

**PARTICIPATION OF COMMUNITY HEALTH CARE WORKERS IN
ENHANCING LONG-ACTING AND REVERSIBLE CONTRACEPTIVES IN
MARRIED WOMEN IN KILIFI COUNTY, KENYA**

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

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DEDICATION

I dedicate this work to my beloved family; my loving wife Florence and my twin boys Prince and Junior. May this thesis be a motivator for high achievement in academia.

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ABBREVIATIONS AND ACRONYMS

CHW:	Community Health Worker
CPR:	Contraceptive Prevalence Rate
IUCD:	Intra Uterine Contraceptive Device
KCRH:	Kilifi County Referral Hospital
KNBS:	Kenya National Bureau of Statistics
LARCs:	Long Acting & Reversible Contraceptives
MLE:	Measurement, Learning & evaluation
MSCH:	Malindi Sub-County Hospital
SPSS:	Statistical Package for Social Sciences
STIs:	Sexually Transmitted Infections
U.S.A:	United States of America
VSCH:	Vipingo Sub-County Hospital
WHO:	World Health Organization

OPERATIONAL DEFINITION OF TERMS

Birth Control Implant: Is a small, single rod that is inserted under the skin in the upper arm by a medical practitioner and releases hormones and protects conception for up to three years.

Community Health Worker refers to community health personnel selected or chosen, trained and working within their communities. The work is purely based on trust by community members, which enhances health care within the community.

Contraceptive refers to a device, drug, or chemical agent that prevents conception.

Emergency Contraception: is a method that is used to prevent unwanted pregnancy after a woman has had unprotected sex, after the method she used has failed, or if a woman is raped

Family planning: The concept or a program of regulating family sizes through the spacing or prevention of pregnancies, especially for economic reasons.

Intrauterine Device (IUD): A small device that is inserted and left inside the uterus to prevent pregnancy.

Progestin: A synthetic form of progesterone that is similar to the hormone produced naturally by the body.

Reproductive age in females: It is the period when a female becomes capable of ovulating, and the ovary produces estrogen to facilitate the process and varies from country to country. In Kenya, it ranges from 16-49 years.

Uterus: A muscular organ located in the female pelvis that contains and nourishes the developing fetus during pregnancy.

Vagina: A tube-like structure surrounded by muscles leading from the uterus to the outside of the body.

ABSTRACT

Community health workers (CHWs) play a vital role in enhancing the utilization of long-acting and reversible contraceptives (LARCs). Since CHWs serve as trusted sources of information and support within their communities makes them instrumental in enhancing the utilization of LARCs among married women and contributing to improved maternal and reproductive health outcomes. Kenya faces significant challenges in ensuring widespread access to and utilization of LARCs among married women despite the proven benefits of these contraceptive methods in preventing unintended pregnancies and improving maternal and child health outcomes. The study assessed the participation of Community Health Workers (CHWs) in enhancing the utilization of long-acting and reversible contraceptives (LARCs) among married women in Kilifi County, Kenya. The study was guided by the following specific objectives; To determine the level of knowledge of CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya; To establish the health and community support systems available for the CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya; To evaluate the health and community systems barriers that hinder the participation of CHWs in in enhancing utilization of LARCs among married women in Kilifi County, Kenya; To investigate the resources available for CHWs that can enhance their participation in promoting utilization of LARCs among married women in Kilifi County, Kenya. The study was anchored on the Health Belief Model (HBM). A descriptive research design was adopted, employing both qualitative and quantitative data collection methods. Interviews, surveys, and focus group discussions were conducted with CHWs, healthcare providers, and community members to gather insights into their experiences, perceptions, and challenges related to LARC promotion. The study was conducted in selected Sub-County hospitals in Kilifi County. The study population was 246 CHWs working in Kilifi County. Study participants will be selected through purposive sampling. The study used structured questionnaires to collect quantitative data. The study also conducted focused group discussions and key informant interviews. Data collected was organized and entered into SPSS Version 24. This was then presented through tables, charts and narratives. Logistic regression was used to assess the levels of association. The strength of the association was measured using a 95% confidence level. The study findings revealed that level of knowledge of CHWs, community support systems, resources available for CHWs did enhance utilization of LARCs among married women in Kilifi County, Kenya. It was concluded that participation of CHWs enhanced utilization of LARCs among married women in Kilifi County, Kenya. Overall, the study findings underscored the importance of equipping CHWs with adequate knowledge, resources, and support to effectively promote LARC utilization among married women in Kilifi County. Addressing the identified barriers and implementing the recommendations can contribute to improving reproductive health outcomes and empowering women to make informed choices about their contraceptive needs.

