deaths in Kenya that are caused by high obstetrics risks are recorded by only fifteen counties namely; Marsabit, Turkana, Wajir, Taita Taveta, Samburu, Garissa, Lamu, Siaya, Vihiga, Homa Bay, Kisumu Isiolo, West-Pokot, Mandera and Migori. In Kenya progressive strides have been made by the government to enhance skilled birth assistance to every childbirth including rolling out many interventions and policies (Moindi e*t al,* 2016). The United Nations Population Fund in 2007 scaled up the intervention by setting up a number of maternal shelters in selected districts in Kenya (Abdulkadir, 2015). However, according to Mwangome *et al*. (2011) very few women in Kenyan countryside deliver under the care of qualified health personnel making maternal mortality disparities very rife among counties in the use of skilled birth attendance.

Samburu County has not been performing well in some health indicators, especially in maternal new-born and child health. Many interventions have been introduced to improve these indicators including free health services in all tier-2 facilities and free maternity services in all health facilities (Samburu County Government, 2015). The introduction of maternal shelters in the County increased the number of skilled attendance deliveries from 1 in 2012 to 21 in 2013, 40 in 2014 and 41 as of September 2015 (Mutea, 2015). However, lengthy distances to health care centres, low levels of income and education in Samburu County exacerbates home deliveries making it seen as a cultural norm. Additionally, despite the introduction of maternal shelters in Samburu County the proportion of skilled birth attendance stands at 19 percent way below the national 62% (Mutea, 2015). Therefore, there was a need to assess the utilization of skilled delivery attendance from maternal shelters in the County.

1.2 Statement of the Problem

According to Wanjira *et al.* (2011), provision of care to mothers and their babies before and after delivery by trained medical health workers with appropriate information and skills ensures safe deliveries for all. Studies by D'Ambruoso *et al.* (2008), Gebrehiwet, (2015), Satti *et al.*, (2013) shows that in spite of low cost and effective interventions coupled with intensive global

promotion and states commitment to achieve set goals with an effort to enhance maternal health, developing countries still experience high maternal mortality rates. For example, maternal shelters were introduced in many developing countries as part of an all-inclusive initiative to reduce pregnancy related deaths through increased access to skilled birth aid. However, their effectiveness is still contentious (Satti *et al.*, 2013). To date, the introduction of maternal shelters has not attained a steady decline in child bearing related deaths in most developing states, specifically in Africa (Lori *et al.*, 2013).

Several studies have also explored the impact of maternal shelter outcomes across the globe. For example, Nyirenda and Maliwichi (2016) suggest that women in countries with poor health systems are 23 times more threatened by maternal death compared to those in resourceful states. Kelly *et al*. (2010) found that women admitted via maternal shelters in Ethiopia had less stillbirth and maternal death rates compared to those that did not use the shelters.

In Kenya, pregnancy-related deaths have shown minimum reduction despite national and various stakeholder efforts to curb the same (Ogolla, 2015). According to the Ministry of Health (2016), the present maternal related deaths and illnesses levels are approximately 414 deaths per 100,000 live births which the ministry describes as high compared to global levels. Likewise according to Kitui *et al.* (2013) in Kenya, since the early 1990s, less than 50% of women deliver in medical facilities where there is likelihood of accessing skilled delivery attendance. In Kenya, there are more health centres in urban areas compared to the rural areas thus presenting higher chance of skilled delivery attendance in the former while a decline of the same has been observed in the latter (Wanjira *et al*., 2011). In Samburu County, for instance, only 19.8% of women seek skilled birth attendance, a proportion lower than the national rate which is at 62% despite the maternal shelter initiatives (Mutea, 2015).

According to a report by the Health Ministry (2016), Samburu County is among Kenya's counties with a high burden of poor maternal and child health outcomes, low coverage rates and large underserved populations. Muithya (2016) found that as much as health care services were evaluated as of good quality in Samburu County, there was very low consumption of prenatal and post- natal services. Therefore, most of the empirical evidence and arguments across the world suggest that maternal shelters save mothers and children's lives. Scanty quantitative studies to assess the utilization of skilled delivery attendance from maternal shelters have been undertaken, specifically in Kenya. This research seeks to answer the following questions:

i. What is the level of community awareness of maternal shelter interventions in Samburu County?
ii. How effective are maternal shelter services in improving access to skilled delivery attendance in Samburu County?
iii. Which are the factors that influence the utilization of maternal shelters among women in Samburu County?

1.3 Objectives of the study

1.3.1 General objective

To assess the utilization of skilled delivery attendance from maternal shelters in Samburu County, North Rift, Kenya.

1.3.2 Specific objectives

i. To assess the level of community awareness of maternal shelter interventions in Samburu County.
ii. To determine the effectiveness of maternal shelter services in improving access to skilled delivery attendance in Samburu County.
iii. To establish the key factors influencing the utilization of maternal shelters among women in Samburu County.

1.4 Assumptions of the study

i. There is awareness by the local community of maternal shelter interventions within Samburu County.
ii. Maternal shelter services are effective towards improving access to skilled delivery attendance in Samburu County.
iii. There are factors influencing the utilization of maternal shelters among women in Samburu County.

1.5 Justification and significance of the study

In Kenya, maternal mortality is one of the major developmental threats to the achievement of the war against poverty, ignorance and diseases as stipulated in the Kenya Sessional Paper No. 10 (1966), and Vision 2030 (Government of Kenya, 2015). This is due to the cycle of poverty that results from maternal deaths-led socio-economic chain of disruptions. This study is in tandem with Kenya's Reproductive Maternal Neonatal Child and Adolescent Health

(RMNCAH) Investment Framework (2016) that is the main driver for Kenya to realize Vision 2030, the Constitution of Kenya 2010 and the entire international and regional treaties domesticated by the government of Kenya in relation to maternal and neonatal mortality reductions. Thus, there is a need to study the role played by maternal shelters in increasing access to skilled delivery attendance because of the consequences of maternal mortality in Kenya, RMNCAH Investment Framework (2016).

This study will also be of significance to women across the world as it will establish what factors influence the utilization of maternal shelters and how effective maternal shelters are towards skilled delivery attendance. The County Government of Samburu may also use the findings to assess the level of maternal shelters usage among women in the region. The study findings shall be of value to decision making organization like the Ministry of Health which may use its findings to develop policy strategies towards maternal shelters usage and skilled delivery attendance. Finally, the findings of the study will reduce the knowledge gap on skilled delivery attendance and the usage of maternal shelters in Kenya.

1.6 Scope of the study

This study was conducted in all the three administrative sub-counties of Samburu County, namely, Samburu East, Samburu North and Samburu Central, North Rift Valley Kenya. Women in reproductive age between 18–49 years who had used maternal services within the last twenty three months and who reside in Samburu County qualified as the respondents. The study assessed the utilization of skilled delivery attendance from maternal shelters. Through this, data collection was conducted on community level of awareness of the existence of maternal shelters, assessed effectiveness of maternal shelter services in improving access to skilled delivery attendance as well as established positive and negative factors that influence the utilization of maternal shelters among women in the County. The recruitment of all the participants was done in the three study sites that is the three sub-counties, each represented by one health care facility that offer maternal shelter services among the five dispensaries with maternal shelter interventions in the County. The study administered survey questionnaires to women within the reproductive age, conducted focus group discussions to women as well as key informant interviews with the health care providers at the antenatal and postnatal care clinics, and stakeholders who support maternal shelter interventions in the County. Women outside the reproductive age bracket were not involved in the study since the study only

targeted women who had used maternal services. The study was descriptive in nature and adopted the skilled attendance theory as its guiding theory.

1.7 Limitations of the study

The main study limitation was language barrier due to the high level of illiteracy in the County. However, to address this, the services of a qualified research assistants from the county who understand and speak the local dialect was engaged.

1.8 Definition of terms

a) Awareness

This refers to knowing that maternal shelters exist.

b) Maternal death

This refers to the death of a woman that does not arise from an accident or incidental related but that which is heightened by pregnancy. The death must be either during pregnancy or within 42 days of pregnancy termination.

Maternal morbidity

This refers to any health condition as a result of or motivated by child bearing or pregnancy that adversely affect a mother's wellbeing.

c) Maternal shelters

These are also referred to as maternity waiting homes, maternal waiting areas, maternal huts or maternal manyattas. They are facilities located in close proximity to health institutions equipped with equipment and qualified health professional with basic skills to assist in obstetric emergencies and offer antenatal care.

d) Skilled birth attendance

This refers to the process of giving adequate care to a mother by a qualified health professional during labour, delivery and the early post-pregnancy period.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This section reviews available studies related to the utilization of skilled delivery attendance from maternal shelters. The section specifically previews literature on skilled delivery attendance, maternal shelters awareness and utilization, the effectiveness of maternal shelters in improving access to skilled delivery attendance and an identification of the key factors influencing the utilization of maternal shelters. The section also presents the conceptual framework and its relevance to the study.

2.2.1 Skilled delivery attendance

According to (Abdulkadir, 2015), this refers to the process of giving adequate care to a mother by a qualified health professional during labour, delivery and the early post-pregnancy termination period. (Graham *et al.*, 2003) states that various enablers are essential for an effective skilled delivery attendance process. These includes an effective and efficient health system with viable referral and communication channels, qualified heath care workers with basic midwifery skills, adequate hospital provisions, equipment and effective infrastructure. On the other hand, a skilled delivery attendant is one who is accredited as a health professional and has knowledgeable and practical skills to safely assist mothers and their babies during child birth in hospital, home or health centre set-ups. Health professional included in skilled attendants are; midwives, doctors, and nurses with midwifery and life-saving skills. Traditional birth attendants whether trained or not are not included in this definition (WHO, 2006).

According to (Kanini, 2012), when a mother develop complications threatening her life or that of her new-born, skilled attendance is viewed as the only most effective intervention that guarantees safe motherhood by ensuring prompt delivery assistance to emergency obstetric and new-born care. When a delivery takes place in a hospital, it presents a clear proof that skilled delivery was administered and acts as a reducing factor in maternal mortality (Kreyberg & Helsingen, 2010). According to Kanini (2012) despite the fact that skilled attendance plays a major role in protecting the health of new-borns, studies shows that only 58% of all deliveries are reported as attended by skilled birth attendants in the developing states. For example, only 46% of mothers who give birth in West and Central Africa, receive assistance from a skilled birth attendant. According to (WHO, 2006), the number of rural mothers who give birth under the care of a qualified health personnel is only half of their counterparts in the urban areas.

Despite worldwide accelerated progress to increase access to skilled birth attendance, a depressive health equity gap still exists between developed and underdeveloped nations. According to UNICEF (2012), only 2% of women are unlikely to access assisted child birth in industrialised states like commonwealth states and Eastern and Central Europe as opposed to 59% of their counterparts in underdeveloped states like sub-Saharan Africa and Southern Asia. The disparity increases further between women in urban and rural areas where globally 60% of rural women have chances of accessing skilled childbirth attendant compared to 89% in urban areas. Further inequality is experienced based on economic status where globally 67% of poor women are unlikely to access skilled care at childbirth while only 11% may not receive the same among rich women, UNICEF (2012).

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

2.2.2 Maternal shelters awareness and utilization

A study by Marjorie and Oona (2003) found that the deaths of mothers in underdeveloped countries that take place during labour, childbirth and soon after delivery contribute to almost half of all maternal deaths. Further, they found that the place where a delivery occurs, that is, whether in a qualified health facility which is equipped with essential emergency obstetric services or not, and who assists in the delivery, that is, the presence of a professional birth attendant are key factors in reducing such deaths. The study also revealed that home deliveries in the absence of care from a skilled birth attendant account for half of all deliveries that occur in developing countries. The same is echoed by Gure (2013) whose study findings indicate that the utilization of skilled delivery services reduces significantly the effects related to complications that may arise during child birth. Many of these obstetric complications are preventable if an early diagnosis and proper management is constituted promptly (Gure, 2013).

In Uganda, a study by Nankwanga (2014) explored the uptake of post-partum services and factors influencing its consumption at Mulago and Mengo hospitals and found that most

women lacked awareness of postnatal services and other services offered in maternal shelters. In their research, Stekelenburg *et al*. (2004) assessed the level of the use of maternal related health services in Kalabo District, Zambia. The study found that insufficient health education offered during antenatal clinic contributed to mothers who would otherwise prefer to deliver in a clinic not do so. In Sudan, El Shiekh and Kwaak (2015) found that there was too low usage of maternal services and recommended that mothers be brought closer to emergency obstetric services or enhance community demand for services by introducing evidence-based strategies.

