

**INFLUENCE OF COMMUNITY HEALTH STRATEGY ON
UTILISATION OF MATERNAL HEALTH CARE: A CASE
OF LAISAMIS WARD IN MARSABIT COUNTY, KENYA**

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DECLARATION

This research project report is my original work and has not been presented for an award in any other University.

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DEDICATION

This research project report is dedicated to my parents Mr and Mrs Lonyo Wambile for their prayers. Special dedication to my family; My husband Mr. Joshua Galoro, my lovely children Karen Hiroya and Angelo Kena, who are a blessing in my life.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANC	Antenatal Care
CHC	Community Health Committee
CHEW	Community Health Extension Worker
CHIS	Community Health Information System
CHS	Community Health Strategy
CHW	Community Health Worker
CORPS	Community-Owned Resource Persons
CU	Community units
FGD	Focus Group Discussion
KDHS	Kenya Demographic Health Survey
KNBS	Kenya National Bureau of Statistics
MDG	Millennium Development Goal
MMR	Maternal Mortality Rate
MOH	Ministry Of Health
MOPHS	Kenya's Ministry of Public Health and Sanitation
NGO	Non-Governmental Organization
NHSSP II	National Health Sector Strategic Plan II
PSHP	Private Sector Health Partnership
SMGL	Saving mothers giving life
TBA	Traditional Birth Attendant
UNICEF	United Nations Children's Fund
UNFPA	United Nations Population Fund
USAID	U.S. Agency for International Development
VHT	Village Health Team
WHO	World Health Organization

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ABSTRACT

The main objective of the study was to examine the influence of community health strategy on utilisation of maternal health care, a case of Laisamis ward, which is in Marsabit County, Kenya. High maternal mortality rate is a challenge in every public health in developing countries including Kenya. Community health strategy aims at building the capacity of households not only to demand services from all providers, but to know and progressively realize their rights to equitable, good quality health care. Community level (*level 1*) are basic community health services. The study sought to address the following objectives: To examine how community's awareness on community health strategy influence utilisation of maternal health care; To establish how community participation influence utilisation of maternal health care; To assess the extent to which established community health committees influence utilisation of maternal health care and to examine to what extent does role of health facility in influencing utilisation of maternal health care. To assess these objectives, the study employed a descriptive survey design, where by questionnaires were generated on related areas of study for the purposes of data collection. Data for the research study were drawn from both primary and secondary sources. Field research was carried out in Merille sub-Location in Laisamis ward by use of In-depth Interview (IDI), Key Informant interviews and Focused Group Discussions (FGD). The target population were mothers of a child bearing age (15 to 49 years) in Laisamis ward. The study used cluster and multi-stage probability sampling techniques in order to select various respondents. Cluster sampling technique allowed the researcher to divide Laisamis Ward into locations. Multi-stage sampling allowed the researcher to select a sample village within each selected sub-location in Laisamis ward. The study used a total sample of 96 respondents. Both Microsoft excel and Statistical Package for Social Science was used to analyze quantitative data while qualitative data was analyzed thematically and the findings presented in tables. Descriptive statistics such as frequency and percentages were used to summarize the data. From the study findings, 81 respondents with 92% were aware of community health workers (CHWs) owing to their roles on health education and promotional activities, while 7 respondents with 8% were not aware of CHWs. Based on the respondent's findings, 35 respondents with 39.77% were aware of Community health committee (CHC) and 53 respondents with 60.23% were not aware CHC. The study recommended that the government should review the Community health workers guidelines since they are drivers of community health strategy. County health promotion officer should sensitize communities including multiple communications prior to formation and recruitment of new members of community health committee to ensure community are fully aware of them.

CHAPTER ONE

INTRODUCTION

1.1 Background of study

Maternal mortality remains a global concern. Recent statistics shows that approximately 800 women die every day from preventable causes related to pregnancy and childbirths (WHO, 2014; Fact sheet N°348, 2014). Despite the fact that situation is precarious in Africa, even wealthier country like United states of America that spends more than any other country on health care and more on childbirth-related care than any other area of hospitalization still suffer from maternal and child health challenges. This unpleasant disparities in maternal outcomes is real especially between racial, ethnic minorities and the poor (Amnesty International, 2010; WHO, 2010).

The target for Millennium Development Goal (MDG) 4 was to reduce the under-5 mortality rate by two-thirds between 1990 and 2015 and the target for MDG 5 was to reduce the maternal mortality ratio by three-quarters during the same period (Rajaratnam JK, Marcus JR, Flaxman AD, et al. 2010). Progress on reducing child and maternal mortality has been substantially slower than the target annual rates of decline of 4.4% and 5.5% for children and mothers respectively (Rajaratnam JK, et al. 2010). WHO (2015) pointed out the main achievements indicating actions that countries and international communities should prioritize to attain the new Sustainable Development Goals (SDGs), which came into effect on 1st January 2016.

Most maternal deaths (99%) are reported from developing countries, with more than half occurring in sub-Saharan Africa (WHO, 2014; Fact sheet N°348, 2014). For instance, maternal mortality rate in Nigeria is estimated to be 630 women per 100,000 live births, attributed to lack of utilisation of maternal health care services (Onasoga et al., 2013). Nigeria has poorer maternal health indicators compared to her neighbours Ghana and Benin with 350 deaths per 100,000 live birth each. (CIA World Fact book, 2012).

Kenya's maternal mortality rates is at 448 per 100,000 live births (KDHS, 2009) above the MDG target of 147 per 100,000 by 2015 (Otieno, 2013). WHO (2014) points out that Kenya's maternal mortality rate in 2013 was 400/100,000 live births, an improvement compared to 550/100,000 live births in 2005. Still with this improvement the challenge remains huge in trying to reduce maternal mortality to the target level under MDGs. KDHS (2008-09) indicates 92 percent of women in Kenya receive antenatal care from a medical professional, either from doctors (29 percent), or nurses and midwives (63 percent). A very small fraction (less than one percent) receives antenatal care from traditional birth attendants, and 7 percent do not receive any antenatal care at all. However, in remote areas of the country the picture may be bleaker than presented in the survey. Laisamis ward is in Marsabit County, which is ranked 42nd in terms of deliveries at health facility; only 18% deliver at health facilities lower than the national average of 37.5% (County fact sheets, 2013). Even though health sector infrastructure has been expanded and improved over the past decade, many women still live at a considerable distance from health facilities, cannot afford to pay fees for maternal services, and/or face

other barriers to accessing quality care. Access to skilled delivery is a particular challenge.

There are two health centres in Laisamis: Laisamis sub-county referral hospital and Merille health centres; one dispensary; that is Lontolio and one hospital; Laisamis mission hospital. Among the four health facilities, only Laisamis mission hospital has inpatient services and runs 24hours. Laisamis sub-county referral hospital lacks adequate staff, it is manned by a clinical officer and four nurses, maternity wing is under construction, the lighting system was fixed in September 2016. Laisamis ward is an arid area largely inhabited by Nomadic Pastoralists. Therefore, the main economic activity is livestock farming and small scale businesses in the few town centres. The area is sparsely populated and vast. The settlements are occasionally concentrated at the water points especially during the dry spells, with poor access to the health services due to the long distances away from the few and scattered health facilities within the Ward. Kandagor (2005) points out that pastoralists in the Horn of Africa are among the most marginalized and disadvantaged of minority groups. He identified poor health services as one of the problems holding back the empowerment of the pastoralists. To curb the health care challenges, he put forth fundamental interventions such as provision of a basic mobile health service, education on nutrition, maternity and child health.

To address this problem, the Government of Kenya On June 1, 2013 introduced a policy of free maternity services in all public facilities. Health facilities almost immediately began to feel the effect of this policy. On the day of the announcement, Pumwani

Maternity Hospital delivered an unprecedented 100 births. By July, the Director of Public Health and Sanitation estimated a 10% increase in deliveries across the country, with increases of 50% in some counties. In some facilities, the numbers were even higher. This policy faces a myriad of challenges such as: inadequate funding, little investment in new infrastructure, lack of equipment and low staffing which lead to a decline in quality of services (Kenya National Commission for Human Rights, 2013).

The Division of Community Health Services, within the department of Primary Health Services in the Ministry of Public Health and Sanitation seeks to deliver affordable, quality, equitable and accessible health services to all Kenyan communities by the year 2030 through Community Health Strategy (CHS). The approach is one of Kenya's Vision 2030 flagship projects within the social pillar. The research study seeks to establish the influence of community health strategy on the utilisation of maternal health care in Laisamis administrative ward.

1.2 Statement of the Problem

The doctor to patient ratio in Marsabit County is 1:63,825 while that of nurse to patient is 1:1,868 (PSHP, 2016). This is quite alarming and needs a lot of attention, the picture is even bleaker when it comes to Laisamis ward. Laisamis ward is characterised by high illiteracy levels, poverty and poor health infrastructure. An estimated 98 percent of Kenya's maternal deaths take place in 15 of the 47 counties and Marsabit is one of them, the rest are Garissa, Homa Bay, Isiolo, Kakamega, Kisumu, Lamu, Mandera, Migori, Nakuru, Nairobi, Siaya, Taita Taveta, Turkana and Wajir, this is according to study by

Population Studies Research Institute at the University of Nairobi, Agwanda (2014). USAID (2015) affirms that apart from maternal death decreasing from last two decades and more, the most disadvantage and vulnerable women from developing countries still die during pregnancy and child birth which translate to 289,000 women dying worldwide.

Pathfinder International (2011) points out that Maternal Health care improvement initiatives were launched in 2003 to address high maternal mortality rates in Nigeria. However, this approach required its implementers to develop community structures referred to as Maternal Care Health Improvement Committees (MCHICs) that were mandated to act as link through which community members could make the political and health systems aware of their needs. The importance of the approach was to improve health system and community structure to facilitate sustainable change in the quality and coordination of maternal health service delivery in order to have a better maternal health care-seeking behaviour among the residents. WHO (2014) highlights Timor-Leste whose maternal mortality rate (MMR) in the year 2005 was 500/100,000 live births and in 2013 MMR is 270 per 100,000 live births, this huge decrease attributed to the community-based participatory model that is inclusive and allows the identification and facilitation of hard to reach area.

In developing countries, women undertake a lot of household chores including care of children, collecting water or fuel, cooking, growing food impacting negatively on their health (World Bank, 2004). Such women are less likely to take up the health care maternal care services for fear of being restrained for days in the health centres. Instead,

they will prefer the traditional approaches that will take less days and free them to attend to other responsibilities (Hotchkiss, 2000). In a survey carried out in Eastern Ethiopia at Kombolcha district in particular, researchers found out that women with poor socio-economic indicators are residing in rural areas were greatly disadvantaged in utilizing maternal health care services (Ayele et al., 2014). The uptake of maternal services in such areas can only be achieved by involving government, non-governmental and communities. This is very similar scenario with women in Laisamis ward whom majority are pastoralist. Wangui (2013) points out modern health services and infrastructure in Laisamis are poor; prompting many women to seek the services of traditional birth attendants, who sometimes are not able to deal with complications. In order to improve maternal health outcomes it is important for the interventions to target individuals, households and community (Lubbock L.A et al., 2008). MOH (2006) acknowledges community health strategy introduce level 1 services, which aimed at empowering Kenyan households and communities to take charge of improving their own health. Though community health strategy was embraced in Kenya since its commencement in the year 2007 (MOH, 2007), neither MOH nor its partners have demonstrated the influence of community health strategy on utilisation of maternal health care amongst women in Laisamis ward. Studies show the importance of community involvement in maternal health in order to develop their own health or improve maternal health care-seeking behavior. Despite women in Laisamis ward being characterized by high illiteracy level, poverty and long walk to the nearest health unit, this paper seeks to find out how maternal health care has been utilised amongst women in Laisamis ward, this was achieved by a survey study conducted in Merille Location.

1.3 Purpose of the study

To establish the influence of community health strategy on utilisation of maternal health care: A case of Laisamis administrative ward in Laisamis Sub-county, Kenya.

1.4 Objectives of the study

The study will be guided by the following specific objectives:

- i. To examine how community's awareness on community health strategy influence utilisation of maternal health care.
- ii. To establish how community participation influence utilisation of maternal health care.
- iii. To assess the extent to which established community health committees influence utilisation of maternal health care.
- iv. To examine to what extent does role of health facility influencing utilisation of maternal health care.

1.5 Research Questions

The study will be guided by the following research questions

- i. How does community awareness on community health strategy influence utilisation of maternal health care?
- ii. How does community participation influence utilisation of maternal health care?
- iii. To what extent does the established community health committees influence utilisation of maternal health care?
- iv. To what extent does the role of health facility influence utilisation of maternal health care?