CHAPTER ONE: INTRODUCTION

The chapter provides background information on the role of participation of community human workers in enhancing utilization of Long-acting and reversible contraceptives among married women. The chapter presents statement of the problem, justification of the study, research questions, objectives, significance, delimitation and limitations of the study.

1.1 Background of the Study

Community Health Workers (CHWs) refer to the members of a community chosen by community members, the Ministry of Health (MoH) or organizations to provide basic health care services to communities. While these providers are trained, they typically do not have any professional certification (Nkole et al. 2021). CHWs are particularly important in areas where the use of health care facilities is low. CHWs play an important role in the promotion and support of health care services, especially in rural areas. In developing countries, CHWs have been used to address the issue of shortage of health workers and the limited pervasive national health system (Mazzei et al. 2019).

In Kenya, CHWs perform activities that are geared towards better health outcomes, even in child and maternal health (Ochieng' *et al.*, 2014). They have been engaged in providing uncomplicated health care services to the community members, such as family planning services (Hoke et al. 2015). According to Onono *et al.* (2014), the work of CHWs in contraceptive services have been narrowly restricted to the provision of short-term contraceptives and not long term contraceptive methods which are considered most useful (Kamanga at al. 2023). Unfortunately, the consumption rate of long-acting contraceptives, including the Long Acting and Reversible Contraceptives (LARCs) in Kenya is significantly low (Hubacher *et al.*, 2023). Janick et al. (201) suggested that the CHWs could be used to enhance the use of the long-acting contraceptives in the community.

The term family planning refers to the use of contraceptive methods with the aim of controlling the number of children, the timing between one child and another (Malama et al. 2020). Modern contraceptives have been so effective in improving

population's productivity, controlling fertility and enhancing the health and well-being of the mother and her child (Fuzal et al. 2023). Current contraceptive use has seen the prevention of unintended pregnancies, which is associated with many undesirable health consequences among women of all ages (Rounciville et al. 2020). Additionally, these contraceptives reduce chances of pregnancy among HIV-positive mothers and subsequently, the number of children born with the virus (Gujo & Kore, 2021). Through contraceptives, women are able to sire children whom they can afford at a point in time (Aychew et al. 2022).

In Kenya, modern contraceptives use has been one of the most dramatic social transformations of the 21st Century (Desalene et al. 20197), that has led to major strides in social economic development and stability (ICF Macro 201). The government faced challenges of acceptance from the population in its quest to control rapid population growth (Buckel et al. 2019). The administration of contraceptives in Kenya continues to face a myriad of challenges, key among them the limited financial and human resources.

There is a desire from the public to reduce postpone the bearing of children and to reduce the risk of unintended pregnancies. There is low documentation on the use of modern contraceptives in Kilifi county (Kavanaugh 2011). The incorrect use of modern contraceptives may increase the chances of unintended pregnancies (Secura, 2010; Frost, 2008). Thus, the public has to be education and adequate public awareness programs be conducted on the safe and correct use of contraceptives to achieve desired outcomes. Family planning programs should advocate for the availability of contraceptives in Kilifi County, to be used by married women to reduce the risk of unintended pregnancies (Mare et al. 2022).

The long acting and reversible contraceptives require only one administration per cycle (Olaniram et al. 2019). Examples are the implants, intrauterine devices and injectable (Muhumiza et al. 2023). Injectables ensure protection from pregnancy for three months, intrauterine devices for upto 10 years and implants offer protection for up to five years (et al. 2019). The implants and intrauterine devices are administered by qualified and trained healthcare providers (NICE, 2005). These contraceptives use is more efficient than the use of pills and condoms (Janiack et al. 2018).

Despite the safety, efficacy, cost effectiveness and user friendliness of the modern contraceptives, their use among married women is still low (Aychew et al. 2022). It is thus important to investigate the role of CHWs in enhancing utilization of long-acting and reversible contraceptives (LARCs) in married women in Kilifi County. Thus, this study sought to investigate the role of Community Health Workers (CHWs) in enhancing the utilization of long-acting and reversible contraceptives (LARCs) among married women in Kilifi County.