In Kenya, safe motherhood approaches such as the provision of not-for-pay maternity services are still being underutilized by many women especially those in low income, rural and remote settings of the country. As a result, maternal mortality has resulted to be very high in some parts of Kenya (Ogolla, 2015). A study by Lonkhuijzen *et al.* (2014) also shows that less adoption of services in mother and new- born health care results to high maternal mortality ratios. Similarly unawareness of the services contribute to the low utilization resulting to high maternal and prenatal mortality and morbidity

The coverage of maternal health care in Kenya is almost similar nationally but differences are still evident especially among urban and rural areas, in the level of the education of women and the level of household welfare (Tesi, 2012). According to Muithya (2016), women with higher education are much more likely to receive antenatal care from a medical doctor than are those with no education. Accordingly, a majority of professional and educated women in urban areas are more likely to involve in maternal health care systems than the women who are less educated and come from rural areas. Therefore, the community must be well informed about the costs and benefits of hospital deliveries while medical services should be more sensitive to community needs and preferences (Mwangome *et al.*, 2011).

A study by Mramba *et al* (2010), on the reasons for the low utilization of maternal shelters in rural Kenya, revealed that the low utilization can be attributed primarily to the lack of awareness of its existence and aims. Additionally, Mramba *et al.* (2010), found that a newly built maternal shelter in Kilifi County was used by less than 10% of women who delivered in hospital. Thus, awareness about the existence of the maternal shelter was a great barrier as 72% of pregnant women did not know about its existence while 95% indicated they would need their husband's permission to use the maternal shelter. The study recommended that healthcare workers must play a key role in improving awareness and educating pregnant women on maternal health and safe birth plans such as the use of the maternal shelters to facilitate prompt access to the obstetric care. A research by Onyango (2014) also found that there is a high

percentage of women not delivering at health facilities in Kajiado Central District despite interventions both by the government and NGOs, especially through the implementation of the community strategy.

A study by Options Consultancy Services Ltd, Partnership Management, Evaluation and Learning (PMEL, 2015) found that community awareness of the existence and aims of maternal shelters is key to enhancing their utilization. For maternal shelters to realize their essential role in the decentralization of obstetric care and increased access to facility-based skilled delivery by providing close residence to health facilities and reduced distance barrier to accessing skilled delivery care, community awareness is important and should begin from community need assessment and throughout the entire implementation and management phase (PMEL, 2015).

A study by UNICEF (2013) found that intensive awareness campaigns on maternal issues like the establishment of maternal shelters in rural remote villages in Eritrea have contributed heavily to their successful adoption and utilization. With the low level of seeking skilled birth attendance (19.8%) by Samburu women, the study is essential to establish the level of the awareness of maternal shelter interventions and how it contributes to the utilization of the same.

2.2.3 Effectiveness of maternal shelter services in improving access to skilled delivery attendance.

Maternal shelters are aimed at improving access to facility-based skilled delivery services in rural areas (Sialubanje *et al*., 2015). The intervention has also been advocated as a way of overcoming geographical barriers in such settings and improving access to care and maternal and neonatal outcomes. A promotion of the use of maternal shelters provides an alternative for the fact that distances between health facilities and the communities are still problematic (Ven, 2009). Maternal shelters have demonstrated such benefits as an increased proportion of facility-based deliveries, improved maternal health, a lower risk of prenatal death, decreased incidence of obstructed labour, improved access to essential and emergency obstetric care ((Lori *et al*., 2013).

A study by Marjorie and Oona (2003) in Central Ethiopia found that 13 maternal deaths had occurred to women who had a direct referral to a hospital while no death had occurred to mothers whose referral was through maternal shelters. The study further established that stillbirths were reported 10 times higher in hospitals with direct admissions than those in hospitals with maternal shelter referrals. In their study, Lonkhuijzen *et al.* (2009) assessed the

effects of a maternity waiting facility on maternal and prenatal health. The study found that there was insufficient evidence to determine the effectiveness of maternity waiting facilities for improving maternal and neonatal outcomes.

Nabudere *et al.* (2013) also explored the ways of improving access to skilled attendance at delivery in Uganda. The study concluded that maternal shelters and working with the private-for-profit sector to facilitate deliveries in health facilities are promising complementary interventions that have been piloted in both the public and private health sectors and a combination of strategies was needed to effectively implement the proposed options.

A study in Kenya by Wangalwa *et al.* (2012) evaluated the effectiveness of the strategy in improving maternal and neonatal health outcomes. The study found that a significant increase in essential maternal and neonatal care practices demonstrates that a community health strategy is an appropriate platform to deliver community-based interventions. Hussein *et al*. (2012) assessed the effects of referral interventions that enable pregnant women to reach health facilities during an emergency after the decision to seek care is made. The study found that the effects of interventions on maternal mortality were unclear but referral interventions usually improved the utilization of health services. Adam *et al*. (2014) examined the effectiveness of a community health worker project conducted in rural Kenya that sought to promote improved knowledge of maternal new-born health and to increase deliveries under skilled attendance. The study found that the delivery of health messages by a community health volunteer increased knowledge of maternal and new-born care among women in the local community and encouraged deliveries under skilled attendance. The available literature, however, does not venture into the effectiveness of maternal shelters in improving access to skilled delivery attendance.

2.2.4 Key factors that influence the utilization of maternal shelters

Most women appreciate the important role maternal shelters play in improving access to skilled birth attendance and improving maternal health outcomes. However, several factors such as women's lack of decision-making autonomy, prevalent gender inequalities, low socio-economic status and socio-cultural norms prevent them from utilizing these services (Sialubanje *et al*., 2015). According to Elmusharaf *et al.* (2015), the main reasons for maternal deaths within the health system are a lack of skilled birth attendants, remoteness, delay in referral for emergency obstetric care, delay or poor implementation of interventions at the

facility level and vertical delivery of care in which single elements of care are implemented without connections with the comprehensive care.

Several studies have also explored the various factors influencing the utilization of maternal shelters. For instance, Tebekaw *et al.* (2015) examined the factors determining women's preference for places to give birth in Addis Ababa, Ethiopia. The study found that education, wealth quintile, the age of the respondent, the number of children, pregnancy intention and cohabitation had net-effects on women's preference for places to give birth. Karkee *et al.* (2013) also reviewed the factors that impede women from utilizing maternity services and those that encourage such use. The study found that the education of couples, their economic status and antenatal check-ups appeared to have positive influences. On the other hand, traditional beliefs and customs, low status of women, long distances to facilities, low levels of health awareness and women's occupations tended to impact negatively on service uptake.

In their study, Nakambale *et al.* (2014) studied the factors affecting the utilization of skilled attendants at birth by pregnant women in Kasama District in Zambia. The study found that women are shunning delivering in health facilities by skilled attendants because of the presence of male midwives, the use of traditional herbs to quicken labour and low levels of knowledge of the danger signs of pregnancy and labour. Similarly, Sialubanje *et al*. (2015) found that the non-availability of funds to buy the requirements for the baby and mother to use during labour at clinics, concerns about a relative to remain at home and take care of children affect the usage of maternal shelters. Additionally, concerns about the poor state and lack of basic social and healthcare needs in the maternal shelters such as adequate sleeping space, beddings, water and sanitary services, food and cooking facilities prevent women from using maternal shelters.

In India, Ravi and Kulasekaran (2014) assessed the socio-demographic factors that influence women's choices of the places of delivery in rural areas. The study revealed that education, age at marriage, birth order, standard of living index and exposure to the mass media appeared strong influencing factors for the choices of the places of delivery. A study by Ghosh *et al.* (2015) also revealed that apart from socio-demographic and economic factors (such as household affluence, women's education, birth order, uptake of comprehensive check-ups, advice regarding danger signs of pregnancy and the household's socio-religious affiliation), supply-side factors such as availability of skilled birth attendants in the village and all-weather roads have significant effects on seeking skilled assistance. A study by Miller (2015) established that the state of maternal shelters in Zambia was a limitation to their utilization

since the maternal shelters lacked social amenities like adequate bathrooms, cooking places and foodstuffs and rest places.

In Nepal, Baral *et al.* (2010) explored the factors affecting the uptake of skilled birth attendants for delivery and the issues associated with women's roles and choices of maternal health care service during delivery. The study found that socio-demographic, economic, socio-cultural and religious factors were responsible for the utilization of maternal health services but very few studies discussed how and why these factors were responsible for the utilization of skilled birth attendants in pregnancy. A study by Mwangome *et al.* (2011) found a number of barriers to seeking skilled attendants at birth including: lack of resources (monetary, transport and access), customer care (lack of partnership between mother and health professionals), and knowledge and beliefs (lack of knowledge about pregnancy and maternal health).

A study in rural Malawi by Mazalale *et al*. (2015) on the factors associated with delivery outside a health facility, found that unmarried women were significantly more likely to deliver outside a facility while women from households with higher socio-economic status and in urban areas were significantly less likely to deliver outside a facility. Banke-Thomas *et al*. (2017) assessed the factors influencing the utilization of maternal health services by adolescent mothers in low-and middle-income countries and found that the education of the adolescent mother and her partner were the commonest significant factors that influenced maternal health shelters utilization. In Zambia, Sialubanje *et al*. (2015) found that most women appreciated the important role maternal health shelters play in improving access to skilled birth attendance and improving maternal health outcomes. However, several factors such as women's lack of decision-making autonomy, prevalent gender inequalities, low socio-economic status and socio-cultural norms prevent them from utilizing these services.

In Kenya, Lidoroh (2013) analysed the determinants of the utilization of maternal health care services among women of reproductive age in Western Province, and found that women who are married, younger and in the high socio-income bracket are likely to take up maternal health care services compared to women who are single, older and have a low socio-income. In his study, Gure (2013) also explored the factors associated with the utilization of hospital deliveries in Garissa and found that age, non-existence of cultural/religious beliefs, previous history in delivering and distance were associated with the utilization of hospital delivery. Kitui *et al.* (2013) found that living in urban areas, being wealthy, more educated, using antenatal care services optimally and lower parity strongly predicted where women delivered and so did religion, ethnicity, and type of facilities used. Onyango (2014) found that knowledge of HIV

status, use of modern family planning methods, ownership of livestock and education levels had significant associations with health facility delivery in Kajiado Central District.

2.3 Theoretical framework

2.3.1 Skilled Attendance Theory

This study will be guided by the skilled attendance theoretical approach by Graham and Bell (2000). This approach illustrates how skilled attendance is effective in the prevention of maternal mortality and morbidity. The theory focuses on the importance of creating an enabling environment and addressing health systems supply and demand–side barriers (Kaunda Katenga, 2010). The supply-side factors are the availability of skilled attendants and their abilities to provide the required care, availability of an enabling environment of resources and referral systems and services accessibility, while the demand-side factors are community awareness of the services and its ability to utilize the services optimally (Graham & Bell, 2000).

The skilled attendance theoretical approach illustrates the complexity of the relationship between structures and inputs. Structures refer to political and policy environments, professional associations and role, social and cultural environments while inputs include human resources, education, quality of care, standards and protocols, financing, community involvement, health systems and referral mechanisms. The theoretical approach also illustrate the processes such as health-care delivery which are required to achieve the desired outcomes like skilled attendance, reduction in maternal and new-born mortality and morbidity and increase in job satisfaction (Adegoke *et al.,* 2011). Graham *et al.* (2003) analysed the evidence for skilled attendance and suggested that it is a mix ratio between different types of skilled attendants that is important to maternal mortality reduction.

Graham *et al.* (2003) postulate that the skilled attendance theoretical approach can be conceived as encompassing: 1) a partnership of skilled attendants (health professionals with the skills to provide care for normal and/or complicated deliveries), and 2) an enabling environment of equipment, supplies, drugs and transport for referrals. According to the approach, the indicator most commonly used to measure skilled attendance is the percentage of deliveries with a health professional. This information is obtained from community-based surveys by asking women to identify the attendant at each of their deliveries over the past three to five years (Hussein *et al*., 2004).

2.3.2 Relevance of the theory to the study

The proposed study seeks to determine the utilization of skilled delivery attendance from maternal shelters. The skilled attendance theory is relevant in guiding the specific objectives of this study because the demand for skilled delivery attendance may be enhanced or negatively influenced by various factors like personal beliefs, cultural expectations or socio-economic factors. The theoretical approach is, therefore, relevant in guiding the study because it outlines an enabling environment based on supply and demand-side factors that may enhance or limit utilization of skilled deliveries in maternal shelters. The supply-side factors are the availability of skilled attendants and required resources while the demand-side factors are community awareness of the services and its ability to utilize the services optimally. This, therefore, provides a guide to assessing how both the dependent (maternal shelters awareness, effectiveness of maternal shelters services and utilization of maternal shelters) and intervening variables (socio-cultural factors, demographic factors, attitude and personal issues such as gender roles and autonomy in decision making) influence the utilization of skilled delivery attendance in maternal shelters.

The theory further outlines how to measure skilled attendance by identifying the percentage of deliveries with a health professional and will be an important guide in data analysis. Further, the theory states that information is obtained from community-based surveys by asking women to identify the attendant at each of their deliveries over the past three to five years therefore guiding the method of data collection to be used in this research.