1.6 Significance of the Study

The results for the research report may be helpful to county health officials, to all stakeholders working in Laisamis ward in coming up with informed health interventions. It is expected that the study of Laisamis ward would be generalized to all other wards in Laisamis constituency. It is hoped that it would provide relevant information that can guide organizations, government, community and other stakeholders to build the capacity of individuals, households and community not only to demand for services from all providers, but to know and progressively realize their rights to equitable and good quality health care. The study would help in better functioning of the Community health strategy relevant information that can guide community, organizations and government.

1.7 Delimitation of the study/scope

The study has been conducted in Merille sub-Location, Laisamis ward in Marsabit County. The study focused on mothers of child bearing age. Maternal health care in this study is limited to ANC attendance, deliveries in health facilities and post-partum care. The study also look at these components of community strategy i.e. community awareness, community participation, community health committee and the role of health facility.

1.8 Basic assumptions of the study

The study assumed the availability of the respondents would be timely and that they would cooperate and be truthful in giving out their honest responses in the study. The study further assumed that there would be no serious changes in the composition of the target population that would affect the efficiency of the study findings.

1.9 Definition of significant terms as used in the study

The significant terms carried out the following meaning in accordance to research study:

Community awareness: understanding of community health the strategy and how it operates.

Community health committee: Act as link between community members and the health facility.

Community Health Strategy: is a strategy aimed at improving health indicators at community level (*level 1*). In this study, it is operationalized to be these components that is; community awareness, community participation, community health committees and the role of health facility.

Community level (*level 1*): Is community level and basic community health services are carried out.

Community participation: Community interventions and community involvement in appointment of community health workers and understanding its operations.

Functional community unit: is unit which is assumed to share resources and challenges

Maternal health care: ANC attendance, deliveries in health facilities and post partum care.

Pastoralist: These are people who own temporary structures and move from one place to another in such of water and pastures for their livestock.

Utilisation: How women are using and benefitting from antenatal care services and deliveries in health facilities.

1.10 Organization of the study

This document has been organised into five chapters. Chapter one has various sections; background information of the study, statement of problem, purpose of study, objectives of study, research questions, significance of study, delimitation of study, limitation of study, basic assumptions, and definition of significant terms. Chapter two provides a review of literature related to the study thematically as per the research objectives, theoretical review, conceptual framework as well as the summary of literature reviewed. Chapter three discussed the methodology used for the study, It comprises of the research design, target population, sample size, sampling techniques, data collection instruments, data collection procedure and data analysis. Chapter four presents the data analysis, presentation and interpretation while chapter five covered a summary of findings, discussion, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter analyzes the reviewed literature under each research objective and has been reviewed under following broad themes: Broader causes of maternal mortality, Community health strategy, community awareness and utilisation of maternal health care, community participation and utilisation of maternal health care, Community health committees and utilisation of maternal health care, the role of health facilities and utilisation of maternal health care. The theoretical review and conceptual framework of the study which aim at explaining the relationship between the dependent and independent variables are also shared.

2.2 Broader Causes of Maternal Mortality

According to report released by World Health Organization (2010) in collaboration with UNICEF, UNFPA & World Bank the number of women dying due to complications during pregnancy and childbirth has decreased by 34% from an estimated 546 000 in 1990 to 358 000 in 2008. Therefore between 1990 and 2008, the majority of the global burden of maternal deaths shifted from Asia to Sub-Saharan Africa (WHO, 2010). More than half of maternal deaths worldwide during 2003 and 2009 are caused by haemorrhage, hypertensive disorders, unsafe abortion and sepsis (WHO, 2010; Say et al., 2014).

Kenya's maternal mortality rates is at 448 per 100,000 live births (KDHS, 2009) above the MDG target of 147 per 100,000 by 2015 (Otieno, 2013). The challenge remains huge in trying to reduce maternal mortality to the target level under MDGs (WHO, 2014). The deaths can be prevented by early detection and treatment, with timely transportation to care at a hospital with necessary facilities.

Women especially among the rural, urban poor, semi-arid region, pastoral and nomadic population are characterized by lack of access to affordable, quality delivery services, lack of sufficient primary health care and antenatal care, are the major cause of maternal mortality (Wendy J Graham and Sudan F Murray, 2000).

A number of counties in Kenya such as Western and Nyanza, report low use of doctors or no doctor at all and some women in North Eastern do not make use of any antenatal care at all (KNBS, 2008/2009). Maternal mortality tend to be highest in counties with poor health indicators and higher poverty level. Kenya's maternal health is further controlled by women's low level income and lack of resources for seeking health care, low level of education, gender inequalities and lack of decision-making power (Bourbonnais Nicole, 2013). Crucial setback such as a delay in making the decision to seek care by women are caused when communities are not well informed of sign to observe that brings about complications, implying the urgency of providing information and sensitizing communities to improve health-seeking behaviour (Wendy et al., 2000; Bourbonnais Nicole, 2013).

2.3 Community health strategy

Ministry of Health (2006) points out that Community Health Strategy (CHS) is move toward awareness and taking part by communities (level 1: community level) in their own health issues. This is achieved with help of Community-owned resource person (CORPS) who are volunteer that are identified by the community, who are in turn trained and guided by the Community Health Extension Worker(CHEW). At community level (*level 1*), basic community health services are provided.

Community participation and awareness in health care is greater contribution and achievement to individual and community at large. It increases understanding and lessen resistance to change. This is an important strategy for isolated scattered group as pastoralist. This strategy speaks out in pastoralists' favour, however, equity and accessibility can be achieved faster for primary health care in support of pastoralists Huka H. et al., (2001). In areas where distances, geographical location is an issue, and lack of transportation prevent people from reaching the health facility, trained community health workers should be brought into action for providing services since they are at the first level in contact with people. In other part of the world different approach are used with aim of achieving similar objective: Pathfinder International (2011) points out Maternal Health care improvement initiatives was launched in 2003 to address the Nigeria high maternal mortality rate. However, the approach required to develop community structures named maternal care health improvement committees (MCHICs) that was mandated to act as link through which community members could make their needs heard to political and health systems. The approach required improve health system

and community structure to facilitate sustainable change in the quality and coordination of maternal health service delivery in order to have a better maternal health care-seeking behaviour among the residents.

However another nation that demonstrated the usefulness of community involvement in health issues is Cambodia whose maternal mortality ratios was 472 deaths per 100,000 live births since the year 2000 and the same figure maintained until the year 2008 (Cambodia Demographic Health Survey, 2005).

In maintaining to meet MDGs 4 and 5, Ghana's major focus is maternal and infant health, therefore, its health service partnered with global NGO named Grameen Foundation in 2008 to create Mobile Technology for Community Health (MOTECH) (WHO, 2012). Grameen Foundation main mission is to help underprivileged women in remote and rural areas take charge of their health throughout their lives through its mobile health work that enhances relevant, timely information tailored to their particular health needs (World health organization, 2012).

Moreover, a strategy that seeks to build healthy families and communities with specific emphasis on improving health through prevention and addressing social concerns at their roots, is introduced by the Government of Nunavut in the Department of Health and Social Services in its mandate to improve the health of mother and the baby set out a five year period and beyond plan named; the *Maternal and Newborn Health Care Strategy* that seeks to build community-based services and strengthening maternal care and

midwifery services. The Strategy also guide the Department of Health to improve and provide quality maternal and newborn health care to its residents (Government of Nunavut, 2008).

In the United States of America, it was found that when women are well educated on the maternal care services, they would apply the knowledge to their practical lifestyle, Level of education of the women also increases their ability to understand the maternal education. Women of higher level of education exhibit increased ability to understand the information passed to them by the health institutions and consequently are able to take up the maternal care services (Leslie and Gupta, 2009).

However, other projects like the APHIA II Nyanza Project implemented community strategy which adhere closely to the objectives of the Kenya National Health Sector Strategic Plan, 2005–2010 (mainly the objective of increasing equitable access to health services), and is particularly directly linked to the Government of Kenya’s community strategy objectives, which include: Providing community-level services for all cohorts and socioeconomic groups; Building the capacity of community health workers to provide community-level services; Strengthening health facility–community linkages through effective decentralization and partnership for the implementation of community-level services; Strengthening communities to progressively realize their rights for accessible and quality care and to seek accountability from facility-based health services (MOH, 2006).

2.4 Community Awareness and utilisation of maternal health care

Awareness is being informed or educated on specific subject matter. Ayele et al.,(2014) demonstrates that lack of understanding regarding the risks related with pregnancy and childbirth, such as this could be because of illiteracy, ignorance, Negative attitude of pregnant mothers towards health workers and socioeconomic and cultural issues, this might be because of lack of sufficient information about the services provided in the health institutions. D. Z. Ayele et al., (2014) recommend that to solves the dangers associated to the maternal and neonatal awareness, the collective effort would be crucial by all stakeholders, governmental and nongovernmental organizations concerned through mobilization and reinforcing information provision so as to encourage mothers to utilize maternal health care services. In addition, emphasising the education of girls and women so as to improve their ability of understanding and decision making would be necessary (Leslie and Gupta1989)

In order to improve maternal and newborn health outcomes, increasing awareness to individual, families and communities to learn and understand on the indirect and direct causes of maternal and neonatal mortality is very crucial (UNICEF, 2008). Madhavan et al.,(2007) points out that it is also important for the individual, families and communities to be aware that these causes of deaths related to pregnancy and childbirths are preventable. A meeting should be held at the community that would involves community leadership such as chiefs, women leaders, youth leaders, religious leaders, elders and community health committee to create awareness, provide necessary information and

improve community understanding that would lead to their support for the successful implementation of the intended program.

The involvement of religious leaders in the advocating for the uptake of maternal health services is an important intervention that has help most the rural areas that hard to reach areas (Chand, S. et al.,2007). Religious leaders are always in close contact with people and they are sometimes considered as the first respondents in case of emergencies. For example, if an expectant lady is in labour and needs medical attention or doctor, she is offered transportation services by the religious leaders. According to study by Population Studies Research Institute at the University of Nairobi (2014) an estimated 98 per cent of Kenya's maternal deaths take place in just 15 out 47 counties and Marsabit is one of them, the rest are Garissa, Homa Bay, Isiolo, Kakamega, Kisumu, Lamu, Mandera, Migori, Nakuru, Nairobi, Siaya, Taita Taveta, Turkana and Wajir. Due to this fact, the UNFPA and the Ministry health have started working with religious leaders through the Inter-Religious Council of Kenya to engage a broad range of faith leaders in the 15 counties that is Christian, Muslim, Jewish and Hindu communities to fight Kenya's high rate of maternal death. Religious leaders signed a call to action, pledging to incorporate positive health messages in their sermons and promised to change the attitude and behaviours that are harmful to women and children like destructive traditional practices that infringe child survival and maternal health (UNFPA, 2015). The governors from the 15 counties guaranteed to prioritize maternal and child health by agreeing to a signed communiqué and promised to allocate more resources to reducing maternal and child mortality (UNFPA, 2014).

Margaret Kenyatta launched the ‘Beyond Zero Campaign’ on 24 January, 2014 in Kenya’s capital Nairobi, these intervention was to improve maternal and child health outcomes in the country. The campaign’s slogan was no mother should die while giving birth to life.

Numerous efforts have been made worldwide in achieving awareness, for example: HeforShe program by UN women which is shared aim that involve men in gender disparities that faces women. HeforShe program can be applicable especially in rural African communities, where the head of household is man and mostly makes majority of family decisions. Men are influential people in the society since they dominate leadership positions. They are influential in local and national advocacy efforts, therefore the support of men in improving the availability and quality maternal health services will be an important platform in rural setting. Those that are advocating for maternal health services should involve men in their operational activities.

2.5 Community participation and utilisation of maternal health care

A healthy community for pregnant women and newborns is an informed, participatory and supportive community. This is a community-based approach, through which households and communities take an active role in health and health-related development issues, where community is arranged into functional units (MOH, 2007). The community units (CU) are organised in villages, in every CU, a community health committees (CHC) has been formed to act as a link between the community and the health facility, the

chairman of the CHC is a community member, the secretary is a CHEW and the treasurer is a CHW (MOH, 2006).

In order to improve the health outcomes in Kenya, Kenya's Ministry of Public Health and Sanitation (MOPHS) through its National Health Sector Strategic Plan II (NHSSP II) is to strengthen health services through several strategies, one of which is the community health strategy (MOH, 2006). Its purpose is to highlights on promotion of individual, household and community access to health care by providing health care services for all groups at household and community levels; building the capacity of community health extension workers (CHEWs) and CHWs to provide community level services; strengthening health facility-community linkages; and raising the community's awareness of their rights to health services (MOH, 2006). The strategy is based on the use Community Health Workers (CHWs) linked to primary health facilities through Community Health Extension Workers (MOH, 2007).