1.2 Problem Statement

Community health workers (CHWs) play a vital role in enhancing the utilization of long-acting and reversible contraceptives (LARCs) (Desalegn et al. 2019). Since CHWs serve as trusted sources of information and support within their communities (Buckel et al. 2019), makes them instrumental in enhancing the utilization of LARCs among married women and contributing to improved maternal and reproductive health outcomes (Gujjo & Kore, 2021). Kenya faces significant challenges in ensuring widespread access to and utilization of LARCs among married women (Aychew et al. 2022), despite the proven benefits of these contraceptive methods in preventing unintended pregnancies and improving maternal and child health outcomes (Orwa et al. 2022).

While CHWs play a crucial role in community-based healthcare delivery, there is a large unmet need for family planning especially in LARCs and sterilization methods (Jacobstein & Stanley, 2013). According to Sedgh & Hussain, (2014), many married women want to limit and space pregnancies. Unfortunately, they do not have access to better and effective contraception. In Kenya, the contraceptive prevalence rate (CPR) is only 58%, while the uptake of LARCs is ranked as low as 13% among all married women (Thatte & Choi, 2014). In Kilifi County, a baseline survey performed by MLE, Tupange Youth and KNBS (2015) revealed that the overall utilization rate of modern contraception methods is only 43.6%, while that of LARCs is 16.0%. Arguably, the low utilization of most effective contraception methods, such as the LARCs contributes to unplanned conception, leading to unsafe abortion and subsequently maternal morbidities and mortalities.

Previous research on LARCs has focused on contraceptives among married women topics (Moler, 2022). There are several studies which have examined the challenge of the LARCs (Juma et al., 2018). Other studies have focused on the effect of community based reproductive health nurses (CORN) on long-acting reversible contraception (LARC) use (Zerfu et al. 2018). This study has led to a numerous number of CHWs interventions (Gujo & Kore, 2021). Fewer studies have examined “LARCs” or provision of long-acting reversible contraception in community health centers, which is a distinct contrast of the investigations based on the LARCs (Desalegn et al. 2019; Aychew et al. 2022; Gujo & Kore, 2021; Buckel et al. 2019; Zerfu et al. 2018). There is a minimal research focus that has been directed towards the role of CHWs and specifically utilization of LARCs in the social context of among married women.

Moreover, existing studies of LARCs are quantitative in nature with a focus on trans theoretical outcomes and models (Zhu, 2022). The adoption of qualitative investigations, however, tends to provide detailed views of impact of CHWs among the women (Aychew et al., 2020; Buckel et al. 2019; Zerfu et al. 2018). Therefore, by examining participation of CHWs and utilization of LARCs contexts, using qualitative approaches, the researcher can better isolate variables and lead to the development of insightful information about the issues of CHWs and LARCs focusing on the married women. Government, communities, policy makers and peace makers can be able to plan for the appropriate interventions to manage the attitudes of the married women toward utilization of LARCs. This will assist to manage the enhancement against married women and develop appropriate intervention programs on utilization of LARCs among the married women in Kilifi County in Kenya.

1.3 Justification of the Study

This study has provided important clarification on the roles and ideals of the CHWs concerning the promotion of the LARCs use at local and national levels are instantiated in practice within the community. These include expounding on the comprehension of the role of the CHWs at various levels beginning with the CHWs performance, community and health systems, national and local context. For instance,

this study has identified the gaps and barriers hindering the CHWs in the successful enhancement of the use of LARCs among married women in Kilifi County.

1.4 Research Questions

This study was aimed at answering four important questions to examine the role of CHWs in enhancing the use of LARCs extensively.

- i. What is the level of knowledge of CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya?
- ii. What are the health and community support systems available for the CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya?
- iii. What are the health and community systems barriers that hinder the participation of CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya?
- iv. What are the resources available for CHWs that can enhance their participation in promoting utilization of LARCs among married women in Kilifi County, Kenya?

1.5 Research Objectives

The study was based on the following broad and specific objectives;

1.5.1 Broad Objective

The purpose of the study was to assess the participation of Community Health Workers (CHWs) in enhancing the utilization of long-acting and reversible contraceptives (LARCs) among married women in Kilifi County, Kenya.

1.5.2 Specific Objectives

The study was guided by the following specific objectives;

- i. To determine the level of knowledge of CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya

- ii. To establish the health and community support systems available for the CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya.
- iii. To evaluate the health and community systems barriers that hinder the participation of CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya.
- iv. To investigate the resources available for CHWs that can enhance their participation in promoting utilization of LARCs among married women in Kilifi County, Kenya.