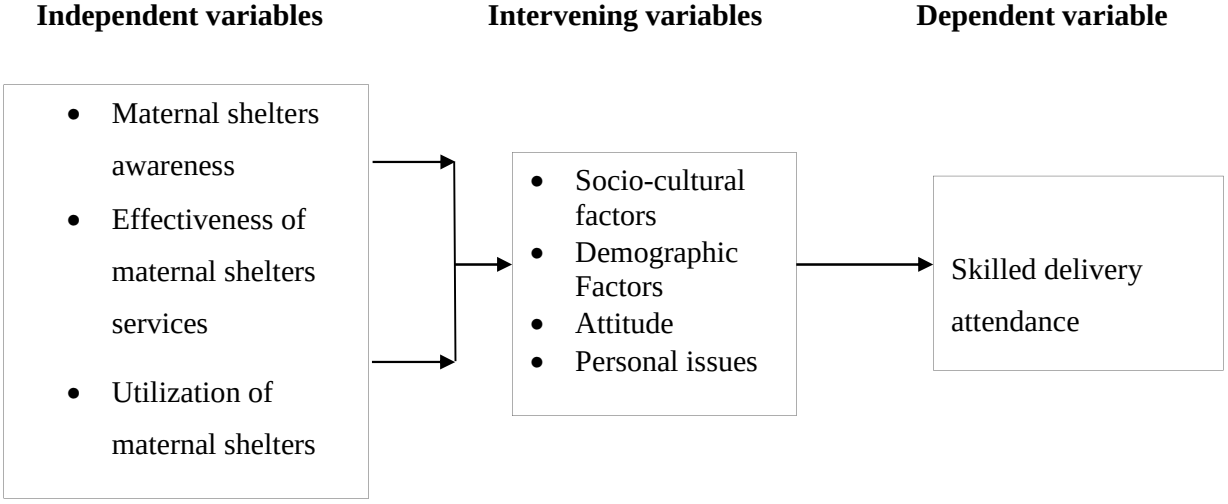
According to the skilled attendance theoretical approach the demand for delivery by the community is met by the health system, which is equated to the enabling environment for skilled attendance (Hussein *et al*., 2004). This approach identifies issues concerning its operationalization at the health centre level. It identifies three stages which are important in understanding service utilization. The first stage looks at the extent to which the health system at the health centre level has made quality maternal health services available and accessible to the women, therefore, guiding the first specific objective on establishing community awareness of maternal shelter services. The second stage looks to the extent at which women optimally utilize the quality services and will guide the second objective on assessing the effectiveness of maternal shelter services to increase skilled delivery attendance to women of reproductive age in Samburu County. Lastly, the third step examines the determinants of service utilization (Katenga-Kaunda, 2010), and is important in informing the study the factors that influence the utilization of maternal shelters among the women of Samburu.

Therefore, the skilled attendance theoretical approach can be used to assess the utilization of skilled delivery attendance from maternal shelters. As such, awareness of the availability of maternal shelters and effective services from them can enhance access to skilled attendance though there are several factors which may influence the utilization of maternal shelters.

2.4 Conceptual framework

The conceptual framework illustrates the various factors that are associated with the utilization of skilled delivery attendance from maternal shelters. The framework illustrates that intermediate factors like socio-cultural factors (autonomy in decision-making, religious beliefs, cultural beliefs, TBAs), socio-demographic factors (socio-economic status, level of education, marital status) and personal attitudes to skilled delivery may positively or adversely affect the interplay between the dependent and independent variables. That is, maternal shelter awareness, the quality of services offered at the maternal shelters and the ultimate utilization of the intervention influences skilled delivery attendance uptake.

Figure 2.1: Conceptual framework



CHAPTER THREE: METHODOLOGY

3.0 Introduction

This section describes the research site, the research design, the study population and the sample population. The chapter also presents the sampling procedure, data collection and processing techniques and, finally, the ethical considerations of the study.

3.1 Research site

This study was carried out in Samburu County in Kenya (Fig. 3.1). The county lies within the arid and semi-arid lands of Kenya in the northern part of the Great Rift Valley.

Figure 3.1: Map of Kenya showing Samburu County

Source: Kenya Road MAPS (2010)

The county borders Turkana to the northwest, Baringo to the west, Marsabit to the north, Isiolo to the east and Laikipia to the south (Fig 3.2).

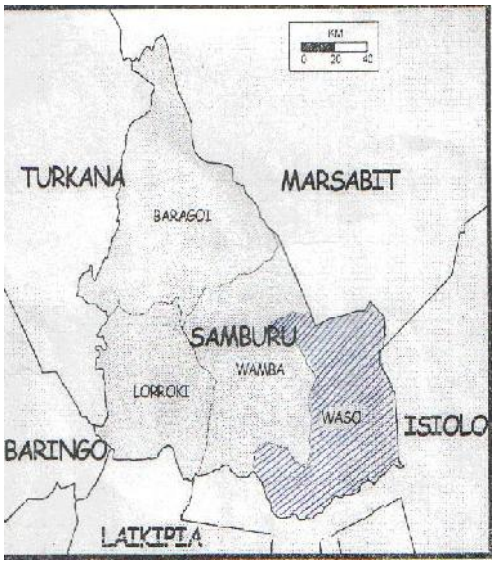


Figure 3.2: Map of Samburu county and bordering counties

Source: Kenya Road MAPS (2010)

Samburu is classified as one of the poorest counties in Kenya with a poverty rate of 73.5% which is higher than the national poverty rate of 45.9%. The county is divided into three sub-counties, namely, Samburu Central, Samburu East and Samburu North (Samburu County Government, 2015). The main economic activity is pastoralism in Samburu East and North, with a majority of those in Samburu Central practising agro-pastoralism (Mutea, 2015). The current projected population for 2014 based on the 2009 population census is 255,931 persons comprising 128,004 females and 127,927 males. This represents a population density of 13 persons per square kilometre occupying 51,670 households. Children under five years constitute 18.93% of the population, women of reproductive age 21.19% while the elderly 4.42%. In the county, early girl child marriages and pregnancies are high as a result of cultures and traditions (Samburu County Government, 2015).

3.2 Research design

This study adopted a cross-sectional descriptive design and collected both qualitative and quantitative data. Quantitative data was collected by use of structured questionnaires and retrospectively analysing any written, spoken or visual maternal related content in the participating health facilities that had adopted maternal shelters.

On the other hand, qualitative data was obtained by conducting three focus group discussions (FGDs) one in each sub-county, consisting of women of reproductive age between 18- 49 years, including those who had used maternal shelter services. These sites were; Samburu Central,

Samburu East and Samburu North sub-counties. Additionally, key informant interviews (KIIs) involved healthcare workers in charge of ANC and PNC at the participating health care facilities, mainly the sub-county Public Health Nursing officer and other stakeholders implementing maternal shelters in the county like NGO staff.

3.3 Study population and unit of analysis

The study population consisted of women aged 18-49 years of Samburu County who had sort maternal services in the last two years. The unit of analysis was an individual woman aged 18-49 years.

3.4 Sample Size and Sampling procedures

The study was conducted in the three Sub-counties of Samburu, namely, Samburu Central, Samburu East and Samburu North. It involved 129 women of reproductive age between 18-49 years who were selected using simple random sampling method and were the study respondents. The sample size was calculated based on a confidence level of 95% and a confidence interval of 10 using Creative Research Systems online sample size calculator tool. It comprised 43 women of reproductive age who were randomly selected in each Sub-county. Only women in reproductive age were selected.

3.5 Data collection methods

3.5.1 Structured interviews

The study used both qualitative and quantitative approaches with the main method of data collection being structured interviews that were used to collect quantitative data. A structured questionnaire (Appendix II) with both open- and closed-ended questions was administered to 129 women of reproductive age above eighteen years. This method collected data on socio-demographic factors, the level of community awareness of maternal shelter interventions, the effectiveness of maternal shelter services in improving access to skilled delivery attendance and lastly on factors influencing the utilization of maternal shelters among women in Samburu County.

3.5.2 Focused group discussions

The study conducted three focus group discussions with women of reproductive age between 18-49 years and collected in-depth information on the utilization of maternal shelter in access

to skilled delivery attendance. These was conducted with the aid of a focus group discussion guide (Appendix III). Each focused group discussion comprised of 6-12 participants drawn from the study sites. Only women aged 18-49 years were included who had sort maternal services within the past two years. This method sought to collect detailed information on community awareness of maternal shelter interventions, the effectiveness of maternal shelter services in improving access to skilled delivery attendance and factors influencing the utilization of maternal shelters. The discussions were recorded and later transcribed for analysis.

3.5.3 Key informant interviews

Key opinion leaders from each of the three sub-counties were used as key informants who included: the county health management public nurse, sub-county public health nurses and staff from each NGO implementing maternal shelter interventions. A key informant interview guide was used (Appendix IV).

3.5.4 Secondary Data

Sources of secondary data which were used in the preparation of this proposal include published and unpublished reports like dissertations, theses journal articles, books, Internet materials, health facility records and other relevant publications from the Ministry of Health, county government of Samburu and the national government of Kenya. These same sources were used in writing the final project. Secondary data sources was used to supplement the primary sources of data.

3.6 Data processing and analysis

The quantitative data collected through questionnaires and health care facilities was analysed using descriptive statistics with the help of the Statistical Package for Social Sciences (SPSS) version 20.0. Descriptive statistics was used to summarize the data using frequencies, percentages and the means was presented using tables, graphs and charts. Qualitative data collected through focus group discussions was analysed thematically and the findings were presented in direct quotations and selected comments.

3.7 Ethical considerations

Informed consent was sought from all participants, and only those who agreed to give their informed consent by signing a consent form (Appendix I) were recruited for the study. All the

participants were informed about the project and their right to withdraw from participation at any stage, if they wish to. In addition, the study also assured the participants of the confidentiality of the information that they provided and efforts were made to respect their desires and wishes. Anonymity and privacy for the respondents was observed and the respondents were assured that their names would not be divulged at any point of the study and that the information would only be used for academic purposes. Lastly, the researcher sought the necessary permit from the National Commission for Science, Technology and Innovation (NACOSTI).

CHAPTER FOUR: FINDINGS AND DISCUSSIONS

4.0 Introduction

This section presents and discusses the findings of the study on utilization of maternal shelters focusing on their effect on access to skilled delivery in Samburu County, North Rift Valley, Kenya. It is divided into the following sections: questionnaire return rate, demographic characteristics of respondents and findings related to the research objectives.

4.1 Questionnaire completion rate

The research sort to establish the presence of women of reproductive age 18-49 years and who had delivered a baby within the last two years prior to the commencement of the study. Out of 100 homesteads visited, 30 homesteads did not have children aged 2 years and below and were therefore excluded from the study. 70 households with 129 women aged between 18- 49 years and had delivered a baby within the last two years prior to the commencement of the study were deemed appropriate for the study and interviewed using a researcher assisted structured questionnaire. All the 129 questionnaires that were distributed returned to the researcher. However, after cleaning/screening of the data, reliable data was obtained from 115 questionnaires that were deemed fit for analysis. The 14 questionnaires excluded from the study due to missing data and errors were well distributed in the three sub- counties hence their exclusion did not increase sampling risk bias. The study attained a completion rate of 89%. According to Mugenda and Mugenda (2003), a response rate of 50% is adequate, 60% is good and 70% and above is excellent.

4.2 Demographic distribution of the respondents.

In this section, the researcher sort to establish the various demographic characteristics of the respondents. Various characteristics were explored including the respondents age, marital status, socio- economic status, ethnic background, occupation and education level were measured in order to determine their influence in utilization of maternal shelters for access to skilled delivery attendance. The findings were then tabulated in table 4.1.

Table 4.1 shows that majority of the respondents, 52 (45.2%) were between the age bracket 18-23 years, which is a close representation of women most reproductive age. The finding is consistent with the study by Utting and Bewley (2011), where it was also found that women are most fertile between the ages of 20 and 24.

Table 4.1: Tabulation of respondents according to age

Age bracket (years)	Frequency	Percentage
18-23	52	45.2
24-29	41	35.6
30-35	14	12.2
>35	8	7
Total	**115**	**100**

Source: Field data (2018)

4.2.1 Demographic distribution of respondents by marital status

Table 4.2 shows the demographic distribution of respondents according to marital status. Married women, 70 (60.9%) had the highest number. This trend is congruent with findings of a study by Muithya, (2016) which found that most of the respondents in a maternal services uptake were married women.