Ministry of Health (2007) highlight in the Community Health Strategy guidelines, Community Health Workers key responsibilities included household registration and update every six months, monthly household visits, active case finding mainly in households with pregnant women and under-five children, and referrals of pregnant women to the clinics for antenatal visits. According to MOH (2006) level 1 aims to empower Kenyan households and communities to take charge of improving their own health. Lubbock LA et al, (2008) suggest that in order to improve maternal health

outcomes it is important for the interventions to target individual, households and community.

There has been a broad agreement that communities should be actively involved in improving their own health (WHO, 1979). Timor-Leste maternal mortality rate in 1990 is 1200/100,000 live births, in 2000 MMR 680/100,000 live births, in 2005 MMR 500/100,000 live births and in 2013 MMR is 270/100,000 live births (WHO 2014). The enormous decrease in maternal mortality rate is attributed to community-based participatory model which is implemented by Timor-Leste (UNICEF, 2013).

It is important that the communities are encouraged to take charge of the responsibilities of their health. Huka H. et al., (2001) support that in order to substantially improve the health care provision to pastoralist people, the implementation of community based and integrated primary health care could contribute to remedying the inadequacies in the health system. The researchers recommended that health care provision itself should advocate for decentralization. They added that care delivery should be dealt at the lowest level (community level) in order to bring services closer to the people. By bringing services closer to the people, the physical accessibility factor will improve, also there is reduction of inequalities and it guarantees enhanced community involvement. The researchers also recommends that community health extension worker should work closely with traditional birth attendants to train them on basic knowledge of the delivery and insist on maintaining hygiene.

The goal of the Make It Happen project to train health workers to improve their knowledge and skills by use of simple technology incorporating the use of mannequins (UNICEF, 2013). The project used a tested innovative model developed by the Liverpool School of Tropical Medicine, WHO and the Royal College of Obstetrics and Gynaecology to develop the competency of health personnel in providing Emergency Obstetric and Newborn Care (UNICEF, 2013). In Sierra Leone, the use of this strategy has confirmed that it is possible to take the training to a national scale while building in-country capacity (UNICEF, 2013)..

2.6 Community health committees and utilisation of maternal health care

Community health committees helps in community mobilization strategies and act as links between community and health services activities, aimed at promoting healthy behavior, particularly in maternal and neonatal health. The committee would be responsible for determining activities, supervising volunteers who provide services, managing funds, and coordinating with the formal health sector and NGOs (MOPHS, UNICEF, 2010).

Wangalwa G et al.,(2012) suggests the value of creating community groups, such as mother-to-mother groups for providing peer support is clear indication that demonstrate, awareness among an organised group that facilitates its issues. One best example of such a programme that focuses on the value of leveraging communities group is Amref Kenya (2012) launched a project named Mama na Mtoto wa Afrika with the aim of improving maternal and child health among the marginalized communities in Kenya's Eastern

province. The project was implemented in Makueni County, with the existing community organizations (grassroots CSOs), whereby people had come together with a zeal to create positive change in their own communities.

In a community health workers focus group discussion in Bondo West district affirms that Community Health Committees (CHC) are relevant since community members listen to them, they are also effective since they call for a meeting once in three months and advise community health workers on village to go for outreach and even organise how CHWs will go for outreach even when no money from MOPHS. Moreover, they participate in hygiene/sanitation one village to another e.g. organise to build latrine for poor family (UNICEF, 2010).

In order for Nigeria to address the high maternal mortality rate, Maternal Health care improvement initiatives was launched in 2003 so as to develop community structures named maternal care health improvement committees (MCHICs) that were mandated to act as link through which community members could make their needs heard to political and health systems. The approach required improve health system and community structure to facilitate sustainable change in the quality and coordination of maternal health service delivery in order to have a better maternal health care-seeking behaviour among the residents (Pathfinder International, 2011).

2.7 The role of health facilities and utilisation of maternal health care

It is very important to examine the role of health facility in utilisation of maternal health care in order to establish its effectiveness and relevance as well as take cognizance of the lessons learnt with regards to empowering communities in taking charge of their own health. The Busia Project emphasize community health strategy is an effective approach to deliver community-based intervention. This is evident by the significant changes in essential maternal and newborn care practices of ANC attendance, skilled deliveries and exclusive breastfeeding (Wangalwa G et al., 2012).

In a Community health strategy evaluation report a focused group discussion of community health workers at Uassin Gishu District, Kesses Community Unit gives out their view on effectiveness of the community strategy; they affirmed that number of illnesses has reduced and parents are taking their children to health facilities more for immunization and baby clinics, more women are delivering in hospitals and also seeking postnatal care services (UNICEF, 2010). Generally people at Uassin Gishu District are utilizing the services of health facilities more when ill and practicing preventive health like sterilizing water and hand washing (UNICEF, 2010).

Xiaoning Liu, Hong Yan, & Duolao Wang (2010) affirms that in order to reduce the maternal mortality rates and to improve maternal care utilisation in western rural areas of China, Chinese Ministry of Health (MOH) and the United Nations Children's Fund (UNICEF) sponsored a program named Safe Motherhood in ten western provinces of China from 2001 through 2005. After the intervention, the proportion of pregnant women

who had their first prenatal visit in the first three months was increased from 38.9% to 76.1%. The proportion of prenatal visits increased from 82.6% to 98.3%. The proportion of women mobilized to deliver in hospitals increased from 62.7% to 94.5%. Hospital delivery was improved greatly from 31.1% to 87.3%. The maternal mortality rate was lowered by 34.9% from 91.76 to 59.74 per 100,000 live births. The community-based intervention had increased prenatal visits rate by 5.2%, first prenatal visit in first trimester rate by 12.0% and hospital delivery rate by 22.5%, respectively. No effect was found on rate of women being mobilized to hospital delivery compared with that of the control group.

The role of health facility on Antenatal Care (ANC) attendance, delivery in health facilities and postpartum care are of great advantage to ensure the utilisation of maternal health care: Access to affordable Antenatal Care (ANC) attendance has a vital impact on the health of the mother and provision of sufficient antenatal care is considered to be foundation of maternal health care. Frequent visit of antenatal care enable uncovering of complications during pregnancies and childbirth therefore antenatal care is powerful tool to reduce maternal mortality in developing countries. According to the latest estimates, 75 percent of women in the developing world receive antenatal care from a skilled health provider at least once during pregnancy, up considerably from 60 percent during the mid-1990s. (UNICEF, 2008). WHO antenatal care guideline recommend that all pregnant women should make at least four ANC visits, with the first visit within three months. Essential interventions in ANC include identification and management of obstetric complications such as pre-eclampsia, tetanus toxoid immunization, intermittent

preventive treatment for malaria during pregnancy (IPTp), and identification and management of infections including HIV, syphilis and other sexually transmitted infections (STIs). ANC is also an opportunity to promote the use of skilled attendance at birth and healthy behaviours such as breastfeeding, early postnatal care, and planning for optimal pregnancy spacing. Deliveries by skilled attendants increased from 40 to 43 per cent (KDHS 2008/9). This means that over 50 percent of deliveries among Kenyan women are attended to by unskilled persons, putting them and their newborns at the risk of poorer birth outcomes.

The death of a mother deeply affect the health and well-being of her children, it is therefore very essential for family, community and government to be involve in maternal death crisis to save the life of mother when giving birth to life. With joint efforts, all these voices will help reduced the maternal deaths that has been pandemic in many of our rural settings, where traditional birth attendants (TBAs) have become useful but if complications arise both the mother and the newborn are in danger (UNFPA, 2011). Sarah Manyeki and Millicent Wanjiru (2012) points outs that regardless of the traditional birth attendants being prohibited, they still play a very important task in remote nomadic pastoralist communities in assisting mothers to deliver, according to baseline survey carried out by Mothers' Union between January and May 2012, 92 percent of women in Laikipia and Samburu Counties give birth at home without the assistance of a skilled heath worker. Marsabit County which is ranked 42nd in terms of deliveries at health facility; only 18% deliver at health facilities lower than the national average of 37.5% (County fact sheets, 2013).

Post partum care (PNC) is an essential emphasis placed on all mothers including those who delivered at home, to attend post-natal clinics for care within few days of delivery for early diagnosis of postpartum complications. It also provide an opportunity for new mother to be counselled on family planning, care of herself and the newborn.. Newborns are vulnerable and most of them die in the first day and week of life when care is low. However, this is because majority of women deliver at home without skilled personnel and care for themselves and their newborns.

2.8 Theoretical framework

The framework that guides the study is the ‘model of three delays’: which is the concept of Thaddeus S, Maine D.(1994) whose goal was dissemination of information to those concerned with preventing maternal deaths. The summary of Thaddeus and Maine titled ‘Too far to walk: maternal mortality in context’ is as follow.

2.8.1 Three delay model

The study relied on three delay model, with a strengthened community health strategy; with increased performance by Community Health Workers, and enhanced role of traditional birth attendants (TBAs) in referral to facilities and would address the three delays.

Thaddeus and Maine (1994) argued that not getting adequate care in time is the overwhelming reason why women die in developing countries. Lack of care, they argued, can be related to three factors: a delay in making the decision to seek care when

complications develop; a delay in reaching obstetric medical facility once the decision to seek care has been made; or delay in receiving adequate and appropriate care once a medical facility has been reached (Maine, 1997).

Delay in the decision to seek medical care may be influenced by various factors such as the actors involved in the decision-making process, illness characteristics and experience with the health system or distance to the health facility (Maine, 1997; Thaddeus and Maine 1994). Delay in reaching an appropriate medical facility is affected by the distribution of health facilities/distance to health centre, availability of transportation, road conditions or cost of transportation, geography e.g. mountainous terrain and rivers. Delay in receiving adequate and appropriate care once the facility is reached is mainly due to operational difficulties in the health care delivery system (Maine, 1997; Thaddeus and Maine 1994) Knight, Self A and Kennedy (2013). Such inadequacies may be characterized by shortages in supplies, equipment, lack of trained personnel, incompetence of the available staff, or uncoordinated emergency services. The delay model helps to identify community and health services factors contributing to maternal deaths and as such it is useful in devising interventions and strategies for preventive measures.

Factors affecting services utilisation

Delays

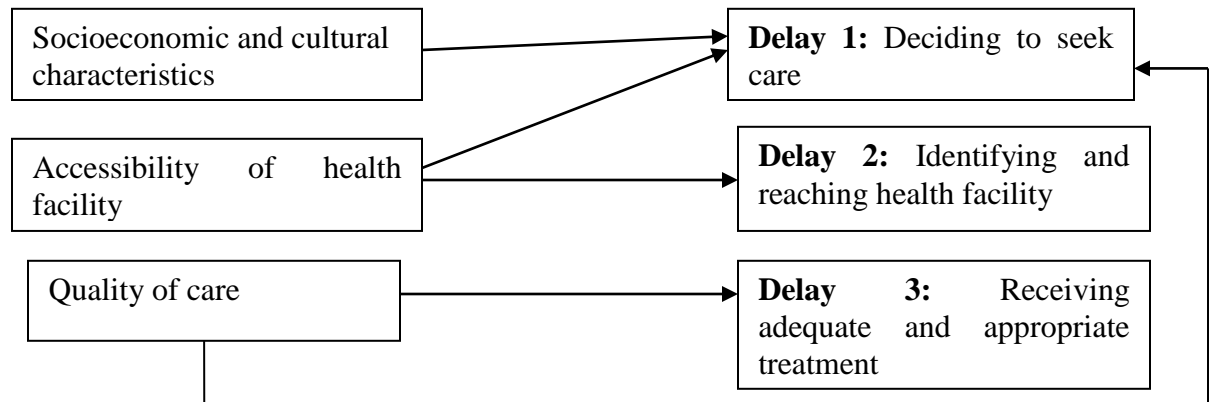


Figure 1: The three-delay model theoretical framework diagram

Source: Thaddeus and Maine (1994)

2.8.2 Link between theoretical framework and the study

The three delays by Thaddeus and Maine (1994) theoretical framework is related to this study through its objectives. The objective one which is community awareness, this is where community units are organised into villages; where community health workers who are members of community are linked to the primary health facilities to provide community level service, whose main purpose is to raise community understanding of their rights. The second objective is community participation in the utilisation of maternal health care services, here community are expected to be involved in overseeing CHW, CHEWs and CHC work results are felt, these relates improves quality of care which in turn increases decision to seek care and receiving adequate and appropriate care. The third objective is established health committee whose responsibility is to act as link between the community and the health facility. The third objective is to curb factors that

affect delay in decision to seek care and delay in identifying and reaching health facilities. The fourth objective is the role of health facility in utilisation of services such antenatal care, hospital deliveries and postnatal care that improves quality of care which in turn increases decision to seek care and receiving adequate and appropriate care.