1.6 Null Hypothesis

The study will be guided by the following null hypothesis;

H₀: Participation of community health workers does not significantly enhance Long-acting and reversible contraceptives among married women in Kilifi County, Kenya.

1.7 Significance of the Study

The significance of studying the participation of community health workers (CHWs) in enhancing the utilization of long-acting and reversible contraceptives (LARCs) among married women lies in its potential to address critical gaps in reproductive health services and improve maternal and child health outcomes. LARCs are highly effective contraceptive methods that offer long-term protection against unintended pregnancies. By studying the role of CHWs in promoting LARC utilization, the study can contribute to expanding access to family planning services, particularly in underserved communities where healthcare infrastructure may be limited.

Access to LARCs empowers married women to make informed decisions about their reproductive health, including when and whether to have children. By enhancing the utilization of LARCs through CHW interventions, the study can promote women's autonomy and agency in family planning decision-making, ultimately improving their overall well-being. In addition, the unintended pregnancies pose significant risks to maternal and child health, including higher rates of maternal mortality and morbidity.

By increasing LARC utilization, particularly among married women who may desire spacing or limiting pregnancies, the study can contribute to reducing the incidence of unintended pregnancies and associated health complications.

Further, in many settings, marginalized and underserved populations face disparities in access to reproductive health services, including family planning. By focusing on CHWs' involvement in promoting LARC utilization, the study can help address health inequities by reaching communities with limited access to healthcare facilities and services, thereby promoting health equity and social justice. Moreover, CHWs play a pivotal role in delivering essential healthcare services at the community level. By examining their participation in promoting LARC utilization, the study can contribute to strengthening community-based healthcare delivery systems, enhancing the capacity of CHWs, and fostering collaboration between community health workers and formal healthcare providers. Lastly, research findings on the effectiveness of CHW-led interventions in enhancing LARC utilization can inform the development of evidence-based policies and programmatic interventions aimed at improving family planning services. This can include strategies to integrate family planning services into existing CHW programs, enhance training and supervision of CHWs, and allocate resources more effectively to meet community needs.

1.8 Delimitation and Limitations

The study delimitation focused specifically on Kilifi County, limiting its generalizability to other regions or counties in Kenya with different socio-cultural contexts and healthcare infrastructure. The study targeted only married women of reproductive age in Kilifi County, excluding unmarried women, men, and other demographic groups who may also benefit from CHW-led interventions in family planning. In addition, the study focused on specific CHW programs or initiatives in Kilifi County, such as those supported by government agencies, NGOs, or community-based organizations, rather than encompassing all CHWs operating in the region. Moreover, was delimited to a specific time frame, such as a particular period of implementation or evaluation of CHW-led interventions in promoting LARC utilization among married women in Kilifi County. The study employed specific research methods, such as surveys, interviews, or focus groups, to collect data from

CHWs and married women, thereby delimiting the scope of inquiry and the types of insights that could be gained.

The limitations of the study included that CHWs had varying levels of training and capacity in family planning counseling and LARC provision, which could affect the quality and effectiveness of their interventions. This limitation could lead to inconsistencies in the information provided to married women and may impact their decision-making process. This was mitigated by implementing comprehensive training programs for CHWs focused on LARCs provision, and addressing cultural sensitivities. Regular refresher training sessions were conducted to ensure CHWs remained up-to-date with the latest guidelines and best practices.

In addition, the deep-rooted cultural beliefs and social norms surrounding contraception, particularly LARCs, posed significant barriers to CHWs' efforts in promoting utilization among married women. These barriers could include stigma, misconceptions, and resistance from community members. The study used CHWs to conduct community sensitization and awareness campaigns to address cultural and social barriers. The researcher engaged community leaders, religious leaders, and influential figures to incorporate culturally sensitive messaging and approaches in CHW interventions during the study.

Lastly, limited data collection and monitoring mechanisms hindered the assessment of CHWs' impact on LARC utilization among married women. Inadequate monitoring and evaluation impeded the identification of gaps in service delivery and the tracking of progress over time. This was mitigated through implementing routine reporting mechanisms for researcher and CHWs to capture data on the services provided and outcomes achieved.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter is based on the existing literature review. This chapter discusses the role of Community Health Workers in enhancing the utilization of long-acting and reversible contraceptives (LARCs) in married women. This section reviews literature in line with the study objectives.