Table 4.2 Distribution of respondents according to marital status

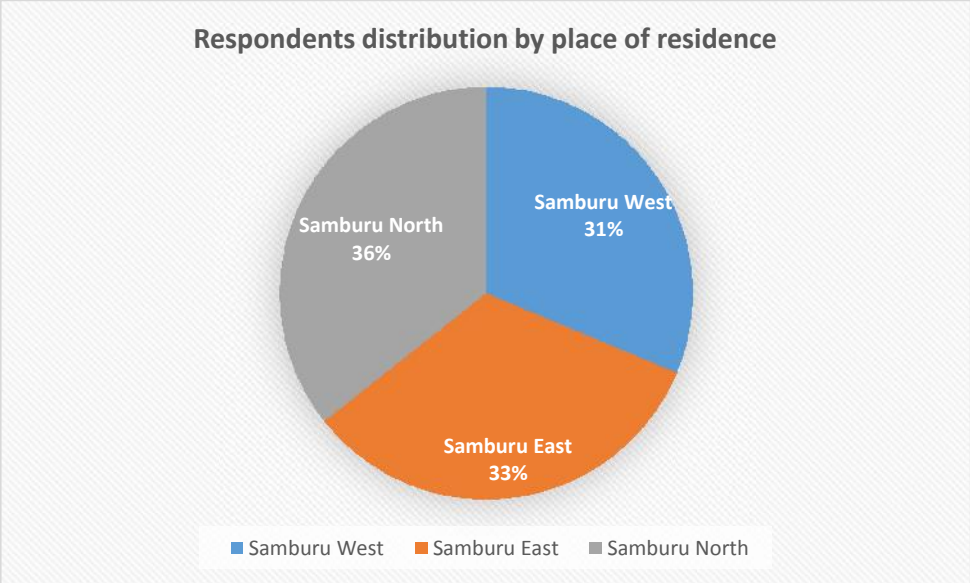
Marital status	Frequency	Percentage
Married	**70**	**60.9**
Widowed	**20**	**17.3**
Divorced	**11**	**9.6**
Single	**8**	**7**
Separated	**6**	**5.2**
Total	**115**	**100**

Source: Field data (2018)

4.2.2 Respondents distribution according to place of residence

Figure 4.1 shows percent distribution of respondents in the site area.

The data collection was fairly distributed within the three sub- counties to minimise data bias.

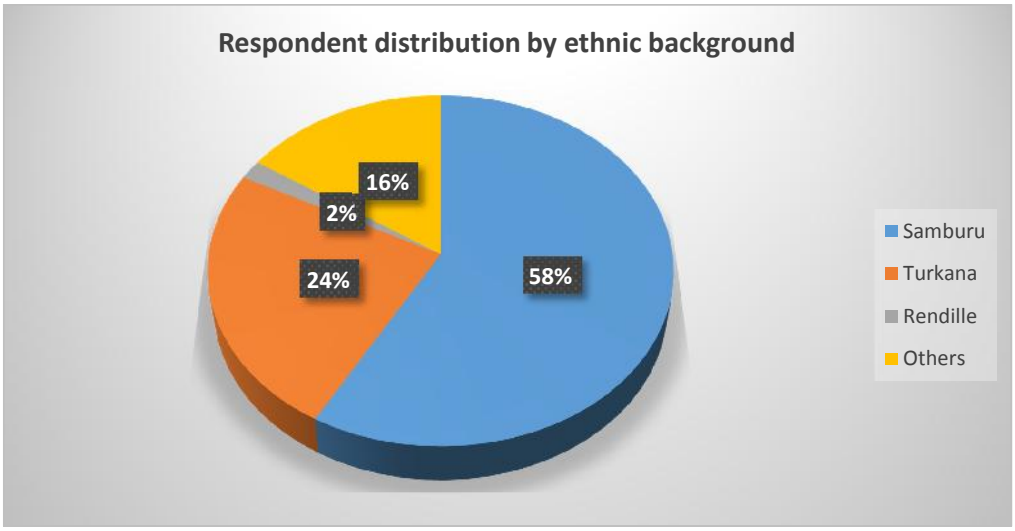


Source: Field data 2018

4.2.3 Respondents ethnic background

Majority of the respondents, 58%, were the native Samburu community, 24% were Turkana, Rendille had a minority participation of 2% while others consisted of 16%.

Figure 4.2 Respondents distribution by ethnic background



Source: Field data (2018)

4.2.4 Socio- demographic characteristics according to education background, the socio-economic status, occupation, house type and family size

Table 4.3 shows the respondents and their spouses' level of education. 79 (68.8%) and 64(64%) respectively of the respondents and their spouses had no form of education. Most of the respondents, 87 (75.7%) live within a low socio-economic status and most, 109 (94.8%), fall within the unskilled occupational level bracket. Most respondents 81 (70.4%) live in mud structures (manyattas) and 93% are engaged in unskilled labour. The demographic percent distribution findings conform to Samburu CDIP report, (Samburu County Government, 2015). which states that illiteracy level is 66%, the poverty level is 73.5%, higher than the national poverty rate of 45.9%.The table also shows that most respondents 65 (56.5%) had an average of 3 children, 40 (34.7) had 4-6 children while those with 6 and above children were 8%. According to Muithya (2016), maternal morbidity and mortality in Kenya results from the interplay of social, cultural, economic and logistical barriers, coupled with a high fertility rate and inadequate health services.

Table 4.3 Cross tabulation of distribution of respondents according to education background, the socio- economic status, occupation, house type and family size.

Variable	Frequency	Percentage
Education background		
No education	79	68.8
Primary	23	20
Secondary	9	7.8
College	3	2.6
University	1	0.8
Total	**115**	**100**
Spouse education level	**Frequency**	**Percentage**
No education	64	64
Primary	15	15
Secondary	17	17
College	3	3
University	1	1
Total	**100**	**100**
Socio- economic background	**Frequency**	**Percentage**
Low	87	75.7
Middle	22	19.1
High	6	5.2
Total	**115**	**100**
Occupation	**Frequency**	**Percentage**
Skilled	6	5.2
Unskilled	109	94.8
Total	**115**	**100**
House type	**Frequency**	**Percentage**
Manyatta	81	70.4
Semi-permanent	27	23.5
Permanent	7	6.1
Total	**115**	**100**
No. of children	**Frequency**	**Percentage**
1-3 children	65	56.5
4-6 children	40	34.7
> 6 children	10	8.8
Total	**115**	**100**

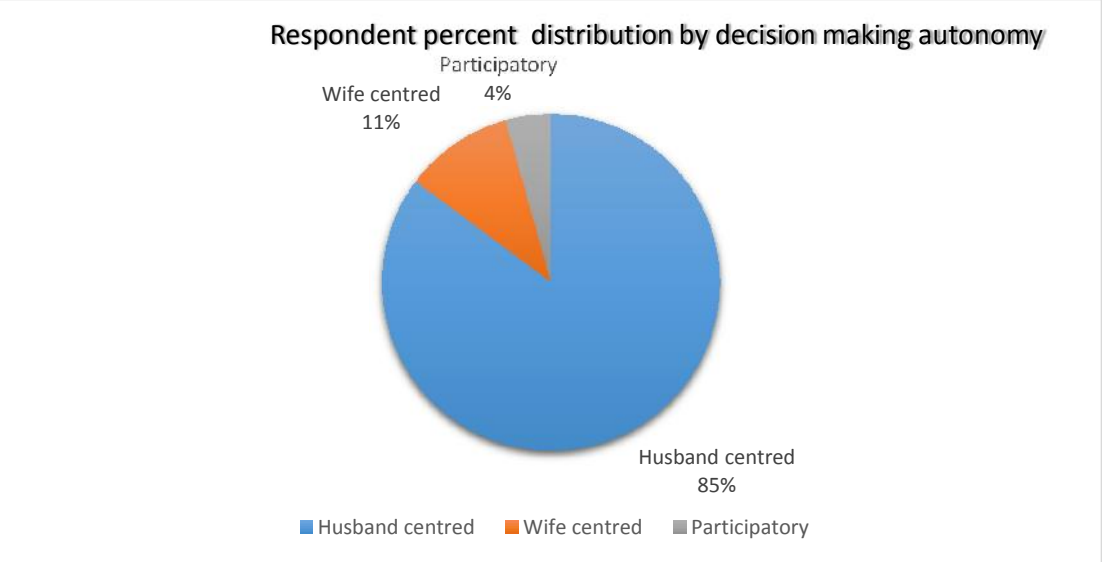
Source: Field data (2018)

4.2.4 Respondents' decision- making autonomy

Decision making autonomy refers to the ability of the respondent to make decisions regarding her maternal health. Figure 4.3 shows that 85.3% of the respondents were not involved in their maternal health decision making, only 10.4% were involved and 4.3% had participatory decision making. This conforms to a previous study by Muithya, (2016) whose findings showed that 92.4% of wives are not involved with mutual decision making.

In one of the focused group discussions, a mother commented that, "In everything I wish to do, for example when to start my prenatal clinics or where to deliver the baby, I must seek permission from my husband." "He may agree or disagree with my wish and I have to abide by his final decision," she continued.

Figure 4.3 Respondent distribution according to decision making autonomy



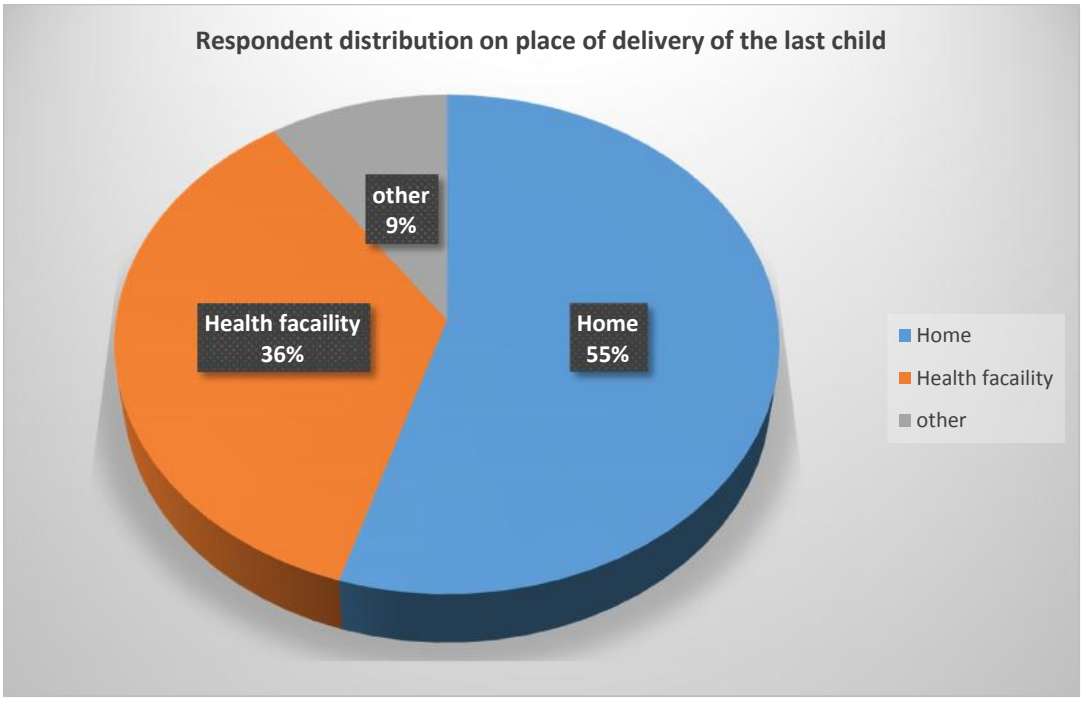
Source: Field data (2018)

4.6 Place of delivery of the last child

Figure 4.4 shows that, 36% of the deliveries were in health facilities while 55% were delivered at home. Although only 36% of the women received skilled delivery attendance, it demonstrated an 11% increase in skilled delivery attendance according to Samburu County health status whose findings shows that skilled deliveries increased from 24.6% to 35.6% between the 2013/2014- 2016/2017 financial years, (Samburu County Government, 2015). The following sentiment was expressed in a key informant interview demonstrates this finding:

"As much as the government has introduced free maternity care, the maternal shelters have played a big role in ensuring that the mothers are at the health facility on time to receive skilled delivery attendance" reported one of the Public Health Nursing officer. "Due to the long distances to the health facilities, the mothers would often not get to hospital on time. They would either deliver at home or in a relative's/ friend's house on their way to hospital". With the maternal shelter here, the mothers con come a week or two before the date of delivery and receive constant monitoring. When the time is due, they are assisted by a skilled mid-wife she further explained.

Figure 4.4 Percent distribution of respondent according to place of delivery of the respondents last born child



Source: Field data (2018)

4.6.1 Respondents delivery attendants' distribution

35% of the respondents were assisted by a skilled health care work during delivery, 39% were assisted by traditional birth attendants, and 22% were assisted by other relatives while 3% conducted self-assisted delivery as shown in table 4.4. The finds closely correspond with the findings on respondent's place of delivery.