2.9 Conceptual framework

Conceptual Framework is a diagrammatic explanation of the research problem hence an explanation of the relationship among several factors that have been identified as important to the study. Kothari (2011) defines conceptual framework as a schematic presentation showing the interactions between the study variables.

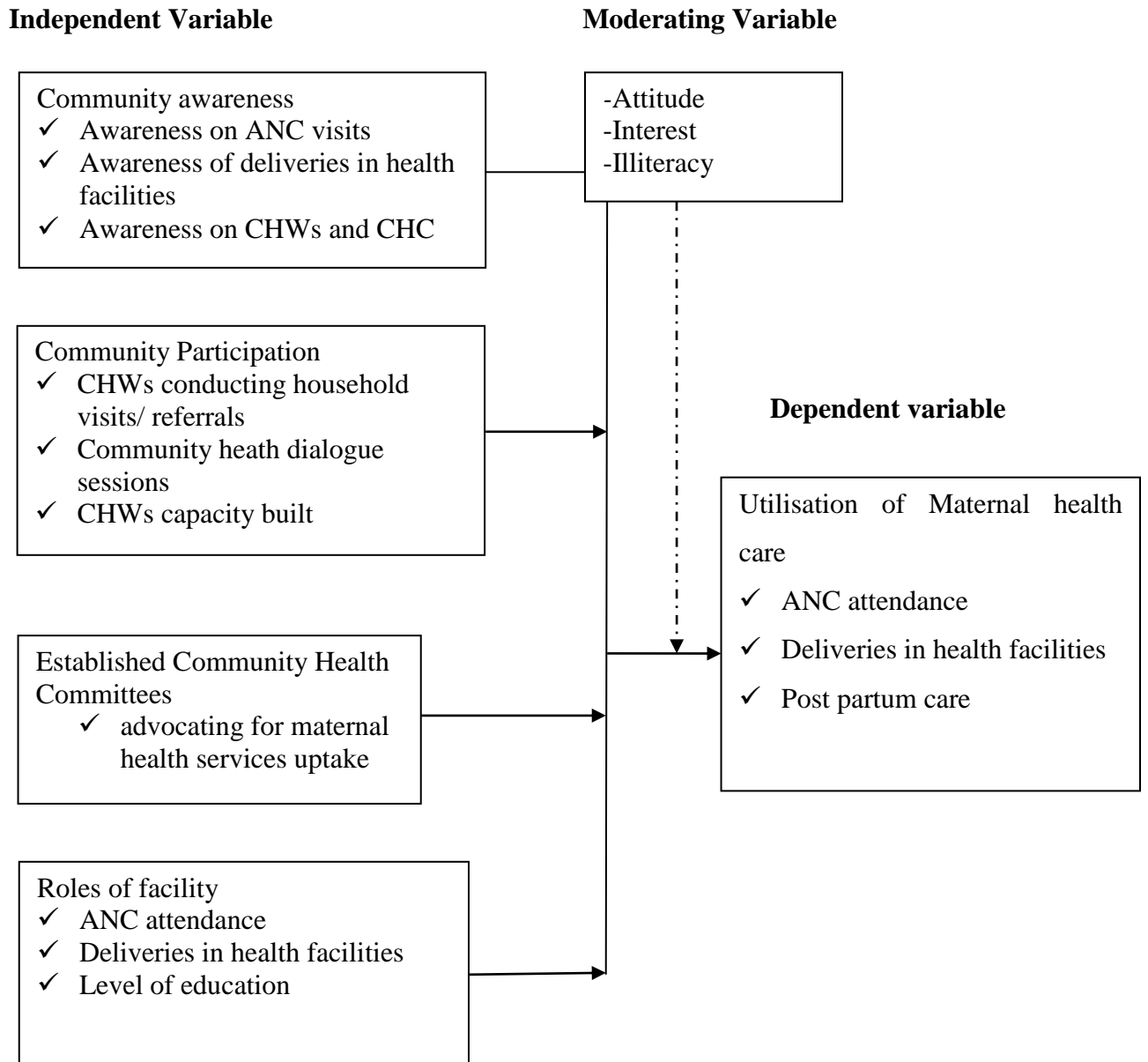


Figure 2: Conceptual Framework

The community awareness is in terms of Antenatal visits, hospital deliveries and postnatal services uptake, community participation in terms of community health workers conducting household visits and referrals, community health workers conducting community health dialogue sessions and CHW's capacity built. Established community

health committees that advocates for maternal health services uptake and the role of health facility to check for effectiveness and the utilisation of Antenatal visits, hospital deliveries and postnatal services uptake. All these strategies predict utilisation of maternal health care amongst pastoralist women. On the right side of the figure are utilisation of the maternal health care which include: ANC attendance, deliveries in health facilities and postpartum care outcomes which are determined by employing community health strategy.

2.10 Gaps in literature reviewed

Though there are several literature on influence of community health strategy on utilisation of maternal health care but there are little information on the influence of community health strategy on utilisation of maternal health care among women in Laisamis sub-county in general and Laisamis ward in particular. The study aims to inform and strengthen the health strategies and initiatives towards improving maternal health.

2.11 Summary

The above literature review relates to the research study under highlighted themes. The sections dealt with in this chapter are Broader causes of maternal mortality, Community health strategy, Community awareness, community participation, Community health committees, The role of health facility in ANC attendance, deliveries in health facilities and post partum care, theoretical review and conceptual framework. The reviewed literature show more efforts should be given to educate society in general and mothers in

particular, to strengthen community participation and community awareness so as to increase the accessibility of maternal health care services. Moreover, providing accurate information about the services provided in the health institutions is required from the concerned governmental and nongovernmental organizations, however not much study has been done to critically survey community health strategy on utilisation of maternal health care services in Laisamis ward in particular and it is this knowledge gap therefore leads the researcher to initiate this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology used to carry out this study. It comprises of the research design, target population, sample size, sampling techniques, data collection instruments, data collection procedure and data analysis.

3.2 Research design

The descriptive survey was used in this study in order to acquire information on whether maternal health care has been utilised amongst women Laisamis ward. Descriptive survey aspires to collect data in order to present a whole picture of the subject under study. Descriptive research was used to get information relating to current status of the phenomena to describe "what exists" with respect to variable (James P, 1997; Oso and Onen, 2009). Descriptive studies portray the variables by answering who, what and how questions (Babbie, 2002). Mugenda and Mugenda (2003) assert that the descriptive survey is a process of testing hypotheses or to answer the questions on the current status of the subject under study. Descriptive survey was chosen because it enables the researcher to generalize the findings to a larger population. The descriptive survey approach has been credited due to the fact that it allows analysis of the relationship between variables (Creswell, 1999).

3.3 Target population

The target population consist of all the people to who the findings of the survey are to be applied or generalized (Dornyei, 2007). Mugenda and Mugenda (2003) describe a population as the entire group of individuals or items under consideration in any field of inquiry and have a common attribute. This study targets mothers of child bearing age (15 to 49 years) living in Laisamis ward. Laisamis ward has a population of 13,109, where 6,682 are females according to Kenya National Bureau of Statistics (2009). There are two health centres in Laisamis: Laisamis sub-county referral hospital with 874 women of reproductive age and Merille health centres with 720 women of reproductive age; one dispensary: that is Lontolio with 583 women of reproductive age and finally one hospital: Laisamis mission hospital with 488 women of reproductive age. The total women of reproductive age in Laisamis ward is 2,665 women (child bearing age 15-49 years) this is according to district health information system (DHIS, 2016).

3.4 Sample Size and sampling Procedure

Taylor (2005) defined sample as subset of a population or universe. It is also defined by Oso and Onen (2009) as a subset of the target population which can be used as a true representative. The sampling procedure is the scientific procedure of selecting those sampling units which would provide the required estimates with associated margins of uncertainty, arising from examining only a part and not the whole (Kothari, 2003).

3.4.1 Sample Size

The sample size for women of child bearing age in Laisamis ward was calculated based on Yamane's formula (Yamane, 1967), this is because it is a simplified formula to calculate sample sizes.

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

Where:

n= required sample size

N= Size of the population

e= margin of error at 10% (standard value of 0.1)

The standard values listed above, the sample size calculation followed as below:

$$n = \frac{2665}{1 + 2665(0.1)^2}$$

$$n = 96.38 \sim \mathbf{96}$$

By using Yamane's formula to compute sample size with level of precision being 10%, where 95% confidence level and $p=0.5$ are assumed (Yamane, 1967). The sample size was calculated from population of 2,665 women of child bearing age 15-49 years from Laisamis ward and out of these 96 respondents were interviewed.

3.4.2 Sampling Technique

The term sample refers to a segment of the population selected for research to represent the population as a whole (Kotler and Armstrong, 2006). Due to vastness of the target

area, the study used cluster and multi-stage probability sampling techniques to select respondents. Cluster sampling technique allowed the researcher to divide Laisamis Ward into sub-locations.

Laisamis constituency has five wards: Loiyangalani, Kargi/South Horr, Korr/Ngurunit, Logologo and Laisamis. Laisamis ward has six sub-locations, namely; Laisamis, Koya, Irir, Lontolio, Ndikir and Merille Sub-Locations. A random sample of one sub-location was selected from Laisamis ward. The selected sub-location is Merille sub-location.

Consequently, from the selected sub-location, a random sample of four villages was selected. The selected villages from the sub-locations were as follows; Merille sub-location - Merille centre, Ilturiya, Lkunono and manyatta Orguba

Therefore, from each selected village all household with mothers of child bearing age (15 to 49 years) were eligible for the study. Multi-stage sampling allowed the researcher to select a sample village within each selected sub-location. The study used a total sample of 96 households. Household level information such as age, education and so on was collected along with information on the household's socioeconomic status, knowledge, attitude and practices on maternal health. Sampling frame were mothers of child bearing age (15 to 49 years). The dimensions of maternal health care to be covered in the survey are antenatal care, delivery care and post-partum care. The clusters of certain sub-locations were chosen as the areas with similar geographic and socio-economic characteristics. It is more cost-effective to select respondents in groups (clusters) so as to reduce travel and administrative costs.

3.5 Data collection Instrumentation

The study relied on both primary and secondary data. Primary data were collected through questionnaire, Key informant interview and focused group discussions. Secondary data were collected using document analysis. Gupta (2007) explains that interviews are reliable when a study seeks to get in-depth information from the key respondents on a specific phenomenon under study. Interviewer-administered questionnaire were used to conduct the survey.

3.5.1 Validity of the instrument

To ensure content validity of the instruments, the study supervisor and peers were involved when questionnaires were developed to avoid ambiguity. Researcher administered the questionnaires and interview guide with the help of trained assistants who speak and understand language (s) spoken in the selected villages. The Research assistants translated the questions to the locals who could not read and write, hence writing their responses.

3.5.2 Instrument Reliability

Reliability refers to a measure of the degree to which research instruments yield consistent results (Mugenda & Mugenda, 2003). A test and re-test were conducted where randomly selected respondents were exposed to the tools of data collection. To achieve this, two respondents from each of the target categories were randomly selected and provided with the survey tools and their feedback assisted in adjusting the tools accordingly. This was used to ensure the research is accurate, correct and meaningful.

3.6 Data collection procedure

A letter of introduction was provided to Laisamis administrative ward leaders, location leaders and sub-location leaders and humanitarian organizations working in the ward to seek their support in data collection processes in the sampled locations. The researcher approached respondents and introduce the purpose of the study and administer the questionnaire, key informant and focus group discussion interview guide. The researcher trained research assistance so as to assist in administering questionnaires. The research assistance also assisted the locals who are illiterate in translating the questions in their mother tongue, hence filling the responses in the questionnaire.

To collect and document comprehensive information on the status of influence of the community health strategy in the Merille sub-location in Laisamis ward with specific interest on maternal health. Key informants interviews were conducted to obtain the data from County Executive Member in charge of health, County Medical Health Officers, CHWs (1 in each unit), CHEWs (in every supervision unit) and chairperson, CHC in every unit, Religious leaders, NGO workers, political leaders, community elders, and community members were also interviewed. Non participant observations were also employed by the researcher to complement the data. Health facility records, CHW registers was also relied on to assess the influence of community strategy on maternal health care utilisation.