2.2 Historical Background

The use of Community Health Workers has been considered as an effective strategy for addressing the ever-increasing shortage of health workers, especially in developing countries. Community health working involves the selection of health workers to provide basic health services within the community in which they live (Kenya *et al.* 2013). The concept has been in existence for about 50 years. Throughout history, the roles and activities of community health workers have transformed and become enormously diverse across countries and program (Takasugi and Lee, 2012). Up to date, there have been countless experiences and involvements of the CHWs throughout the world with program extending from large scale, national and regional program, such as vaccinations and disease prevention to small-scale community-based initiatives including delivery of short-term contraceptive services to the small target group.

2.3 Role of Community Health Workers in the Promoting LARCs

CHWs fill the gap that exists between the huge populations that require healthcare services and the current health care facilities and providers (Braun *et al.*, 2013). This is widely observed in a rural village and urban poor communities. In Kenya, they engage in educating households on various health issues including family planning, such as pills and condoms and other health issues (Ochieng *et al.*, 2014). They attend community meetings, community action, and dialogue days to provide health messages. The CHWs act as a link between communities and health facilities (Takasugi and Lee, 2012). They may refer clients to the health facility for services

and tracing. This implies that the CHWs are better placed to be used in enhancing the utilization of LARCs in the community.

2.4 Long-acting and Reversible Contraceptives (LARCs)

Long-acting reversible contraception (LARCs) methods include the intrauterine contraceptive device (IUCD) and the birth control implant (Creanga *et al.*, 2011). Both are reversible that is, if a client wants to become pregnant or if she wants to stop using them, one can have them removed at any time. The IUCD and the implant are the most effective forms of reversible birth control available (Juma *et al.*, 2015). Their effectiveness rate is the same as that of sterilization (Cleland *et al.*, 2012)).

2.4.1 Intrauterine Contraceptive Device (IUCD)

The IUCD is a small, T-shaped, plastic device that is inserted into and left inside the uterus (Hubacher *et al.*, 2014). There are two types of IUCDs. The first one is the hormonal IUCD, which releases progestin and is approved for use for three and five years. The second one is the non-hormonal copper IUCD, which can be used for an approved period of up to 10 years. They work mainly by preventing fertilization of the egg by the sperm and implantation of the zygote into the intrauterine walls (Whelpton *et al.*, 2015). The hormonal IUCD also makes the cervical mucus thicker, which makes it harder for sperm to enter the uterus and fertilize the egg. It keeps the endometrium of the uterus thin, which makes it less likely for implantation.

IUCD has numerous benefits and is more efficient than the use of methods such as pills. For instance, a patient with other conditions, such as cardiovascular disorders can safely use the non-hormonal IUCD (Ward and Hisley, 2015). The non-hormonal IUCDs are not associated with side effects, such as weight gain, which are observed in other hormonal contraceptives. Pregnancy can also be achieved immediately after cessation of use of the IUCD. The main disadvantage of IUCD is the increased risk of sexually transmitted infections, particularly among women with numerous sexual partners (Hansingo, 2015). Furthermore, it does not prevent any of the sexually transmitted diseases. In some cases, the IUCD contributes to perforation of the uterine wall, pelvic inflammatory disease, heavy bleeding, or come out during menstruation and fail to prevent pregnancy (Hansingo, 2015).

2.4.2 Birth Control Implant

The birth control implant is a single flexible rod that is inserted under the skin, such as in the upper arm (*Figure 3*) (Ward & Hisley, 2015). It releases hormone, progestin, into the body. It's effective for upto 3 years. The progestin in the implant prevents pregnancy by stopping ovulation (Whelpton *et al.*, 2015). The progestin in the implant thickens the cervical mucus, making it harder for a sperm to enter the uterus and fertilize the egg (Hansingo, 2015).

The implants have various benefits, such as long-term contraception outcome, safety in post-abortion care, and during breastfeeding (Whelpton, 2015). However, since it is hormonal, it may produce various side effects, such as rapid weight increased, increased blood pressure, increased bleeding. It also does not provide protection against STIs. It may not be used among women with various conditions, such as cancer or cardiovascular disorders (Ngure, 2014). There may also be delayed pregnancy after termination of the use of implants.