Table 4.4 Respondent percent distribution according to delivery attendant

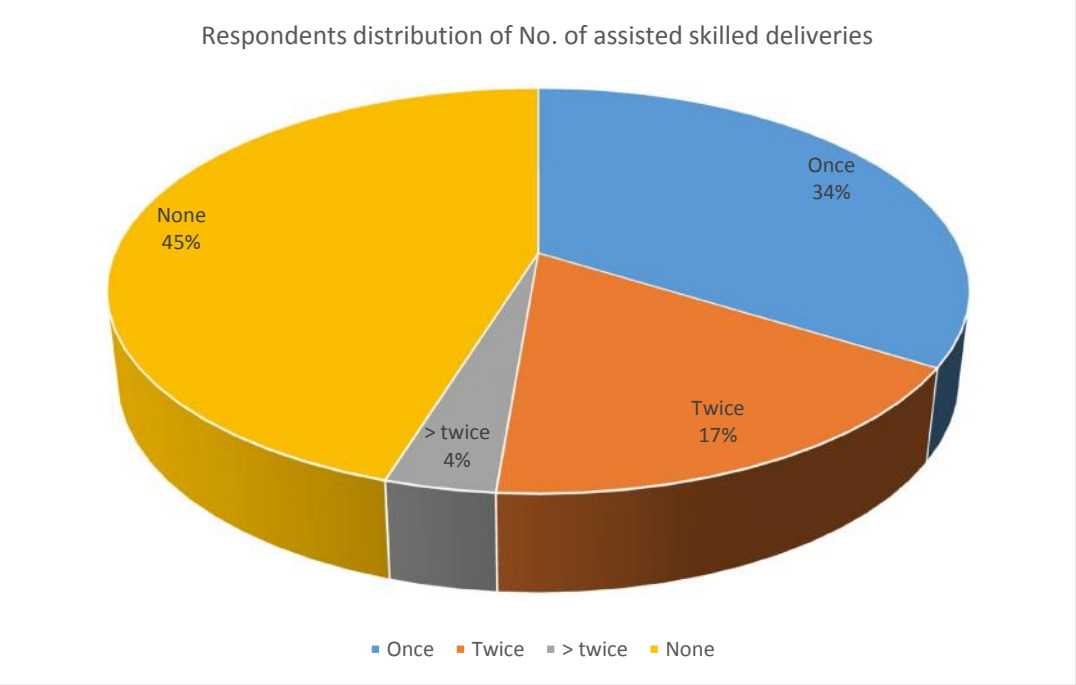
Who assisted you during delivery N		%
Health care worker	41	35.4
TBA	44	39.1
Relative	26	22.2
Self	4	3.3
Total	**115**	**100**

Source: Field data (2018)

4.6.2 No. of skilled deliveries the respondents had ever had

In the illustration below, 34% of the respondents had received skilled delivery attendance only once. 17% had been assisted twice. Those that had received the service more than two times were 4% while 45% of the respondents had never been assisted by a skilled personnel at delivery.

Figure 4.5 percent distribution of respondents according to number of assisted skilled deliveries



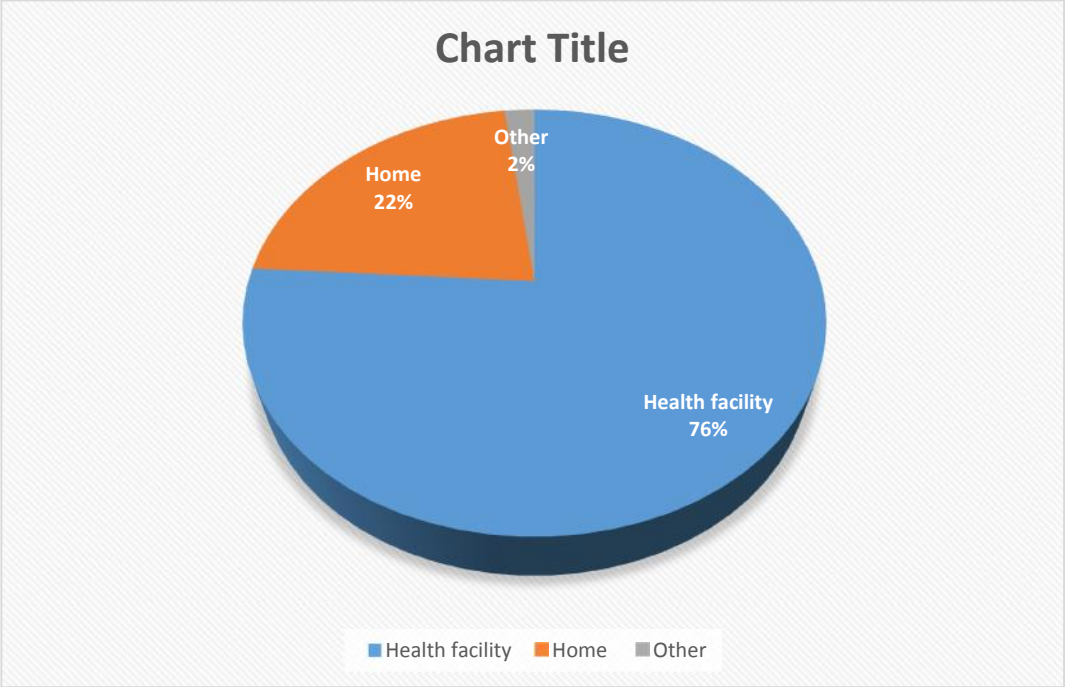
Source: Field data (2018)

4.6.3 Respondents' preferred place of birth.

More than three quarters of the respondents, 76%, would prefer to deliver in a health facility while 22% would prefer to deliver at home. Only 2% would prefer to deliver elsewhere.

"*Every time I have a pregnancy I plan to deliver in a health facility, however sometimes the baby pain comes earlier than the doctor's date or when I do not have money to travel and I am forced to deliver at home because the hospital is very far from my village*" said a woman during a focused group discussion. In a different focused group discussion, another woman noted that although she had always desired to deliver in a health facility, her family does not agree with it because most of the midwives are men and the Muslim religion does not allow a man to touch a woman.

Figure 4.6 Percent distribution of respondents' according to preferred place of birth



Source: Field data (2018)

4.7: Maternal shelters awareness and utilization

In this section, the researcher sort to find out the level of maternal shelter awareness in Samburu County and how that influences utilization of the maternal shelters.

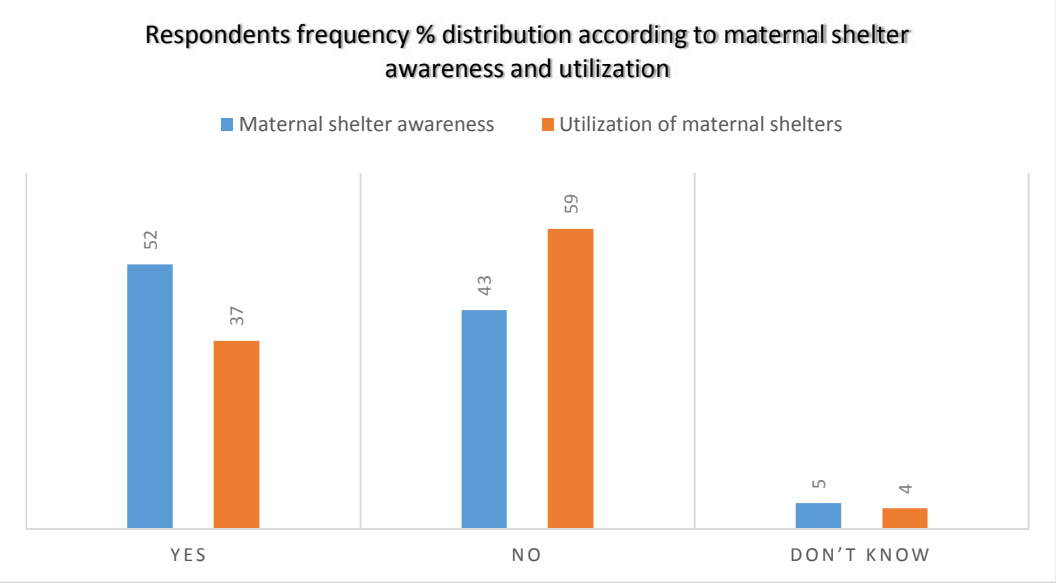
4.7.1 Respondents' percent distribution according to maternal shelter awareness and utilization.

As shown in Figure: 4.7, over half of the respondents (52%) reported that they were aware of maternal shelter interventions but only 37% had utilized the intervention.

The comments from respondents below obtained in one of the focus group discussions in Samburu North, tend to show what attributed the high level of awareness to:

- *"Community health volunteers are conversant with maternal and new born health eduaction and effectively pass the message on advantages of the use of maternal shelters which enables one to access skilled delivery assistance not only to the women but to the entire commnity. This has made it easy for us to get permission to go to the maternal shelter when delivery time nears".*
- *A few mothers get the same information during pre and post natal clinics*
- *"The CHVs mobolised us (the community) including our husbands and we constructed the maternal shelter in a similar way our manyattas" said one of the mothers.*
- *Women who deliver through maternal shelter referrals know how to take care of their personal hygiene so there is no bad smell in their huts after delivery.*
- *The mothers are also trained on how to feed the new baby especially on 6 months exclusive breastfeeding so their babies are healthier and fall ill or die less often.*

Figure 4.7 Maternal shelters awareness and utilization frequency percentage



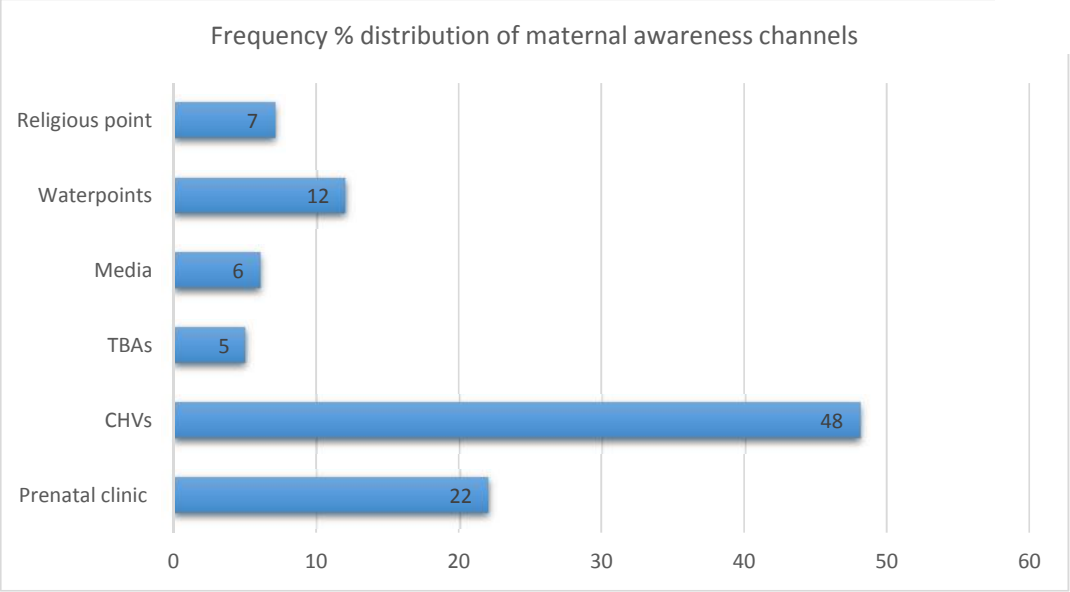
Source: Field data (2018)

4.7.2 Forms of maternal shelter awareness

The highest percentage 48% of respondents received maternal shelters information from community health volunteers. This findings agrees with a study by Wangalwa et al (2012) which states that strengthening community health strategy plays a pivotal role in delivering community-based maternal and new-born health care.

"Mambo mengi kuhusu afya na hospitali tunajulishwa na madaktari wa kijiji (we get most of the information related to health from the community health volunteers)" narrated one of the respondents in a focused group discussion. The same was echoed by one of the sub- county Public Health Nursing Officer during a key informant interview, who said the county in collaboration with non -governmental organizations like AMREF had helped strengthen the community health strategy which has made it very easy for the Ministry of health to reach out to communities living in rural remote areas and the mobile pastoralists.