Desk review, Key informant interviews and FGDs were used to understand the trends and level of maternal health care utilisation. In-depth interviews were used to obtain data from the health providers- health workers, traditional birth attendants, NGO workers dealing with maternal health, community based health workers and Religious leaders to complement the survey.

3.7 Data analysis techniques

The collected data was checked for errors in responses, omissions, exaggerations and biases before analysis of data. For easy management and longevity of the data, it was captured in Ms-Excel 2007 windows. Data obtained from the field was cleaned, coded, and analyzed with the aid of International Business Machine (IBM) Statistical Package for Social Sciences (IBM SPSS V 21) in order to analyze quantitative data. All data was entered and verified after effective coding. Data was then scrutinized in relation to the objective of the study, otherwise with a potential abundance data; vast numbers of irrelevant summaries would be produced. Data was cleaned and coded by summarizing, synthesizing, sorting and labelling key issues emerging from the responses using an excel sheet. Qualitative data from the open ended questions was analyzed thematically. Results were then presented in narratives, tables and graphs. A simple regression model was used in determining the level of influence the independent variables have on dependent variable as shown below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where;

Y = Utilisation of maternal health care (Dependent Variable)

β_0	= Constant Term
$\beta_1, \beta_2, \beta_3, \beta_4$	= Beta coefficients
X_1	= Community's awareness
X_2	= Community participation
X_3	= Community health committees
X_4	= Health facility
e	= Error Term

3.8 Ethical considerations

Most controversy about the ethics has arisen at the level of practice, rather than principle (Murphy & Dingwall, 2001). In their book they show the significant ethical issues that were considered in the research process include consent and confidentiality. In order to secure the consent of the selected participants, the researcher relied all important details of the study, including its aim and purpose.

3.9 Operationalization of variables

This section analyses the operational definition of variables on the influence of community health strategy on utilisation of maternal health care; a case of Laisamis Administrative Ward in Laisamis Sub-County, Kenya. Variable are given in Table 3.1.

Table 3.1: Operationalization of variables

Objectives	Variable	Indicators	Measurement	Scale	Data collection methods	Tool of Analysis
To examine the community's awareness on community health strategy influence utilisation of maternal health care	Community awareness	<ul style="list-style-type: none"> ✓ Awareness on ANC visits ✓ Awareness of deliveries in health facilities ✓ Awareness on CHWs 	Frequency Percentage Mean Standard deviation	Ordinal Nominal	Questioners Observation	Quantitative
To establish how community participation influence utilisation of maternal health care	Community Participation	<ul style="list-style-type: none"> ✓ CHWs conducting household visits/ referrals ✓ Community health dialogue sessions ✓ CHWs capacity built 	Frequency Percentage Mean Standard deviation	Ordinal Nominal	Questioners Observation	Quantitative
To assess the extent to which established community health committees influence utilisation of maternal health care	Community Health Committees	<ul style="list-style-type: none"> ✓ Awareness on CHC ✓ advocating for maternal health services uptake 	Frequency Percentage Mean Standard deviation	Ordinal Nominal	Questioners Observation	Quantitative
To examine to what extent does role of health facility influencing utilisation of maternal health care	The role of health facility	<ul style="list-style-type: none"> ✓ ANC attendance ✓ Deliveries in health facilities ✓ Level of education 	Frequency Percentage Mean Standard deviation	Ordinal Nominal	Questioners Observation	Quantitative

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter deals with the analysis of data collected from the field, presentation and interpretation of the data. Analysis of data was done using statistical package for social sciences (SPSS) version 21; presentation is done using tables while interpretations are generated from analysis of the data presented. Detailed analysis of the data, interpretation and explanation of the results with regard to objectives and the research question are given.

4.2. Response Rate

The response rate of the of respondents is presented in the table 4.1

Table 4.1: Response Rate

Category	Frequency	Percentage
Responded	88	91.67
Did not respond	8	8.33
Total	96	100.00

From Table 4.1, the researcher distributed 96 self-administered questionnaires to the sampled respondents, 88 questionnaires were returned and this represents 91.67% response rate which the researcher found sufficient to proceed with data analysis. Mugenda and Mugenda (1999) stated that a response rate of 55% and above is a good response rate. The high response rate is attributed to the fact that the researcher worked

with a team of research assistants who had the motivation to administer the questionnaires to the respondents.

4.3 Background Information of the Respondents

The respondents were asked to indicate their age, educational background, employment status and religious affiliation, as some of the socio-demographic factors that influence utilisation of maternal health services uptake. These issues are known to affect the use of maternal health care services. This information was provided in the sub-headings below.

4.3.1 Distribution of Respondents by Age

In this section the researcher sought to establish the age of respondents. Table 4.2 shows the distribution of respondents in terms of age bracket.

Table 4.2: Distribution of Respondents by Age Category

Category	Frequency	Percentage
15-20 yrs	5	5.7
21-26 yrs	22	25
27-32 yrs	40	45.4
33-38 yrs	14	15.9
Over 38 and above yrs	7	8
Total	88	100.00

From table 4.2, 5 respondents accounting for 5.7% were aged between 15 years to 20 years, 22 respondents representing 25% of the respondents were aged between 21 years

to 26 years, 40 respondents accounting for 45.4% were aged between 27 years to 32 years, 14 respondents accounting for 15.9% were aged between 33 years to 38 years and 7 respondents accounting for 8% were aged over 38 years. This shows that the largest population of the respondents belonged to the most vibrant age group (27 to 37 years) this is the most energetic age group and are able to understand issues related to community health strategy and the utilisation of maternal health care services.

4.3.2 Educational background

The respondents academic background was established as shown the Table 4.

Table 4.3: Distribution of Respondents by Highest Level of education

Level of education	Frequency	Percent
None	17	19.3
Primary school	37	42
Secondary School	20	22.7
College	10	8.8
University Degree	4	4.5
Total	88	100

From findings, a woman's level of education had a positive influence on maternal health care utilisation since educated women are empowered. According to Pingua (2012) on her study about factors influencing women empowerment among pastoral communities: A case of Gabra community of Marsabit County in Kenya. From the findings majority of women

are aware of the importance of education that educated women knew their rights more than others and educated woman can make their own decisions.

4.3.3 Religious affiliation

The study revealed that 49 respondents with 55.7% were Catholics, 22 respondents with 25% were protestants, 15 respondents with 17% were Muslims, 2 respondents with 2.3% were African Traditional Religion, as presented in table 4.4.

Table 4.4: Distribution of Respondents by Religious affiliation

Religious affiliation	Frequency	Percent
Protestant	22	25
Catholic	49	55.7
Muslim	15	17
African Traditional Religion	2	2.3
Total	88	100

4.4.3.1 Qualitative findings on the role of religion in creating awareness on the utilisation of maternal health care

From focus group discussion points out that religion was found to create awareness on the utilisation of maternal health care, particularly catholic was found to play a significant impact in determining utilisation of maternal healthcare services. This was done after sermons during announcements, especially where positive messages on importance of ANC visits, hospital deliveries or when gynaecologist is around and so on, are passed to

the congregations. Religious leaders are very helpful in case of emergencies, religious leaders assist congregations with their vehicle especially if a lady who is in labour and needs urgent medical attention.

4.3.4 Employment Status

Table 4.5 shows the study findings on the respondents employment status.

Table 4.5: Response Rate of Employment status

Respondents Employment status	Frequency	Percent
self-employed	48	54.54
Employed	14	15.9
Unemployed	26	29.5
Total	88	100

From table 4.5, 48 respondents with 54.5% are self-employed, this because in Merille there is a very big market day on every Tuesday where buying and selling of livestock is done, and these has greatly improved living standards of pastoralists. This was followed by 26 respondents with 29.5% who were unemployed. While 14 respondents with 15.9% were employed. When women are economically empowered barriers to accessing quality care are solved.

4.4 Utilisation of maternal health care services

Researcher observed how respondents utilised maternal health care services, the findings are presented in Table 4.6 and Table 4.7. Respondents were asked to indicate the number of visits they have attended in antenatal care during their last birth and place of deliveries.

Table 4.6: Number of visits to antenatal care

the number of visits of antenatal care, the study found out that 38 respondents with 43.18% have attended at least four antenatal care visits during their last birth, 6 respondents with 6.82% have attended for more than four times antenatal care visits, 14 respondents with 15.91% have attended for at least three times antenatal care visits, 8 respondents with 9.09% have attended antenatal care visits at least twice, 3 respondents with 3.41% have attended antenatal care visits at least once while 19 respondents with 21.59% have never attended antenatal care visits as shown in the Table 4.6 below.

Number of visits	Frequency	Percentage
Once	3	3.41
Twice	8	9.09
Thrice	14	15.91
Four times	38	43.18
More (specify)	6	6.82
None	19	21.59
Total	88	100.00

4.4.1 Qualitative findings associated with number of visits to antenatal care

The respondents pointed out that check-ups delivery in health facility, postpartum and other Antenatal care services motivates their attendance of at least four antenatal care visits. Those Women that did not attended Antenatal care visit argued that lack of awareness of the importance of antenatal care, distance to the health facility, lack of funds, ignorance, some will prefer to be committed of taking care of their livestock over going to ANC visits. According to focused group discussion not all women attends antenatal care because the older women term themselves more experience than others and some are not aware of it.

Table 4.7: Cross Tabulation of Place of delivery and Age

Age of Respondents	Place of delivery		Total
	Home	Health Centre	
15-20 years	1.3%	8.2%	9.5%
21-26 years	5.6%	31.1%	36.7%
27-32 years	23.1	20.9	44%
33-38 years	6.6%	1.6%	8.2%
Over 38 and above years	1.6%		1.6%
Total	38.2%	61.8%	100.0%

The results presented in Table 4.7 indicate that the place of delivery and age where those who delivered at home with highest percentage is 27-32 years with 23.1%, followed by 33-38 years with 6.6%, 21-26 years with 5.6%, over 38 and above years with 1.6% and 15 -20 years with 1.3% delivered at home. While those delivered at the health centre with highest percentage 21-26 years with 31.1%, followed by 27-32 years with 20.9%, 15 -20

years with 8.2% and 33-38 years with 1.6%. Majority of the respondents delivered at the health centre comprising of 61.8% while 38.2% delivered at home. Overall, the findings indicate that, overtime as age increases, home is the preferred place of delivery.

4.4.2 Qualitative findings on the limitations for the place of delivery

From the focus group discussion, respondents gave reasons as why women are not delivering at health facilities; during sudden onset of labour presence of traditional birth attendants, negative attitude of pregnant mothers towards health workers. Respondent reported that they lack funds to pay hospital bills, majority of women reported that they experience labour pains at night and the health centres area not working 24 hours. Others gave birth at home because some made it a routine to give birth at home, illiteracy, ignorance, poor infrastructures to the health centres and lack of adequate assistance from birth attendants are the major undermining factors that determine their place of delivery.

Table 4.8: Utilisation of maternal health care services

Utilisation of maternal health care services	Yes	No
Mother’s education greatly influences health care utilization	90%	10%
Inaccessibility and utilization of antenatal health-care services influence utilisation of maternal health care services	82%	18%
Timing of antenatal visits influences utilisation of maternal health care services	78%	22%

The results presented in Table 4.8 show that the respondents agreed to the statements of Utilisation of maternal health care services at Laisamis administrative ward in Marsabit county, Kenya, where Mother’s education greatly influences health care utilization had

the most influential indicator with 90%, seconded by Inaccessibility and utilization of antenatal health-care services influence utilisation of maternal health care services with 82% and finally Timing of antenatal visits influences utilisation of maternal health care services was the least indicator with 78%

4.5 To examine the community's awareness on community health strategy influence utilisation of maternal health care

Community health workers are the drivers of community health strategy at the community level, therefore trained community health workers should provide services since they are at the first level in contact with people.

4.5.1 Community awareness of community health workers on the Utilisation of Maternal Health Care

The respondents were asked to indicate Community awareness on community health workers (CHWs) Table 4.9 shows the study findings on the respondents awareness on CHWs.

Table 4.9: Community awareness of community health workers

Description	Frequency	Percentage
Yes	81	92%
No	7	8%
Total	88	100%

From the study findings, 81 respondents with 92% were aware of community health workers (CHWs) owing to their roles on health education and promotional activities. While 7 respondents with 8% were not aware of CHWs as presented in table 4.9. "Community Health Volunteers visit our homesteads, in our *manyattas*. They educate us on the need to go for ANC visits & deliver at health facility. We know them, because they are our sons and daughters." Focus group participant.