2.5 Trend in the Utilization of LARCs

Globally, the trend of the use of permanent contraception has noticeably increased (Adeyinka *et al.*, 2014) However, the rise is still less significant, and it is widespread underutilization of LARCs (Mekonnen and Worku, 2011). For instance, the report by Jacobstein and Stanley (2013) revealed that in the U.S., the rate of use of oral contraceptives is 32%, a condom is 17%, IUCDs is 8%, the implant is 6%, and female and male sterilization is 12%. Hansingo (2015) also reported that 22% of married women still use natural methods instead of artificial techniques. This clearly indicates that the use of LARCs had not been well utilized as compared to the other family planning methods.

The research conducted by Adeyinka and others (2014) indicated that the low rate of use of LARCs in the United States is mainly due to inadequate knowledge among women, provider information dependence and the bias of the providers towards performance contraceptives methods. Mekonnen and Worku (2011) noted that training and capacity building to healthcare providers, coupled with enhanced

awareness to the public on the safe and correct use of contraceptives had increased their usage thus preventing unintended pregnancies and unsafe abortions.

Regionally Sub-Saharan Africa experiences a high rate of fertility evidenced by increased birth rates. This is attributed to the high rate of unmet need for family planning, especially the long-acting contraceptives. Most of the sub-Saharan African countries have not sufficiently promoted the use of LARCs as options to the rapidly growing population, particularly in the rural areas (Tolley *et al.*, 2014). For instance, in Uganda, the rate of use of long-acting reversible contraceptives (LARC) is estimated to be as low as 13%, despite being considered as the most cost-effective contraceptives (Kabagenyi *et al.*, 2014). The report by Creanga *et al.* (2011) indicated that in Sub-Saharan Africa, there is an acute shortage of contraception services, with only 52% of the women able to access contemporary family planning services. Secondly, the country has not fully recognized the input of CHWs to scale up the trend of promoting the delivery of contraception services.

In Kenya, the CPR stand at 61% according to (KDHS, 2018) of the use of LARCs has markedly increased to 17% between 2000 and 2016 (Juma, 2017). However, the use of short-term methods is still favorable at more than 56% (Sonalkar *et al.*, 2013). Most of the health facilities in Kenya offer pills, injectable, male condoms, implants, sterilization and female condoms (Hubacher *et al.*, 2013). A study performed by Tolley *et al.* (2014) identified that among the available contraceptives methods in Kenya, the use of IUCD use is lowest at 0.8%, while the rate of use of implants is about 11%. The short-term methods are widely used with injectable contraceptives rating at approximately 35% and oral pills at about 29% (Ochako *et al.*, 2015). In Kilifi South Sub-County, the rate of use of is oral contraceptive is about 22.7%, implants 8.9%, IUD is 7.1%, and injectable contraceptive is 15.0% (Ngure, 2014).

2.6 Effect of Level of Knowledge and Utilization of LARCS

The level of knowledge of community health workers (CHWs) on the use of Long-Acting Reversible Contraceptives (LARCs) can significantly impact their effectiveness in promoting and supporting the utilization of these contraceptive methods (Desalgn *et al.* 2019). Bolarinwa and Olagunju (2019) study focused on the knowledge and factors influencing long acting reversible contraceptive use among

women of reproductive age in Nigeria. The study established that CHWs with a high level of knowledge about LARCs can provide accurate and comprehensive counseling to individuals and communities. They can effectively communicate the benefits, risks, and proper usage of LARCs, addressing concerns and misconceptions that may inhibit uptake. According to study on revealed that CHWs who are well-informed about LARCs can play a crucial role in increasing awareness and acceptance of these contraceptive methods within communities. By providing clear and evidence-based information, they can help dispel myths, reduce stigma, and promote positive attitudes towards LARC use.

In the same vein, Harzif et al. (2018) study on actors associated with the utilization of long-acting reversible contraceptives among family planning clients at the Pameungpeuk Rural Hospital, Indonesia. Established that with a deep understanding of LARCs can offer personalized support to individuals in their decision-making process regarding contraceptive options. They can assess individuals' needs, preferences, and reproductive goals, providing tailored recommendations and guidance that align with their circumstances.