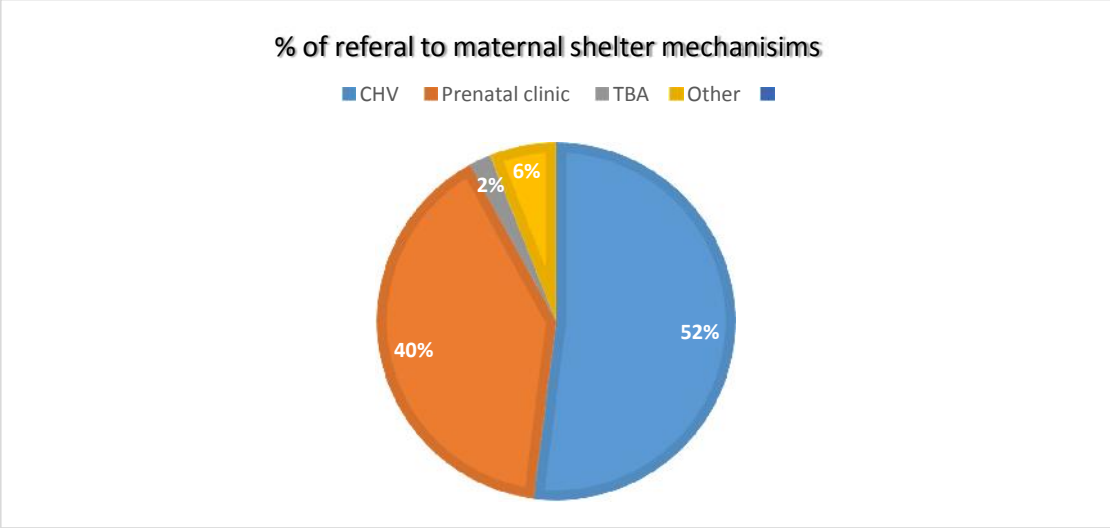
Figure 4.8 Frequency percentage distribution of maternal shelter awareness channels



4.7.3 Referral channels to maternal shelter services.

Most of the respondents (52%) who had utilised maternal shelter services reported that they were referred to the maternal shelter to await delivery time by community health volunteers. 40% of the referrals were by health care workers during antenatal clinics while the traditional birth attendants in the villages referred 6% of the respondents as demonstrated in figure: 4.9.

Figure 4.9 Frequency percentage distribution of maternal shelter utilization referral channel.

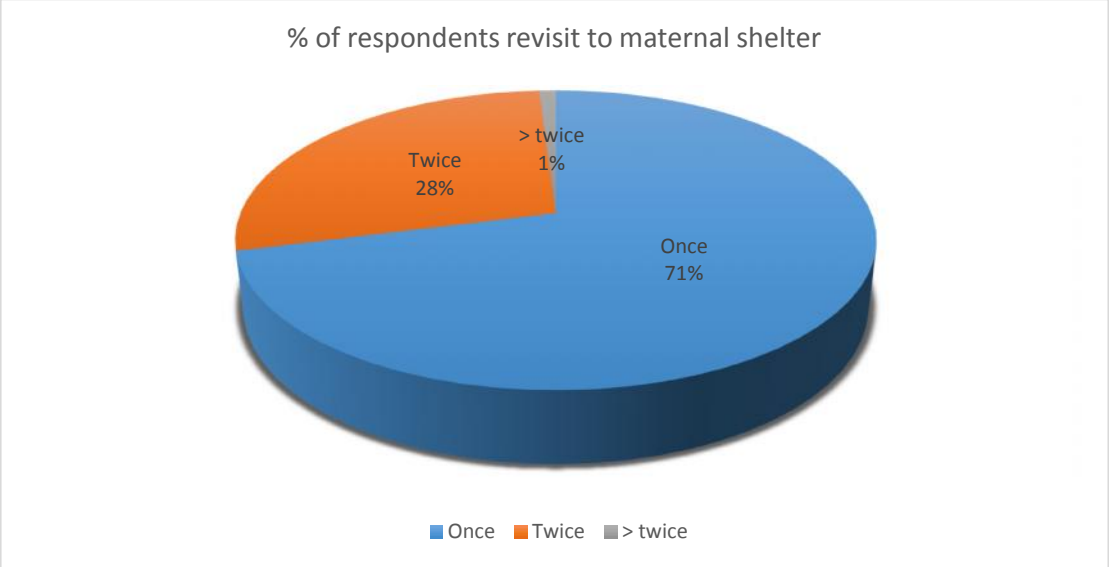


Source: Field data (2018)

4.7.4 No. of maternal shelter utilization by the respondents.

Majority (71%) of the respondents who had utilised maternal shelter services had only used it once. 28% of those respondents had revisited once and a minimal 1% had used the service more than two times.

Figure 4.10 Frequency percentage distribution of respondents according to revisit to a maternal shelter.



Source: Field data (2018)

4.7.5 Respondents' awareness of services offered at maternal shelters.

A high number 62, (53.9%) of respondents were aware of the services offered at maternal shelters. 33.9% were not aware while 12.2% were not sure. The data is demonstrated in table 4.5

Table 4.5 Respondent frequency percentage distribution according to awareness of services offered at maternal shelters

Awareness of services offered at maternal shelters		
Variable	Frequency	Percentage
Yes	62	53.9
No	39	33.9
Don't know	14	12.2
Total	115	100

Source: Field data (2018)

4.7.6 Services offered at maternal shelters.

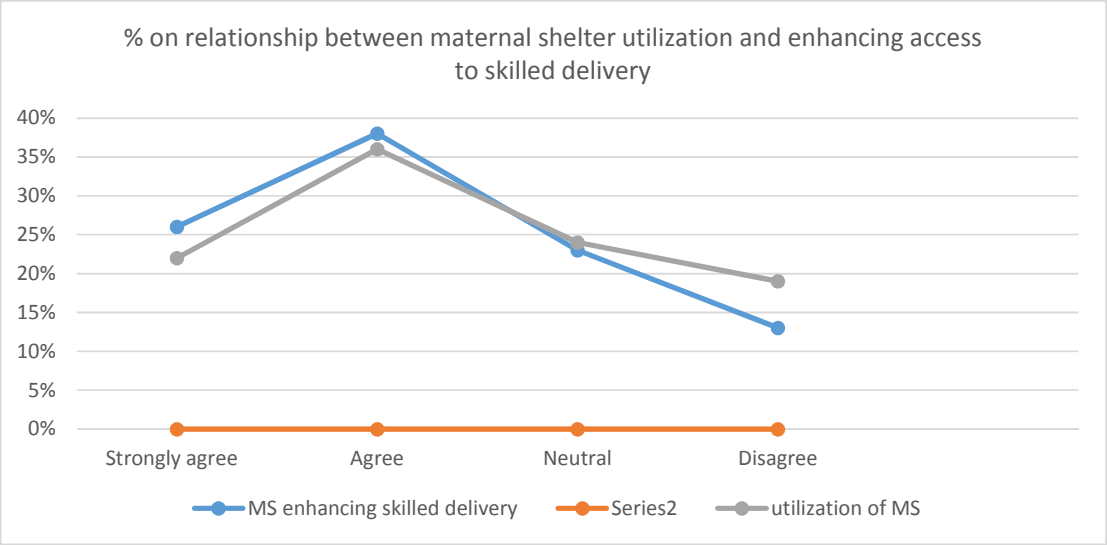
The researcher sort to know the services offered in maternal shelters. According to responses in various FGDS, the respondents received services as quoted. *"At the maternal shelter we learn several things like what we should eat when pregnant, how to feed the new baby, importance of breastfeeding the child within the first 24 hours and exclusively for the first six months, the importance of sleeping under a treated mosquito net with the baby to prevent malaria and self- hygiene. Women who deliver through maternal shelters have no bad smell',* another respondents affirmed. The mothers explained that according to the Samburu culture, it was a taboo for a woman to take a bath within the first 14 days after delivery.

In summary, the mothers receive health talks on household nutrition and diet diversification, hygiene, importance of pre and post natal clinics, child immunization and hospital delivery, HIV and AIDS prevention, prevention of mother to child treatment among others.

4.7.7: Utilization of maternal shelters and access to skilled delivery.

The highest percentage of respondents (38%, 36%) agree that utilization of maternal shelters enhanced access to skilled delivery. The findings agree with a study by Mutea, (2015) which saw skilled delivery attendance increase from 1 in 2012 to 41 in 2015 at Nachola dispensary in Samburu North sub-county after introduction of a maternal shelter intervention.

Figure 4.11 Respondent percentage distribution on the relationship between utilization of maternal shelters and enhanced access to skilled delivery.



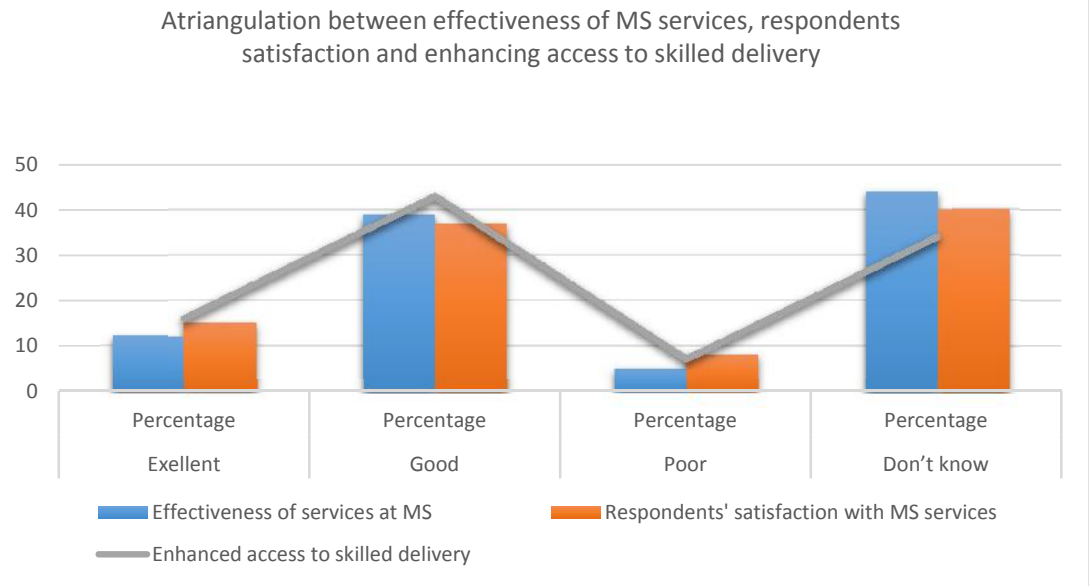
4.7. 8: Effectiveness of maternal shelters services, respondent satisfaction in the services and improved access to skilled delivery attendance.

In table 4.6 51% of respondents who had utilized maternal shelter services rated the services offered at maternal shelters as excellent (12%) and good (39%) attaining a satisfaction rate of 52% (15%, 37%)) in the same ranking categories respectively. According to the findings, 43% of the respondents scored good on enhanced utilization of skilled delivery as a result of the effective and satisfactory services offered at the maternal shelters. The statistical finding agree with Graham *et al.* (2003) Skilled Attendance Theory that postulates attaining skilled attendance is a mix ratio between a partnership of skilled attendants/ health professionals and an enabling environment and are important in maternal mortality reduction.

Table 4.6 Frequency percentage distribution of respondents according to effectiveness of maternal shelter services, respondent satisfaction and improved access to skilled delivery.

Effectiveness of maternal shelters services, respondent satisfaction in the services and improved access to skilled delivery attendance.								
Dimensions	Exellent	Good	Poor	Don't know	Exellent	Good	Poor	Don't know
Variables	Frequency	Frequency	Frequency	Frequency	Percentage	Percentage	Percentage	Percentage
Effectiveness of maternal shelter services	14	45	6	50	12	39	5	44
Mothers satisfaction rate with the services	17	43	9	46	15	37	8	40
improved access to skilled delivery	18	50	8	39	16	43	7	34

Figure 4.12 Respondents percent distribution according to the relationship between effectiveness of MS services, respondents' satisfaction and enhancing access to skilled delivery



Source: Field data (2018)

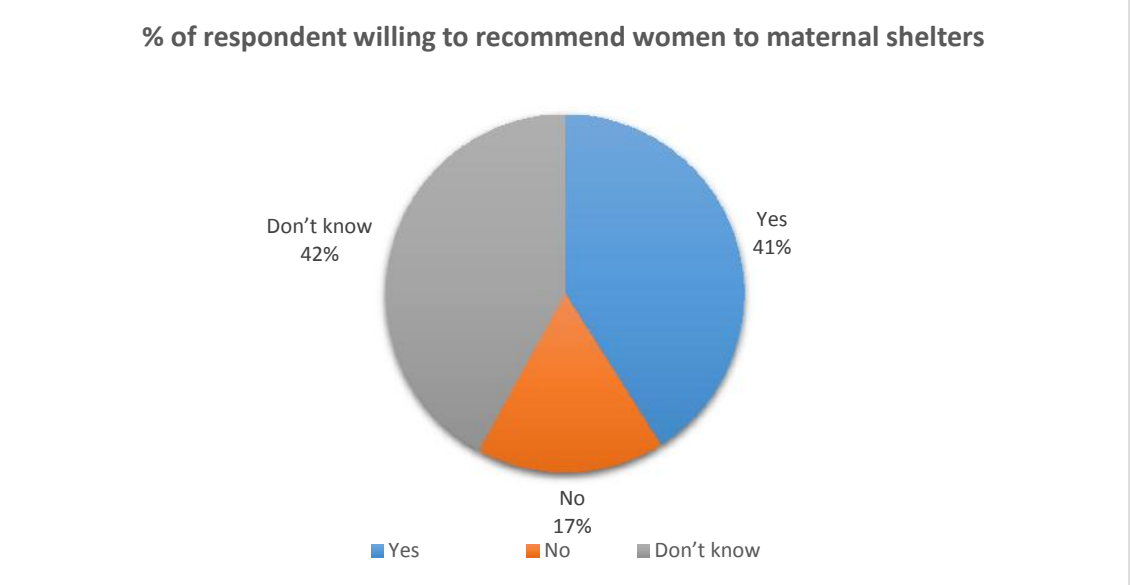
4.7.9: Workers available at maternal shelters and affiliated health facilities.

a) Doctor
b) Nurse
c) Clinical officers
d) Midwives
e) Nutritionist
f) Community health volunteers
g) Patient attendant

4.7.10: Respondents willingness to recommend someone to a maternal shelter

According to figure 4.13, 41% of respondents would be willing to refer another mother to maternal shelters, 17% responded no while 42% were neutral.