4.5.1.1 Qualitative findings associated with community awareness on Community Health Workers

From the key informant interviews and focus group discussions conducted, the respondent mentioned some of the roles associated with awareness of community health workers: Educating the community on health issues, proper hygiene and sanitation, Community health worker make regular visits to expectants mothers to check on the progress of mothers in their homes until the day they have successful delivery once they are blessed with baby they are taught on how to care of the baby and importance of balance diet on the child and the mother. CHW are not performing their job as require since they are not motivated at all by the government. In Merille sub-Location the little effort made by CHW this is because of non-governmental like World Vision that is motivating and assisting with transport to go for outreach services.

From focused group discussion conducted one respondents said" I have witnessed a community health worker assisting people who needed treatment by taking them to hospital for instance I came across one of them helping a child who had been bitten by a

snake and I also witnessed community health worker taking a lady who was on labour to hospital and ensured she had a safe delivery and many other people".

4.5.1.2 Proposition of better strategies for promotion of maternal health care

From the key informant interviews conducted, the respondents suggest better strategies to ensure effectiveness of community health workers "CHWs should be well trained through seminars/workshops, CHW's should be increased in number because the area is large and the population sparsely disperse, CHW should be given enough health materials and equipment/kits, CHWs should engage more with local community so as to enable efficient information passing hence efficient maternal services utilisation with better understanding of the locals. CHW's should work hard in the ANC's area since many women are illiterate and ignorant, Household visits, records Keeping of ANC's registers should be improved. Incentive should be provided to CHW's to encourage them so as to enable each health facility employing more CHW's".

Table 4.10 examined the level of community awareness on community health strategy. The study in this part aimed at identifying the extent at which the following factors influence community's awareness on community health strategy on utilisation of maternal health care. Likert scale of 1-5 (No extent (1), little extent (2), Moderate extent (3), large extent (4) and Very large extent (5)), was used to determine respondent's degree of extent to which they agreed on the following statements. The table 4.10 shows the research findings.

Table 4.10: The level of community awareness on community health strategy

Factors Under Consideration	Responses					Mean	Std. Dev
	1	2	3	4	5		
Women experience of complications with previous births increases awareness of the risks involved in failing to seek care and thus sought care to avoid complications.	9	16	29	20	14	3.2500	0.3698
Lack of awareness about the dangers associated with pregnancy and childbirth and the feeling that labour is easy at home and feeling shame to go to health institutions for delivery.	5	4	56	13	10	3.3750	0.4048
Women's utilisation of maternal health services is often influenced by perceived socio-cultural, economic, and health system factors operating at the community.		5	12	49	20	3.7442	.48961
Women's past experiences with poor-quality care in health facilities influences future behaviours.		3	44	31	13	3.1000	.51611
Frequency of antenatal care visits and attendance during the last birth before the survey influences place of delivery.	3	9	64	10	2	3.0000	.41611
Women's utilisation of services is affected by the varying degree to which they receive information about health care		7	44	20	17	3.3750	0.4048
perception of mothers to the quality of services provided influences utilisation maternal health	9	10	14	33	22	3.2500	0.4397
Religious leaders play a significant role in manipulating people's perceptions and beliefs	5	3	27	36	17	3.2	0.4320
Total						3.28	0.434

Respondents were asked to provide answers on each item that was measured by a five point Likert scale ranging from 1 (No extent) to 5 (very large extent). From Table 4.10, mean and standard deviation were used to test respondent ideas where Standard deviation is the square root of the variance. It measures the spread of a set of observations. The larger the standard deviation is, the more spread out the observations are, while mean is the arithmetic mean across the observations, it is the most widely used measure of central tendency. It is commonly called the average.

From the findings, the statement on women's utilisation of maternal health services is often influenced by perceived sociocultural, economic, and health system factors operating at the community with a mean of 3.7, lack of awareness about the dangers associated with pregnancy and childbirth and the feeling that labour is easy at home and feeling shame to go to health institutions for delivery and women's utilisation of services is affected by the varying degree to which they receive information about health care (mean=3.37) were the most profound factors that influence community's awareness on community health strategy utilisation of maternal health care in Laisamis Administrative ward. Other significant factors were women experience of complications with previous births or low parity increases awareness of the risks involved in failing to seek care and thus sought care to avoid complications which was supported with a mean of 3.2500 and the influence of perception of mothers to the quality of services provided in maternal health clinics as well as the role of religious leaders in manipulating people's perceptions and beliefs both supported with a mean of 3.25.

4.6 Influence of Community Participation on Utilisation of Maternal Health Care

The study revealed that Community Participation aim of working at this level is to contribute to the empowerment of women, families and communities to improve and increase their control over maternal and newborn health, as well as to increase the access and utilisation of quality health services, particularly those provided by the skilled attendants. Improvement of both health services and actions at the community level are required to ensure that women and their newborns have access to the skilled care they need, when they need it. CHWs who were described as gate keepers of health in the community were found to be effective in dialoguing with the households on actions for health since they shared a common situation and experience. The study also aimed at establishing how community participation influence utilisation of maternal health care, table 4.11 shows the research findings.

The study also looked at the extent at which the following factors influencing community participation on utilisation of maternal health care. Likert scale of 1-5 (No extent (1), little extent (2), Moderate extent (3), large extent (4) and Very large extent (5)), was used to determine respondent's degree of extent to which they agreed on the following statements. The table 4.11 shows the research findings.

Table 4.11: Influence of Community Participation on Utilisation of Maternal Health Care

Factors Under Consideration	Responses					Mean	Std. Dev
	1	2	3	4	5		
Community involvement through women's groups, and health management influences institutional deliveries	7	12	14	23	32	3.968	.3737
Local participation in improving health services increases interaction between health systems and communities thus stimulate demand for health services	3	9	64	10	2	3.000	.2868
Reducing maternal mortality through increased service utilisation requires effective community interventions built on understanding of perceptions of maternal care services within their cultural context		25	37	26		3.168	.4737
Community participation has a positive influence on utilisation of maternal health care.		12	38	24	14	3.046	.3458
Women's sharing of success stories on quality care received during their previous pregnancies, to successful delivery outcomes from facility-based care provides a safe environment and bench mark for younger women.			15	18	55	4.132	.4329
Total						3.46	0.38

From the findings, the statement on Women's sharing of success stories on quality care received during their previous pregnancies, to successful delivery outcomes from facility-based care provides a safe environment and bench mark for younger women was highly supported with a mean of 4.1302. Other significant factors were the statement that

Community involvement through women's groups, and health management influences institutional deliveries was also strongly agreed with a mean of 3.968. Another statements that was supported is reducing maternal mortality through increased service utilisation requires effective community interventions built on understanding of perceptions of maternal care services within their cultural context with a mean of 3.168.

4.6.1 Qualitative findings on influence of community participation on the utilisation on maternal health care

The respondent suggested that there may be effects of education on the community participation, with highly educated communities are more organised in demanding better public services, Community participation was found very effective based on antenatal education as they targeted uneducated mother were able to make informed decision about the place of delivery.

From focus group discussions conducted, the respondents agree that communities do participate in utilisation of maternal health care, previously there were many instances where both mother and the child lose their lives due to complications and ignorance. But presently as result of contributions by Community Health Workers who are part of the locals, situation have greatly improved.

4.7 Community health committees influence utilisation of maternal health care

Based on the respondent's findings as shown in table 4.12, 35 respondents with 39.77% were aware of Community health committee (CHC) and 53 respondents with 60.23% were not aware CHC .The study found indeed CHCs are irrelevant since community members are not aware of them; they are also ineffective since they are hardly seen. Those respondents who know them argued that their outreach has not got to the village level.

Table 4.12: Community awareness of community health committees (CHCs)

Description	Frequency	Percentage
Yes	35	39.77%
No	53	60.23%
Total	88	100%

4.7.1 Qualitative findings associated with Community awareness of community health committees

Key informants interviews pointed out that community health committees do not perform their jobs as required this is because CHC are not well trained on their roles and responsibility. Due to lack training it is difficult for the committees to do their jobs as obligated. Illiteracy is challenge since most committees do not understand their roles fully hence lowers the community uptake of maternal health care services. The people are nomadic pastoralist and reaching them is not easy because of the distance and also sparsely populated hence tracing them is not easy.

The study also looked at the extent at which the following factors influencing community's health committees on utilisation of maternal health care. Likert scale of 1-5 (No extent (1), little extent (2), Moderate extent (3), large extent (4) and Very large extent (5)) was used to determine respondent's degree of extent to which they agreed on the following statements. Table 4.13 shows the findings.

Table 4.13: Community health committees influence utilisation of maternal health care

Factors Under Consideration	Responses					Mean	Std. Dev
	1	2	3	4	5		
Community health committee's training need to be conducted in the community itself, with community participating and providers of feedback.		4	37	17	30	3.441	.3356
Community health committee need to be organised, meets on a regular basis and keeps records of meetings and resolutions shared with community members.		1	44	20	12	3.345	.4458
Community should be involved in the evaluation conducted on community health committee activities that assesses their achievements in relation to program indicators and targets.	3	9	64	10	2	2.932	.2369
Community should be mobilized including multiple communication prior to formation and recruitment of new members of community health committee to ensure community are fully aware.	2		9	29	47	4.032	.3707
Open communication with community health committees about the importance of seeking health care, facilitates a woman's utilisation of maternal health care services.			35	53		3.449	.3959
Community plays an active role in demanding of better services from health facilities			43	12	33	3.419	.2989
Total						3.44	0.346

According to Table 4.13, community should be mobilized including multiple communication prior to formation and recruitment of new members of community health committee to ensure community are fully aware with a mean of 4.032. Other statements were, open communication with women committees about the importance of seeking care facilitates a woman's utilisation of maternal health care services supported with a mean of 3.449 and community health committee's training need to be conducted in the community itself, with community participating and providers of feedback supported with a mean of 3.441 were highly influential in determining community health committees influence utilisation of maternal health care.

4.8 Role of health facilities in influencing utilisation of maternal health care

Health facilities is directly in contact with the community, and they carry out activities related to community like antenatal visits, encouraging hospitals delivery and postnatal care. Utilisation of these services improves maternal health care.

The study also looked at the extent to which the role of health facility influence the utilisation of maternal health care. Likert scale of 1-5 (No extent (1), little extent (2), Moderate extent (3), large extent (4) and Very large extent (5) was used to determine respondent's extent to which they agreed on the following statements.

Table 4.14 shows research findings

Table 4.14: Role of Health facilities in influencing utilisation of maternal health care

Factors Under Consideration	Responses					Mean Score	Std dev
	1	2	3	4	5		
Health facility–based care increased women's sense of security and safety which contributes the perception of the value of institutional care and encouraged further utilisation of services.			13	38	37	3.7	0.47
Accessibility and proximity to health facilities plays a significant role which influences utilisation of maternal health care.				66	22	4.0	0.51
The role of health facilities on training and deployment of CHWs improve maternal health.			5	25	58	4.266	0.67
Women's low level of interest in utilisation of maternal health care is related to religious ideology.		25	37	26		3.033	0.53
The health-seeking behaviour of nomads is governed by individual beliefs, values and attitudes about health needs.			17	54	17	4.366	0.40
Decision-making on where to deliver falls under the domain of women, but they are influenced by husbands and community leaders.		22	50	15		3.0	0.51
Total						3.73	0.403

On determining the role of health facilities in influencing utilisation of maternal health care, table 4.14 shows that the health-seeking behaviour of nomads is governed by individual beliefs, values and attitudes about health needs was the supported with a mean of 4.3667. The role of health facilities on training and deployment of CHWs improve maternal health was supported with a mean of 4.2667 and accessibility and proximity to health facilities plays a significant role which influences utilisation of maternal health care with a mean of 4.0. Health facility-based care increased women's sense of security and safety which contributes the perception of the value of institutional care and encouraged further utilisation of services supported with a mean of 3.7.

4.9 Regression Analysis

This section covers the findings of regression and correlation analysis. The analysis included; direction and magnitude of the relationship, goodness of fit of the model, test of significance of the model, estimated model and individual significance of the model parameters.

4.9.1 Determining How Well the Model Fits

The aim of the regression analysis was to identify the relationship between the influence of community health strategy on utilisation of maternal health care: A case of Laisamis administrative ward in Laisamis Sub-county, Kenya. Table 4.15 shows that there exist a very strong positive correlation between the predictors and dependent variables. Further coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables) R^2 equals 0.864; that is,

Community's awareness, Community participation, Community health committees, Health facility strategies explain 86.4 percent of the variation in influence of community health strategy on utilisation of maternal health care leaving only 13.6 percent unexplained. The P- value of $0.003 < 0.05$) implies that the model of influence of community health strategy on utilisation of maternal health care is significant at the 5 percent significance.