Study on factors affecting utilization of long-acting reversible contraceptives among sexually active reproductive-age women in the pastoral community of Northeast Ethiopia: a community-based cross-sectional study by Mare et al. (2022), established that knowledgeable CHWs can facilitate access to LARC services by guiding individuals to appropriate healthcare facilities, advocating for the availability of LARC supplies, and assisting with appointment scheduling and follow-up care. Their ability to navigate the healthcare system effectively can help overcome barriers to access. Zerfu et al. (2018) indicated that CHWs who are knowledgeable about LARCs can provide ongoing support and follow-up to individuals using these contraceptive methods. They can monitor adherence, address concerns or side effects, and provide reinforcement of key messages, promoting continuity of care and long-term contraceptive use.

Gujo and Kore(2021) established that CHWs with expertise in LARCs can serve as resources within their communities, training and mentoring their peers to improve their knowledge and skills in family planning counseling and LARC provision. This cascading effect can strengthen the overall capacity of CHWs to promote LARC

utilization. Desalagne et al.(2019) recommended that knowledgeable CHWs can contribute to improved data collection and monitoring of LARC utilization within their communities. They can accurately document contraceptive uptake, identify trends, and assess the impact of interventions, providing valuable insights for program planning and evaluation (Mare et al. 2022). Overall, the level of knowledge of CHWs on the use of LARCs is a critical determinant of their effectiveness in promoting uptake and utilization of these contraceptive methods (Buckel et al. 2019). Investing in comprehensive training and ongoing professional development for CHWs can enhance their capacity to support individuals and communities in making informed decisions about family planning and reproductive health (Aychew et al. 2022). It is on this premise the current study sought to determine the level of knowledge of CHWs on the use of LARCs among the married women in Kilifi County, Kenya.

2.7 Health and Community Support Systems Available for the Utilization of LARCs

Health and community support systems play a crucial role in facilitating access to Long-Acting Reversible Contraceptives (LARCs) and supporting individuals in their decision-making process regarding contraceptive options (Aychew et al. 2022). Janiak et al. (2018) carried a study on the barriers and pathways to providing long acting reversible contraceptives in Massachusetts community health centers: a qualitative exploration. The study findings revealed that health facilities, including hospitals, clinics, and reproductive health centers, serve as primary points of access for LARC services. Trained healthcare providers, such as doctors, nurses, midwives, and community health workers, offer counseling, information, and provision of LARCs to individuals seeking contraception.

Bornstein et al. (2018) study focused on access to long-acting reversible contraception among US publicly funded health centers. The study revealed that dedicated family planning clinics provide specialized services related to contraception, including counseling, method selection, and provision of LARCs. These clinics often offer a range of contraceptive methods, ensuring that individuals have access to comprehensive family planning services tailored to their needs. Mazzei et al. (2019) study focused on the community health worker promotions increase uptake of long-acting reversible contraception in Rwanda. It was established that CHWs play a vital

role in promoting awareness, providing education, and facilitating access to LARCs within communities. They conduct outreach activities, organize community meetings, and offer one-on-one counseling to individuals and couples, addressing questions, concerns, and misconceptions about LARCs.

Kamanga et al. (2023) study focused on the strengthening systems to provide long-acting reversible contraceptives (LARCs) in public sector health facilities in Uganda and Zambia. The study revealed that mobile outreach programs bring contraceptive services, including LARCs, directly to communities, particularly in remote or underserved areas where access to health facilities may be limited. These programs often involve mobile clinics, outreach teams, or community health campaigns that deliver contraceptive education, counseling, and provision services. Hovarth et al. (2020) from uptake to access: a decade of learning from the ACOG LARC program. The study established that peer support groups offer individuals the opportunity to connect with others who have experience using LARCs or other contraceptive methods. These groups provide a supportive environment for sharing information, experiences, and concerns related to contraception, helping individuals make informed decisions and overcome challenges.

Aligne et al. (2020) study on the impact of the Rochester LARC Initiative on adolescents' utilization of long-acting reversible contraception, explains that CBOs often collaborate with health facilities and providers to support community-based initiatives aimed at promoting LARC utilization. They may engage in advocacy, capacity building, and community mobilization activities to raise awareness, address barriers, and promote access to LARCs. Dana et al. (2023) study on the disparities in readiness of health facilities to provide long-acting reversible contraceptives (LARCs) and permanent methods (PMs) in Bangladesh., posits that telecommunication services, such as hotlines and helplines, offer individuals confidential access to information, counseling, and support regarding contraception, including LARCs. Trained counselors provide guidance, answer questions, and refer individuals to appropriate services as needed.