Figure 4.13 percentage respondent distribution according to willingness to recommend a maternal shelter.



Source: Field data (2018)

4.7.11 Factor that influence utilization of maternal shelters in Samburu County

The researcher sort to establish the factors that influence utilization of maternal shelters in Samburu County using the dimensions in Table 4.7: Cultural barriers; Transport challenges; Communication failure; Human resource factors Infrastructural challenges; Socio-economic factors; Personal issues and religion.

Table 4.7 is a tabulation of the percent frequency distribution of respondents' according to factors influencing maternal shelter utilization. Source: Field data (2018).

Factors	**Sub factors**	**Strongly agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
		N%	N%	N%	N%	N%
Cultural barriers	Resistance by family members	8	12	18	32	30
	lack of decision-making autonomy by women	12	20	17	29	22
	Traditional birth right practices	10	18	21	32	29
	Stigmatization due to usage of maternal shelters	10	15	20	28	27
Transport challenges	Lack of transport to the maternal shelters	27	32	16	6	8
	Remoteness and long distances to facilities	27	36	18	10	9
	Lack of partnership between maternal shelters and the community	8	11	22	32	27
Communication failures	Low levels of health awareness about maternal shelters	12	24	20	31	14
	Miscommunication in the family	8	11	28	31	22
	Lack of clear goals on what to expect	10	24	24	26	16
Human resource factors	Poor attitude of maternal homes staff	4	8	28	31	19
	Lack of services at night and weekends	12	28	28	18	14
	Inadequate skilled birth attendants in the affiliate health facility	22	38	29	7	6
Infrastructural challenges	Poor implementation of interventions at the facility level	18	36	27	12	7

	Small and crowded facilities with inadequate resources	19	41	29	7	4
	Poor state of basic social and healthcare needs like water and sanitary services	18	36	26	12	6
Socio – economic factors	Concerns about a relative to remain at home and take care of children	16	35	25	15	8
	Household affluence and women's roles in the family	15	32	20	15	18
	Availability of traditional birth attendants in the village	15	37	28	12	8
	Education of the mother and her partner	16	31	31	15	6
Personal issues	Women's preference for places to give birth	20	34	24	14	8
	Previous history in delivering	18	38	27	13	4
	Privacy	14	23	34	18	11
	Presence of male midwives	22	32	23	16	7
Religion	Household's socio-religious affiliation	8	11	33	27	21

Cultural barriers to maternal shelter utilization: Table 4.7 indicates that most of the respondents disagreed with the cultural barriers dimensions (resistance by family 32%, autonomy in decision making, 29% and traditional birth rights 32%). This deduces that cultural barriers are not a hindrance to utilization of maternal shelters. The findings agree with a study by Gure (2013) which showed that cultural factors do not influence uptake of maternal services. As much as earlier findings in this study had shown that 85% of the respondents do not have autonomy in decision making that does not hinder utilization of maternal shelters for skilled delivery attendance. This may have been attributed by the significantly high level of maternal shelter awareness as shown earlier in this study.

Transport challenges: Table 4.7 depicts that majority of the respondents (32%) agreed that there is lack of transport to maternal shelters, 27% strongly agreed while only 14% disagreed and strongly disagreed. In the remoteness and long distance dimension, majority (36%) of the respondents agreed and 27% strongly agreed. 18% were neutral and 19% (10%, 9%) disagreed and strongly disagreed respectively. According to Kock and Prost (2017) poor road access lack of health services/facilities and remoteness of Samburu County remain a major challenge in supply of health services to its population. Finally under the lack of partnership between maternal shelters and community category, majority of the respondent (32%, 27%) disagreed and strongly disagree respectively. *We, (community members) built the maternal shelter and is ran by us. The ministry of health and other donors only come in to assist with heath care workers and other facilities like new born mother and baby package and lots of education reported a woman in an FDG.* The findings agree with a study by Wangallwa et al (2013) which says that strengthening community health system helps to address disparities in maternal health.

Communication failure: in relation to communication factors, table 4.7 depicts that a majority of the respondents (31%) disagreed that there was a low level of health awareness about maternal shelters and that there was lack of clear goals on what to expect at the maternal shelters (26%).

Human resource factors: In the human resource dimension, a majority (31%) of the respondents disagreed that maternal shelter workers had a poor attitude. However a majority (28%) agreed that there was lack of weekend and night personnel, and more so 38% of the respondents also agreed that there were inadequate skilled health care workers. These findings are in congruent with studies by Muithya, (2016) and Nzola, (2017), whose findings indicate that there are inadequate skilled health care workers in most health facilities in Kenya.

Infrastructural challenges: Table 4.7 shows in regard to service delivery at the health care facility that a majority (36%) of respondents agreed that there were poor implementation of interventions at the facility level and 41% reported that the health facilities were small and crowded with inadequate resources.

Social economic factors: table 4.7 depicts that majority of the respondents (32%) agreed that they were concerned about who would take care of the younger children that were left at home. According to Mutea, (2013) a mother, once referred to a maternal shelter is required to go there one or two weeks before to await delivery. 48% respondents reported in the neutral, disagree

and strongly disagreed category. Additionally, the findings in table 4.7 also shows that 32% of the respondents strongly agreed and agreed that household affluence and the woman roles too influenced utilization of maternal shelters. The findings also indicate that 37% of the respondents agree that presence of traditional birth attendants in the villages influence maternal shelter utilization for skilled delivery attendance. 20% did not agree.

Personal issues: Table 4.7 shows that a majority of the respondents (36%) agreed that the preference of the place of birth influenced maternal shelter utilization while 22% disagreed or strongly disagreed.

Further, a majority 38% of the respondents agreed, 15% strongly agreed while 17% either disagreed or strongly disagreed that previous birth history influences utilization of maternal shelters. According to the nurse in-charge of Kisima dispensary in Samburu West sub-county, *one of the key factors that qualifies a mother to a maternal shelter referral is previous birth history. For example, previous history of high haemorrhage after delivery, frequent miscarriage, hypertension, frequent infant death among others* he explained further during a key informant interview. A majority of respondents 32% further reported that the presence of male midwives in a health facility hinders utilization of maternal shelters. "*It is shameful for me to be assisted to deliver a baby by a man, some of whom are the age of my sons*" reported a mother during a focused group discussion. Privacy at the maternal shelter had a majority (34%) of the respondent being neutral.

Religion: Findings in table 4.7 shows that a majority (27%) of the respondents disagreed that religion influences utilization of maternal shelters. *"I do not know of any religion that prohibited you to go to hospital"*, said a respondent during a focussed group discussion. A sentiment that was echoed by the rest of the discussion group members. Only 11% reported that they agreed that religion influences maternal shelter utilization, while 33% were neutral.

4.3.14 The researcher further sort to know if there were other factors apart from the tabulated ones in table 4.7 that influenced utilization of maternal shelters.

Some of the additional challenges mentioned were:

- Inadequate cooking space and cooking wares
- Lack of space to enable them come to the shelter with some of the younger children
- Inadequate food preservation methods

- Need for space to keep some of the small (chicken, goats) livestock that they may wish to bring along to feed on if referred for a long duration at the shelter.
- Space for relatives to stay in when they come to visit a mother at the shelter

CHAPTER 5: SUMMARY, CONCLUSSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of findings, discussions of key findings, conclusion drawn from the findings and recommendations. The conclusions and recommendations drawn were focused on addressing the objectives of the study. The research sort to investigate the utilization of skilled delivery attendance from maternal shelters in Samburu County, North Rift, Kenya. The study was guided by three objectives; to assess the level of community awareness of maternal shelter interventions in Samburu County; to determine the effectiveness of maternal shelter services in improving access to skilled delivery attendance in Samburu County and to establish the key factors influencing the utilization of maternal shelters among women in Samburu County.

5.1 Summary of findings

A total of 129 questionnaire were distribute to women of reproductive age 18 to 49 years across Sumburu County upon which 115 were duly completed and returned to the researcher. Majority of the respondents were between 18 to 23 years and majority of them were married. Majority of the respondents had no form of education and most of them, 75.7%, live within a low socio-economic status. According to the findings, 85.3% of the respondent had no autonomy in decision making, only 10% were involved in decision making. The study also showed that only 36% of the children aged two years and below of the respondents were delivered by skilled birth attendants. The study also established that 34% of the respondents had received skilled birth attendance only once, 17% had received twice, 4% had received more than two times while 45% had never been assisted by a skilled delivery attendant at delivery. Despite having few mothers receiving skilled birth attendance, of the respondents 76% would prefer to deliver in a health facility. According to the study, majority of the respondents were aware of mater shelter interventions and satisfied with the services offered there. This tended to enhance utilization of the maternal shelters and access to skilled delivery.

5.1.1 Assess the level of community awareness of maternal shelter interventions.

The first objective was to assess the level of community awareness of maternal shelters in Samburu County. The study found out that 52% of the respondents were aware of the existence of maternal shelters. Some of the elements that were captured in this study were that majority of the respondents (48%) had received awareness information from community health

volunteers while 22% of the respondents had received the information during prenatal clinics. This findings agrees with a study by Wangalwa *et al* (2012) that strengthening community health strategy plays a pivotal role in delivering community-based maternal and new-born health care. The same was reflected in the referral system where a majority of the respondents who utilised maternal shelters (52%) were referred by community health volunteers, 40% were referred by health care workers during prenatal clinics while 8% was referred to by other means.

5.1.2 To determine the effectiveness of maternal shelter services in improving access to skilled delivery attendance.

The researcher sort to identify the services offered at maternal shelters, the respondents' awareness of the services, respondent satisfaction and how it influenced utilization of maternal shelter interventions. According to the study finding, majority (53.9%) of the respondents were aware of the services. The study also shows that a majority (52%) rated services at maternal shelters within very good and good score. The findings negate a study by Miller (2015) who established that the state of maternal shelters in Zambia was a limitation to their utilization due to poor services and lack of social amenities. The study also found that a majority 43% of respondents rated 'good' in relation to enhanced access to skilled delivery. A triangulation relationship between effectiveness of maternal shelter services, respondents' satisfaction and mater shelter utilization tends to enhance access to skilled delivery attendance.

5.1.3 Establish the key factors influencing the utilization of maternal shelters.

In this objective the research sort to establish the factors that influence skilled delivery attendance from maternal shelters.

According to the findings, the factors that did not negatively influence utilization of maternal shelters were; cultural barriers like resistance by family members, lack of women decision making autonomy and traditional birth rights were not statistically significant in influencing maternal shelter utilization. The findings do not agree with a study by Karkee *et al.* (2013) who reviewed the factors that impede women from utilizing maternity services and those that encourage such use. The study found that on one hand, traditional beliefs and customs, low socio- economic status of women, long distances to facilities, low levels of health awareness and women's occupations tended to impact negatively on service uptake. However, according to Loran and Audrey (2017), the European Union and AMREF Health Africa, in partnership with Kenya Ministry of Health and a local NGO (The Community Health Africa Trust) project

on strengthening community health systems had helped address social disparities in maternal, new born and child health, nutrition and family planning. This was affirmed by a response by a health care worker in a key informant interview, who stated that; *"work has become easier for us because the community members are now knowledgeable about the advantages of skilled delivery including the male counterparts. This is as a result of intensified community education on maternal, new born and child health, nutrition and family planning by community health volunteers. The husbands now know that hospital delivery increases mother and child survival and are progressively consenting their wives to use maternal shelters to facilitate skilled delivery attendance".* Lack of women decision making autonomy therefore now tend not to negatively impact on maternal health decisions.