Table 4.15: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F	df1	df2	Sig. F
.929	.864	.842	1.13044	.842	4.261	5	181	.003

a. Predictors: (Constant), Community's awareness, Community participation, Community health committees, Health facility.

4.9.2 Analysis of Variance

ANOVA findings ($F(4, 185) = 4.261, p = .003 < .05$) in table 4.16 shows that there is correlation between the predictors variables (Community's awareness, Community participation, Community health committees, Health facility) and response variable (utilisation of maternal health care) hence the regression model is a good fit of the data.

Table 4.16: ANOVA

Model	sum of squares	df	mean square	F	Sig
Regression	21.780	4	5.445	4.261	.003
Residual	231.301	181	1.278		
Total	253.081	185			.

a. Predictors: (Constant), Community's awareness, Community participation, Community health committees, Health facility

b. Dependent Variable: Utilisation of maternal health care

4.9.3 Coefficients of the Regression Equation

A simple regression analysis shown below was used:

$$Y = 0.295 + 0.317X_1 + 0.207 X_2 + 0.159 X_3 + 0.218 X_4 + e$$

Where;

Y = Utilisation of maternal health care (Dependent Variable)

β_0 = Constant Term

$\beta_1, \beta_2, \beta_3, \beta_4$ = Beta coefficients

X_1 = Community's awareness

X_2 = Community participation

X_3 = Community health committees

X_4 = Health facility

e = Error Term

Table 4.17: Coefficients

Predictors:	B	Std. Error	Beta	t	sig
Constant	.295	.190	.243	1.553	.125
Community's awareness	.317	.069	.127	4.594	.008
Community participation	.207	.072	.213	2.875	.005
Community health committees	.159	.075	.059	2.120	.003
Health facility	.218	.072	.018	3.028	.015

a. Dependent Variable: Utilisation of maternal health care.

This tests whether the Unstandardized (or standardized) coefficients are equal to 0 (zero) in the population. If $p < .05$ then, one can conclude that the coefficients are statistically significantly different to 0 (zero) is shown in table 4.17. The corresponding p -value respectively, indicates that all independent variable coefficients are statistically significantly different from 0 (zero), that is each independent variable is linearly related to the dependent variable. A four predictor model could be used to forecast Utilisation of maternal health care.

Constant = 0.295, shows that if Community's awareness, Community participation, Community health committees, Health facility strategies were all rated as zero, Utilisation of maternal health care rating would be 0.295

$\beta_1 = 0.317$, shows that one unit increase in Community's awareness results in 0.317 units increase in Utilisation of maternal health care other factors held constant.

$\beta_2 = 0.207$, shows that one unit increase in Community participation results in 0.207 units increase in Utilisation of maternal health care other factors held constant.

$\beta_3 = 0.159$, shows that one unit increase in Community health committees results in 0.159 units increase in Utilisation of maternal health care other factors held constant.

$\beta_4 = 0.218$, shows that one unit increase in Health facility results in 0.218 units increase in Utilisation of maternal health care other factors held constant.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of findings and discussions investigating the influence of community health strategy on utilisation of maternal health care in Laisamis administrative ward of Laisamis Sub-County of Marsabit County in Kenya. It further makes comprehensive conclusions based on the established relationship between key indicators of maternal health care services in Kenya and major recommendations are made. Finally areas of further research are suggested.

5.2 Summary of the study findings

Summary of findings was done in accordance to the objectives of the study.

5.2.1 Community's Awareness on Community Health Strategy influence utilization of maternal health care

The study found out that women's utilisation of maternal health services is often influenced by perceived socio-cultural, economic and health system factors operating at the community with mean of 3.7442. Lack of awareness on the dangers associated with pregnancy, childbirth and the feeling that labour is easier at home and the feeling of shame associated with going to health institutions for delivery, therefore, women's utilisation of services is affected by the varying degree to which they receive information; about health care both with a mean of 3.375 were the most profound factors that influenced community's awareness on community health strategy utilisation of maternal

health care in Laisamis Administrative ward. Other significant factors are with a mean of 3.25 are women's experience of complications with previous births increases awareness of the risks involved in failing to seek care and consequently sought care to avoid complications; perception of mothers to the quality of services provided influences utilisation of maternal health care as well as the role of religious leaders in manipulating people's perceptions and beliefs with mean of 3.2.

The study found out that, communities are aware of the utilisation of maternal health care. Respondents pointed out that they attend ANC services in a health facility, postpartum and other Antenatal care services motivated their attendance of at least 4 ANC visits. They argued that CHWs have educated women on the awareness of health problems, these communities know more about the availability of maternal health care services, they use this information more effectively to maintain and achieve good health status. Religion was also found to create awareness on the utilisation of maternal health care, particularly the Catholic Church was found to play a significant impact in the determination of the utilisation of maternal healthcare services.

5.2.2 Community Participation influence utilisation of Maternal Health Care

The respondents highly supported the statement that women's sharing of success stories on quality care received during their previous pregnancies, to successful delivery outcomes, from facility-based care provides a safe environment and bench mark for younger women was highly supported with a mean of 4.1302. Other statement are: Community involvement through women groups, and health management influences

institutional deliveries was also strongly agreed with a mean of 3.968. Another statements that was supported is; reducing maternal mortality through increased service utilisation requires effective community interventions built on understanding of perceptions of maternal health care services within their cultural context with a mean of 3.168.

5.2.3 Community health committees influence utilisation of maternal health care

The study found out that community health committee (CHC) are irrelevant since community members are not aware of them, they are also ineffective since they are hardly seen. Based on the respondent's findings, 53 respondents with 60.23% were not aware of CHC and 35 respondents with 39.77% were aware of Community health committee (CHC). Those respondents who knew them argued that their outreach has not reached to the village level. The study found out that, the community should be mobilized including multiple communication prior to formation and recruitment of new members of community health committee to ensure that the community are fully aware with a mean of 4.032. Other statements were, open communication with women committees about the importance of seeking care facilitates a woman's utilisation of maternal health care services supported with a mean of 3.449 and community health committee's training need to be conducted in the community itself, with community participating and providers of feedback supported with a mean of 3.441 were highly influential in determining community health committees influence utilisation of maternal health care.

5.2.4 Role of Health facilities influence utilisation of Maternal Health Care

Based on the findings, 38 respondents with 43.18% have attended at least four antenatal care visits during their last birth, 6 respondents with 6.82% have attended for more than four times antenatal care visits, 14 respondents with 15.91% have attended for at least three times antenatal care visits, 8 respondents with 9.09% have attended antenatal care visits at least twice, 3 respondents with 3.41% have attended antenatal care visits at least once while 19 respondents with 21.59% have never attended antenatal care visits.

Respondents pointed out that care given during visits like health education that is; mothers are taught on danger signs of delivery, signs to observe before the onset of delivery, importance of taking iron drugs, importance of delivery in health facility, education on postpartum and other Antenatal care services motivates their attendance of at least 4 ANC visits. Those Women that did not attend Antenatal care visit argued that lack of awareness of the importance of antenatal care, distance of the health facility, lack of funds, ignorance, some will prefer to be committed to taking care of their livestock over going for ANC visits. Others gave birth at home because some made it a routine to give birth at home, illiteracy, ignorance, poor infrastructures to health centres and lack of adequate assistance from birth attendants as the major undermining factors that determine their place of delivery.

According to research study the following statements were supported by respondents: health-seeking behaviour of nomads is governed by individual beliefs, values and attitudes about health needs was supported with a mean of 4.3667. The role of health

facilities on training and deployment of CHWs improved maternal health care services was supported with a mean of 4.2667 and accessibility and proximity to health facilities plays a significant role which influenced the utilisation of maternal health care with a mean of 4.0. Health facility-based care increased women's sense of security and safety which contributed to the perception of the value of institutional care and encouraged further utilisation of services supported with a mean of 3.7.

5.3 Discussion of findings

This section looks at the findings of the study and compares these findings to what has been found out by other researchers as discovered during literature review. In doing this, the section highlights the key findings that brings out new knowledge and compares it to other findings from other similar studies, thus presenting an argument for the findings from this study.

According to the research study, women utilisation of maternal health services was often influenced by perceived socio-cultural, economic, and health system factors operating at the community. Lack of awareness on the dangers associated with pregnancy and childbirth and the feeling that labor is easy at home and the feeling of shame associated with going to health institutions for delivery and women's utilisation of services is affected by the varying degree to which they receive information about health care were the most profound factors that influence community's awareness on community health strategy utilisation of maternal health care in Laisamis Administrative ward. This is in line with a study by Ayele *et al.*, (2014) who recommend that to curb the negative effects

and attitudes, combined efforts would be necessary by stakeholders through mobilization; improving education of the population in general and women and girls in particular and providing suitable package of maternal services to the underprivileged groups could be proper strategy to utilisation of maternal health care services.

UNFPA and the Ministry health have started working with faith leaders to fight Kenya's high rate of maternal death. Religious leaders signed a call to action, pledging to incorporate positive health messages in their sermons (UNFPA, 2015). This study confirms that religion was found to create awareness on the utilisation of maternal health care, particularly catholic was found to play a significant impact in determining utilisation of maternal healthcare services. This was done after sermons during announcements, especially where positive message on importance of ANC visits, hospital deliveries were passed on to the congregations. This support this study's findings that women's sharing of success stories on quality care received during their previous pregnancies, to successful delivery outcomes from facility-based care provides a safe environment and bench mark for younger women.

Lubbock *et al.*, (2008) suggests that in order to improve maternal health outcomes, it is important for the interventions to target individual, households and the community. However, this study confirms that community participation aims at contributing to the empowerment of women, families and communities to improve and increase their control over maternal and newborn health, as well as to increase the access and utilisation of quality health services, particularly those provided by the skilled attendants.

Improvement of both health services and actions at the community level are required to ensure that women and their newborns have access to the skilled care they need, when they need it. CHWs who were described as the major drivers of community health strategy were found to be effective in sensitization of the households on actions for health since they shared a common situation and experience. It also inline with MOH, (2006), level 1 which aims to empower Kenyan households and communities to take charge of improving their own health.

Based on research study, CHCs are irrelevant since community members are not aware of them, they are also ineffective since they are hardly seen. Those respondents who know them argued that their outreach has not got to the village level. According to the community health strategy, CHCs has been formed to act as a link between the community and the health facility. They oversee the operations of health services in the community by actively participating in the selection and supervision of CHWs, discussing with CHWs the community data and community action plans in order to address the identified health issues in the community. Wangalwa (2012) points out the importance of creating community groups, such as mother-to-mother groups for providing peer support is clear indication that demonstrate, establishing community-based governance structures. One best example of such a programme that focuses on the value of leveraging communities group is Amref Kenya(2012) launched a project named Mama na Mtoto wa Afrika with the aim of improving maternal and child health among the marginalized communities in Kenya's Eastern province.

It is very vital to examine the role of health facility in the utilization of maternal health care in order to establish its effectiveness and relevance as well as take cognizance of the lessons learnt with regards to empowering communities in taking charge of their own health.

5.4 Recommendations of the study

The Government of Kenya, on 2013 introduced a policy of free maternity services in all public facilities with an objective of reducing maternal and prenatal mortalities. This was meant to ensure that mothers were not charged for delivering in public health facilities and thus promote and improve hospital deliveries. To improve the effectiveness of the policy, the government needs to introduce more equipped health care facilities to maintain consumption of these services (Antenatal, hospital delivery and postnatal care). To improve the quality of services it is important for county government to direct more funds to health sector so as improve maternity infrastructures and purchase necessary equipments. Recruiting more staffs to improve the delivery of maternal health care services, this is because availability of skilled and motivated health workers in sufficient numbers is critical in attaining better health care outcomes.

The ministry of health should review the Community health workers guidelines, one to provide them with the incentives to motivate, two incorporate CHW's in the payroll system so as to increase sustainability (provision of incentives and rewards to health care workers) so that they can give out greater output of their work.

Through county health promotion officer, community should be sensitized including multiple communications prior to formation and recruitment of new members of community health committee to ensure community are fully aware.

County health officials should conduct training of traditional birth attendants in every village and encouraging them to accompany the mother to the health facility during delivery.

More efforts should be given to educate society in general and mothers in particular, to strengthen community participation and to increase the accessibility of maternal health care services. Moreover, providing accurate information about the services provided in the health institutions is required from the concerned governmental and nongovernmental organizations.

Improving education among girls, especially beyond primary school needs to be strongly encouraged by the Government as education has an impact on the women decision on the place of delivery.

5.5 Conclusions of the study

The main purpose of this study was to establish the influence of community health strategy on utilisation of maternal health care. This study acknowledges that, women's access to quality health care is fundamental to attaining reduction in maternal mortality and morbidity. This study affirms that though positive trends were observed in maternal

health care utilisation, the current utilisation patterns of maternal health care services in the study areas are still below the targets, and this is because *level 1* services are not fully functional. Most women did not make the recommended number of antenatal care visits. Effective community mobilization is identified as a possible solution. Designing of effective programs should base on an identified determinants for low utilisation of maternal health care in the study areas.

It is evident that less focus was put to improve health centres' capacity, mainly administration and management of the services, as observed by limited service time and shortage of staff. This picture defeat the purpose of motivating the women to utilize health facilities and not the traditional birth attendants. It is important to prioritize quality over coverage. Good management systems could ensure maximization of the current capacity to deliver better health care services.

Utilisation of maternal health care in Merille sub-Location could be rated as moderate due to efforts made by non-governments organization like world vision. Merille sub-Location and Laisamis ward in particular has very few health stakeholders with programmatic priorities and interests hence posing challenges in addressing the health problems and needs as a whole. As a result of this fundamental level of health service delivery – level 1 is not fully functional in the sub county due to the cost implication and sustainability given the many challenges of the sub county, some of which are unique.

5.6 Suggested area for further study

This study mainly considers influence of community health strategy on utilisation of maternal health care in Laisamis ward, in Laisamis sub-county, Kenya. However, there is need for more studies required in examining influence of community health strategy in utilisation of maternal health care in other counties in Kenya. Further studies should also focus on the impact of devolution on improvement of maternal health care services in Kenya.

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APPENDICES

Appendix I: Letter of Introduction

FELISTA N. TIMAADO

P.O BOX 51896 00100

NAIROBI

DATE:

Dear sir/Madam,

RE: Research Project Data Collection Exercise

I am a post graduate student pursuing Masters of Arts Degree in Project Planning and Management at the University of Nairobi. As part of my coursework, I am expected to submit a research report on the **Influence of community health strategy on utilisation of maternal health care: A case of Laisamis administrative ward in Marsabit County, Kenya.**

Kindly assist in completing the attached questionnaire. I assure you that the information you provide is purely for academic purpose and will be treated with outmost confidence. Names will not be disclosed.

Your cooperation will be highly appreciated, and I look forward to your positive responses.

Yours faithfully

Felista N. Timaado

University of Nairobi. M. A Student.

Appendix II: Research Questionnaire

Introduction

The purpose of this questionnaire is to collect data on the Influence of community health strategy on utilisation of maternal health care amongst women in Laisamis ward. The research is partial requirement for the completion of Masters of Arts in Project Planning and Management degree.

The information you provide will be confidential and will only be used for the purposes of this research. Responding to this questionnaire confirms your full consent to participate in this process.

Date of interview: _____ Time: Starting: _____ AM. /PM. End: _____ AM. /PM.

Section A. DEMOGRAPHIC DATA OF THE RESPONDENTS (Kindly use tick according to your response and please answer all the questions)

1. Area of residence (**Location of interview**)_____

2. What is your age bracket?

- | | | | |
|---------|-----|-------|-----|
| 15-20 | () | 21-26 | () |
| 27-32 | () | 33-38 | () |
| Over 38 | () | | |

3. What is your marital status?

- | | | | |
|------------|-----|-------------|-----|
| a. Married | () | b. Single | () |
| c. Widowed | () | d. Divorced | () |

4. Highest level of Education attained

- a) University ()
- b) Secondary ()
- c) Primary ()
- d) College ()
- e) Others _____

5. What is your religious affiliation?

- a) Catholic ()
- b) Protestant ()
- c) Muslim ()
- d) African Traditional Religion ()
- e) Others, specify.....

6. What is your employment status?

- a. Employed ()
- b. self-employed ()
- c. unemployed ()

Section B. Utilisation of maternal health care services

7. How many Antenatal care visits have you attended during your last birth before the survey?

- 1 (); 2 () 3() 4() More(specify_____) None ()

8. If none, state the reasons?

.....
.....
.....

9. If you attended required number of antenatal care visits, what motivated you?

.....

.....

.....

10. To what extent does each of the agrees to the following statements of Utilisation of maternal health care services?

Factors Under Consideration	1	2
Mother's education greatly influences health care utilization		
Inaccessibility and utilization of antenatal health-care services		
Timing of antenatal visits influences utilisation of maternal health care services		

Section C. Influence of Community's Awareness on Community Health Strategy

Utilisation of Maternal Health Care

11. Are you aware of community health committee's?

Yes () No ()

12. Is the community aware of community health workers on the Utilization of Maternal Health Care

Yes () No ()

13. Does your religion play a role in creating awareness on the utilization of maternal health care especially during worship?

Yes () No ()

14. What is the role played by religious leaders in utilization of maternal health care in Laisamis administrative ward?

.....

Note: For each of the questions, tick against your response or write your response in the blank space provided.

15. To what extent does each of the following factors influence community's awareness on community health strategy utilisation of maternal health care? Using a Likert scale of 1-5: No extent (1), Little extent, (2), Moderate extent (3), Large extent (4) and Very large extent (5)

Factors Under Consideration	1	2	3	4	5
Women experience of complications with previous births increases awareness of the risks involved in failing to seek care and thus sought care to avoid complications					
Lack of awareness about the dangers associated with pregnancy and childbirth and the feeling that labour is easy at home and feeling shame to go to health institutions for delivery					
Women's utilisation of maternal health services is often influenced by perceived socio-cultural, economic, and health system factors operating at the community.					
Women's past experiences with poor-quality care in health facilities influences future behaviours.					

Factors Under Consideration	1	2	3	4	5
Frequency of antenatal care visits and attendance during the last birth before the survey influences place of delivery.					
Women's utilisation of services is affected by the varying degree to which they receive information about health care					
perception of mothers to the quality of services provided influences utilisation maternal health					
Religious leaders play a significant role in manipulating people's perceptions and beliefs					

Section C: Influence of Community Participation on Utilisation of Maternal Health Care

16. Are there any Community participation on utilization of maternal health care in your area?

Yes () No ()

17. If yes, what do they do?

.....

.....

.....

.....

.....

.....

18. Do community health workers conduct household visits?

Yes ()

No ()

19. If yes, how often?

.....

20. Do community health workers recommend women to referrals?

Yes ()

No ()

If yes, under what conditions?

.....

.....

.....

.....

.....

21. How effective have the community health workers played on community participation in maternal health care

.....

.....

.....

.....

.....

Note: For each of the questions, tick against your response or write your response in the blank space provided.

22. To what extent does each of the following factors influence community's participation on utilisation of maternal health care? Using a Likert scale of 1-5: No extent (1), Little extent, (2), Moderate extent (3), Large extent (4) and Very large extent (5)

Factors Under Consideration	1	2	3	4	5
Community involvement through women's groups, and health management influences institutional deliveries					
Local participation in improving health services increases interaction between health systems and communities thus stimulate demand for health services.					
Reducing maternal mortality through increased service utilisation requires effective community interventions built on understanding of perceptions of maternal care services within their cultural context					
Community participation has a positive influence on utilisation of maternal health care.					
Women's sharing of success stories on quality care received during their previous pregnancies, to successful delivery outcomes from facility-based care provides a safe environment and bench mark for younger women.					

Section D. Community health committees influence utilisation of maternal health care

23. How would you rate the effectiveness of community health committees in influencing utilisation of maternal health care?

- a) Very effective b) Effective c) Not effective

24. What is the role of religious leaders on effectiveness of community health committees in influencing utilisation of maternal health care?

.....
.....
.....

25. How had the Community-based integrated health care interventions proved as an effective and efficient way to reduce maternal deaths and improve utilisation of maternal health care services?

.....
.....
.....

Note: For each of the questions, tick against your response or write your response in the blank space provided.

26. To what extent does each of the following factors influencing community's health committees on utilisation of maternal health care? Using a Likert scale of 1-5: No extent (1), Little extent (2), Moderate extent (3), Large extent (4) and Very large extent (5)

Factors Under Consideration	1	2	3	4	5
Community health committee's training need to be conducted in the community itself, with community participating and providers of feedback					
Community health committee need to be organised, meets on a regular basis and keeps records of meetings and resolutions shared with community members					
Community should be involved in the evaluation conducted on community health committee activities that assesses their achievements in relation to program indicators and targets.					
Community should be mobilized including multiple communication prior to formation and recruitment of new members of community health committee to ensure community are fully aware.					
Open communication with community health committees about the importance of seeking health care, facilitates a woman's utilisation of maternal health care services.					

Factors Under Consideration	1	2	3	4	5
Community plays an active role in demanding of better services from health facilities					

Section E: Role of Health facilities in influencing Community Health Strategy on Utilisation of Maternal Health Care

27. Did the delivery of health services through mobile clinics improved the Utilization of Maternal Health Care?

Yes () No ()

28. Where did you give birth last before the survey?

Home () Health centre () Other (specify _____)

29. If you gave birth at health centre, what motivated you?

.....
.....
.....

30. If not at the health centre, what are the reasons?

.....
.....
.....

31. Did you attend post partum care?

Yes () No ()

32. If the answer Yes, what motivated you?

.....

33. If the answer No, what are the reasons?

.....

34. To what extent does each of the following factors influence the utilisation of maternal health care? Using a Likert scale of 1-5: No extent (1), Little extent, (2), Moderate extent (3), Large extent (4) and Very large extent (5)

Factors Under Consideration	1	2	3	4	5
Health facility-based care increased women's sense of security and safety which contributes the perception of the value of institutional care and encouraged further utilisation of services.					
Accessibility and proximity to health facilities plays a significant role which influences utilisation of maternal health care					
The role of health facilities on training and deployment of community health workers improve maternal health.					
Women's low level of interest in utilisation of maternal health care is related to religious ideology.					

Factors Under Consideration	1	2	3	4	5
The health-seeking behaviour of nomads is governed by individual beliefs, values and attitudes about health needs.					
Decision-making on where to deliver falls under the domain of women, but they are influenced by husbands and community leaders					

35. What is the role played by health facilities as well as non-governmental organizations in utilisation of maternal health care in Laisamis administrative ward

.....

.....

THANK YOU FOR TAKING YOUR TIME TO RESPOND TO THIS QUESTIONNAIRE

Appendix III: Focused Group Discussion (Women)

The purpose of this questionnaire is to collect data on the Influence of community health strategy on utilisation of maternal health care amongst women in Laisamis ward. The research is partial requirement for the completion of Masters of Arts in Project Planning and Management degree. The information you provide will be confidential and will only be used for the purposes of this research. Responding to this questionnaire confirms your full consent to participate in this process

- 1) How would you rate utilisation of maternal health care in the area?
- 2) Do women attend Antenatal care (ANC)?
- 3) Do women attend post-partum care?
- 4) Are there community Health Workers in your area?
- 5) Are there Community Health Committees in your area?
- 6) How would you rate the effectiveness of the community health strategy?
- 7) In your opinion, does community participation influence utilisation of maternal health care?
- 8) Are any monitoring visits done on Community Health Workers activities in your area?
- 9) Will monitoring visits improve utilisation of maternal health care?
- 10) What are your suggestion as solutions to increasing utilisation of maternal health care

Appendix IV: Key Informant Interviews

The purpose of this questionnaire is to collect data on the Influence of community health strategy on utilisation of maternal health care amongst women in Laisamis ward. The research is partial requirement for the completion of Masters of Arts in Project Planning and Management degree. The information you provide will be confidential and will only be used for the purposes of this research. Responding to this questionnaire confirms your full consent to participate in this process.

Date of interview: _____ Time: Starting: _____ AM./PM. End: _____ AM./PM.

A. DEMOGRAPHIC DATA OF THE RESPONDENTS

Area of operation (**Location of interview**) _____

1. What is your understanding of community health strategy?

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2. What is your role on maternal health care?

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3. Are there community health strategies or practices that contribute to the maternal health care?

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4. What do you propose as better strategies for promotion of maternal health care?

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5. What is the role played by religious organizations in utilisation of maternal health care in Laisamis administrative ward

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6. In your opinion, what should be improved by?

a) Health facility

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.....

b) Community Health Workers

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c) Community health committees

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7. What are the roles of community Health Workers in your area?

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8. How would you rate effectiveness of community health workers in influencing utilisation of maternal health care- (*ANC, deliveries, Post partum care*)?

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.....
.....

9. How would you rate effectiveness of community health committees in influencing utilisation of maternal health care- (*ANC, deliveries, Post-partum care*)?

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10. Explain your response above (Please give examples / stories depicting effectiveness)?

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Appendix V: Study Area