Secondly, communication failures like low level of health awareness about maternal shelters, miscommunication in the family and lack of clear goals on what to expect in maternal shelters too were not a hindrance to utilization of maternal shelters due to effective awareness by community health volunteers. According to the study, religion too was not a hindrance to utilization of maternal shelters. Both Muslim and Christianity did not advise against use of skilled delivery. This is in agreement with a study by Gure, (2013) that had similar findings.

On the other hand, according to the study, maternal shelter utilization was adversely influenced by; transport challenges like lack of transport to maternal shelters, remoteness and long distances. This commensurate with a study by Kock and Prost, (2017), which states that poor road access lack of health services/facilities and remoteness of Samburu County remain a major challenge in supply of health services to its population. Most respondents (55%) showed that there was no lack of partnership between the community and maternal shelters because the shelters are fully owned by the community, established through the community health system. Infrastructural challenges (poor implementation of interventions at facility level, small and crowded facilities with inadequate resources, poor state of basic social health care needs like water, and sanitary services); human resource factors (lack of services at night and weekends, inadequate skilled birth attendants in the affiliated health facilities); socio- economic factors (Household affluence and women's roles in the family, availability of traditional birth attendants in the village and education of the mother and her partner) and personal issues (Women's preference for places to give birth, previous history in delivering, privacy and presence of male midwives). Several studies like; Nakambale *et al.* (2014), Sialubanje *et al*. (2015), Karkee *et al.* (2013), Muithya, (2016) and Miller (2015), are all in agreement with these factors that according to the study influenced utilization of maternal shelters.

5.2 Conclusion of the study

Based on the findings, the study concludes that there was community awareness on maternal shelter interventions in Samburu County. It was observed that there was a relationship between community strategy strengthening and the level of community awareness on maternal shelter interventions.

The study observed that although women in Samburu have very limited decision making autonomy, it did not negatively affect utilization of maternal shelters.

Regarding determining the effectiveness of maternal shelter services in improving access to skilled delivery attendance, the study concludes that the services at the maternal shelters were effective because they tend to increase maternal shelter utilization and ultimately enhance access to skilled delivery. However, the study also observed that some services at the maternal shelter and health facility level like inadequate water and sanitation services, provision of facilities to accommodate younger children; obstetric care resources including human resource at the health facilities were inadequate.

The study concludes that there are factors that influence utilization of maternal shelters in Samburu County. The study observed that most of the factors that adversely influenced the utilization were structural.

5.3 Recommendations

Health care workers should be more proactive in awareness creation on maternal shelter interventions during antenatal and postnatal clinics.

More investment in the health sector focusing on maternal shelters should be prioritised

There is need for the health sector to increase private –partnership engagement to address the gaps in maternal shelter interventions.

There is need to adopt a multi- sectorial approach so as to achieve a holistic intervention to the factors that negatively influence maternal shelter utilization.

Recommended areas of study

- Assess the level of men involvement in maternal and new-born health and how it impacts on the same in Samburu County.
- Assess the impact of the various stakeholders and donor in the Ministry of health in relation holistic improvement of health service delivery in Samburu County.
- Assess the effect of devolution of the health sector in Samburu County in relation to maternal and new- born care services.

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APPENDICES

Appendix 1: Consent Form

Teresia Kamau

University of Nairobi

Nairobi

Dear respondent,

My name is Teresiah Kamau, a student at the University of Nairobi, pursuing a Master Degree in Gender and Development Studies. I am conducting a study on the utilization of skilled delivery attendance from maternal shelters in Samburu County.

The research is purely for academic purpose to fulfilling the University academic requirements. The information obtained will be treated with utmost confidentiality. For this reason no names of patients will be written on the researcher note book. You have been chosen at random to be in a study and your participation is on voluntary basis. I kindly request you answer all the questions as honestly as possible and you are free to stop and ask a question where necessary. The session will take about 30 to 40 minutes. I therefore seek your permission to involve you in the study.

Please sign for your approval

Signature _____ Date _____

Appendix II: Questionnaire interview guide.

This questionnaire has four sections; please respond to all the questions.

The aim of this questionnaire is to collect data on the utilization of skilled delivery attendance from maternal shelters in Samburu County. The study is strictly for academic purposes and any information provided thereof will be purely used for academic purposes and will not be disclosed without the consent of the respondent. Please respond where appropriate

Section 1: Respondent demographic Information (now am going to ask you questions about yourself)

Filter question

1) **Have any women in your household given birth the last two years?**
2) **If yes, may I speak to one**

Put a tick [√] in the space provided next to the correct response

A: Personal profile

1. In which bracket does your age fall

15-20 [ ] 21-25 [ ] 23-30 [ ] 31-35 [ ]

36-40 [ ] 41 – 45 [ ] 46-49 [ ]

2. Gender Male [ ] Female [ ]

3. What is your marital status

Married [ ] Single [ ] Widowed [ ] Divorced [ ] Separated [ ]

4. Where do you stay?

Sub-county……

Location…….

Village……..

5. Religion

Catholic [ ] Protestant [ ] Muslim [ ] others (specify)…….…….

6. What is your ethnicity?

Samburu [ ] Turkana [ ] Rendille [ ] others (specify)----------

7. What type of a house do you live in?

Permanent house [ ] Semi-permanent house [ ] Mud-walled [ ]

B: Education (the highest level completed)

8. (i) What is your highest level of education

Primary [ ] Secondary/high school [ ] University [ ] College [ ] No education [ ] any other (specify)…….

(ii) What is the highest level of education of your spouse

Primary [ ] Secondary/high school [ ] University [ ] College [ ] No education [ ] any other (specify)…….

C. Socio- economic background

9. What is your source of living?.....

10. (i) Which employment cadre do you belong to

Employed [ ] Self- employed/ *Jua kali* [ ] Casual labourer [ ]

(ii) Which employment cadre does your spouse belong to

Employed [ ] Self- employed/ *Jua kali* [ ] Casual labourer [ ]

11. (i) Based on the information you have stated above, what is your average monthly income?

Below KES 3000 [ ] KES 3000-10000 [ ] KES 10,000- 30,000 [ ] Above KES 30,000 [ ]

(ii) What is the average monthly income that your spouse earns?

Below KES 3000 [ ] KES 3000-10000 [ ] KES 10,000- 30,000 [ ] Above KES 30,000 [ ] don't know [ ]

12. Does your husband allow you to make decisions Yes [ ] No [ ]

13. Number of children

[ ] 2 [ ] 3 or more [ ]

14. Where did you deliver your youngest child?

15. Please indicate the number of skilled birth attendance you have had ……

16. Where is your preferred place of giving birth?

Home [ ] Hospital [ ] Others (Specify) …….

17. Who assisted you during delivery?

Health personnel [ ] Self [ ] Relative [ ] Traditional birth attendant [ ]

(Now am going to ask you questions about your maternal health)

Section 2: Maternal shelters awareness and utilization

18. Have you ever heard of a maternal shelter/ maternal hut Yes [ ] No [ ]

19. If yes to the above question, where did you get the information about a maternal shelter?

Prenatal clinic [ ] CHW [ ] TBA [ ] Media [ ] Water points [ ] Religious point [ ]

20. Have you ever used a maternal shelter/ maternal hut? Yes [ ] No [ ]

21. If yes in above question, indicate the number of times

_____

22. Who referred you to the maternal shelter

23. If the answer to question 20 is no, please state why? (tick more than one if mentioned)

Distance [ ] Cost [ ] Spouse refusal [ ] Quality of service at the MS [ ] House chores [ ] Other (specify) ……

……

……

……

……

24. How many maternal shelters are you aware of in your sub-county?.....

25. Are you aware of the services offered by maternal shelters

Yes [ ] No [ ] Not sure [ ]

If yes above, indicate some of the services

_____

_____

_____

_____

26. How do you rate the utilization of maternal shelters by women in your village?

Excellent [ ] Good [ ] Poor [ ] Not Sure [ ]

27. Does the utilization of maternal shelters enhance skilled delivery?

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly Disagree [ ]

Section 3: Effectiveness of maternal shelters services in improving access to skilled delivery attendance

28. How effective are the services offered by maternal shelters in your county?

Very effective [ ] Effective [ ] Not effective [ ] No idea [ ]

29. Indicate some of the workers available in maternal shelters

_____

_____

_____

_____

30. How is the experience of the staff in the maternal shelters in your area?

Excellent [ ] Good [ ] Poor [ ] Not idea [ ]

31. Does the experience of maternal shelter workers enhance access to skilled delivery attendance?

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly Disagree [ ]

32. Can you refer someone to a maternal shelter?

Yes [ ] No [ ]

33. Do effective services in maternal shelters enhance access to skilled delivery attendance?

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly Disagree [ ]

Section 4: Key factors influencing the utilization of maternal shelters

34. In the table below, evaluate the extent in which the listed factors influence the usage of maternal shelters by women in Samburu County. Please use the following scale as appropriate

1-Not at all, **2**- Minimal extent **3**- Moderate extent, **4**- Large extent, **5**-Very large extent

Factors	**Sub factors**	**1**	**2**	**3**	**4**	**5**
Cultural barriers	Resistance by family members					
	lack of decision-making autonomy by women					

	Traditional birth right practices					
	Stigmatization due to usage of maternal shelters					
Transport challenges	Lack of transport to the maternal shelters					
	Remoteness and long distances to facilities					
	Lack of partnership between maternal shelters and the community					
Communication failures	Low levels of health awareness about maternal shelters					
	Miscommunication in the family					
	Lack of clear goals on what to expect					
Human resource factors	Poor attitude of maternal homes staff					
	Lack of services at night and weekends					
	Lack of skilled birth attendants in the maternal home					
Infrastructural challenges	Poor implementation of interventions at the facility level					
	Small and crowded facilities with inadequate resources					
	Poor state of basic social and healthcare needs like water and sanitary services					
Socio – economic factors	Concerns about a relative to remain at home and take care of children					
	Household affluence and women's roles in the family					
	Availability of skilled birth attendants in the village					
	Education of the mother and her partner					
Personal issues	Women's preference for places to give birth					
	Previous history in delivering					
	Privacy					
	Presence of male midwives					
Religion	Household's socio-religious affiliation					

Apart from the above factors, indicate other factors that influence the utilization of maternal shelters by women in Samburu County.

_____

_____

_____

_____

Thank you for your time and cooperation

Appendix III: Focus group discussion guide

Group No ……

Sub county ……..

Number of respondents ……

1. Have you ever heard about a maternal shelter/maternal hut (research assistant to explain what a maternal shelter is?)
2. Where did you hear the information about a maternal shelter?
3. Where were/was the person (s) who informed you about a maternal shelter from?
4. How many maternal shelters are in this sub- county?
5. How far are they from where you live?(how many hours do you take to get there?)
6. What is the mode of transport mostly used to get to the maternal shelters
7. Has anybody in this group ever used a maternal shelter?
8. …….. (#) of you said that you have used a maternal shelter, how many times has each one of you used it?
9. For those who have never used maternal shelter, what are your reason(s) for not using the service?

   ……
   ……
   ……
   ……

   Where did your delivery take place and who assisted you during your delivery when you were referred to the maternal shelter? (probe whether it was a health professional like a nurse, doctor or midwife)
10. If not used maternal shelter in the subsequent pregnancy, what is the reason for not using?
11. Have you ever encouraged/ told anybody else to use the maternal shelter?
12. Do you think the services offered by maternal shelters are effective?
13. Do effective services in maternal shelters enhance access to skilled delivery attendance?

14. How would you rate your satisfaction of the services offered at the maternal shelter?

a. Very satisfied

b. Moderately satisfied

c. Not satisfied

15. What are the reasons for your satisfaction……
……

……

……

(b). what are the reasons for your dissatisfaction? ……..……

……

……

……

16. How do you rate the utilization of maternal shelters in your sub county? (Do many or few mothers use maternal shelters?

17. In your opinion, does the awareness and utilization of maternal shelters enhance skilled birth attendance?

18. What are some of the challenges that influence utilization of maternal shelters by women in your village

19. Which are key factors affect the utilization of maternal shelters by women in your sub county?

20. Is there any belief, culture or religion that stops you not to deliver in a hospital? If yes which one?

……

……

……

21. In your experience, who decide where pregnant women will deliver and why?

……

……

……

……

22. Overall how satisfied were you with the services offered at the maternal shelters?

……

……

……

……

Thank you for your time and cooperation

Appendix IV: Key informant guide

Designation…….

Sub county ……

Location …….

1. Are you aware of any maternal shelters in your area of jurisdiction?
2. How many maternal shelters are in this location?
3. Was your department involved in community awareness campaigns on maternal shelters?
4. In your opinion, was the awareness campaign effective in enhancing maternal shelter utilization?
5. In your opinion do you think maternal shelters enhance access to skilled delivery to pregnant women in this location?
6. What are some of the challenges that influence utilization of maternal shelters by women in your village?
7. Which are the key factors that affect the utilization of maternal shelters by women in your sub county?