Further, Aychew et al. (2022) health education materials, such as brochures, posters, and pamphlets, provide individuals with information about LARCs, their benefits, risks, and usage instructions. These materials are often distributed in health facilities, community centers, and outreach events to enhance awareness and knowledge about LARCs. Mazzei et al. (2019) by leveraging these health and community support systems, individuals can access accurate information, counseling, and services related to LARCs, empowering them to make informed decisions about their reproductive health and contraceptive choices. Therefore, by leveraging these health and community support systems, individuals can access accurate information, counseling, and services related to LARCs, empowering them to make informed decisions about their reproductive health and contraceptive choices. It was on this premise the current study sought to establish the health and community support systems available for the CHWs to enhance utilization of LARCs among married women in Kilifi County, Kenya

2.8 Health and Community Systems Barriers Hindering Participation of CHWs in enhancing Utilization of LARCs

Several health and community systems barriers can hinder the participation of Community Health Workers (CHWs) in enhancing the utilization of Long-Acting Reversible Contraceptives (LARCs). Henry et al. (2021) study on the facilitators and barriers to implementation of long-acting reversible contraceptive services for adolescent girls and young women in Gaborone, Botswana; opines that CHWs may lack adequate training and capacity in family planning counseling and LARC provision, limiting their ability to effectively promote and support LARC utilization. Insufficient training programs, lack of supervision, and outdated or incomplete information can undermine CHWs' confidence and competence in delivering family planning services.

Silumbwe et al. (2018) study on community and health systems barriers and enablers to family planning and contraceptive services provision and use in Kabwe District, Zambia, revealed that inconsistent availability of LARC commodities due to stock outs, supply chain disruptions, and procurement challenges can impede CHWs' efforts to promote LARC utilization. CHWs may encounter difficulties in accessing and replenishing contraceptive supplies, leading to interruptions in service delivery and

missed opportunities for contraceptive counseling and provision. Kamanga et al. (2023) opines that weak healthcare infrastructure, including limited access to health facilities, shortages of essential supplies and equipment, and inadequate staffing, can hinder CHWs' ability to provide LARC services. Remote or underserved areas may lack the necessary infrastructure to support comprehensive family planning programs, limiting CHWs' reach and effectiveness.

Muhumuza et al. (2023) examined the development of a multi-level family planning intervention for couples in rural Uganda: key findings & adaptations made from community engaged research methods. The study established that the deep-rooted cultural beliefs, social norms, and religious ideologies surrounding contraception, particularly LARCs, can pose significant barriers to CHWs' engagement with communities. Stigma, misconceptions, and resistance from community members may inhibit open discussions about family planning and hinder acceptance and uptake of LARCs. In the same vein, Rounciville et al. (2020) opines that gender inequalities and power imbalances within households and communities may limit women's autonomy and decision-making authority regarding contraceptive use, including LARCs. Husbands or other family members may exert control over reproductive choices, constraining women's access to family planning services and undermining CHWs' efforts to promote LARC utilization.

Fazal et al. (2023) assessed the client-centered counseling and facilitation in improving modern contraceptive uptake in urban slum of Karachi Pakistan. The study findings revealed that fragmentation and lack of coordination within the health system can result in disjointed efforts to promote LARC utilization. Poor integration of family planning services into primary healthcare settings, inadequate communication between CHWs and formal healthcare providers, and competing priorities may hinder collaboration and impede CHWs' ability to effectively refer individuals to LARC services. Moreover, Malama et al. (2020) examined a couple-focused, integrated unplanned pregnancy and HIV prevention program in urban and rural Zambia. The study findings revealed that limited data collection and monitoring mechanisms can hinder the assessment of CHWs' impact on LARC utilization. Inadequate monitoring and evaluation systems may obscure the extent of CHWs'

contributions, making it difficult to track progress, identify gaps in service delivery, and allocate resources effectively.

Lastly, Soin et al. (2022) analyzed health workers' values and preferences regarding contraceptive methods globally: A systematic review. They concluded that addressing health and community systems barriers requires comprehensive strategies that strengthen CHWs' training and capacity, improve healthcare infrastructure and supply chain management, address cultural and social norms, empower women, enhance coordination within the health system, and invest in robust data collection and monitoring systems. By overcoming these barriers, CHWs can play a more effective role in enhancing the utilization of LARCs and advancing reproductive health outcomes within communities. It is on this premise the current study sought to evaluate the health and community systems barriers that hinder the participation of CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya.

2.9 Resources Required by CHW for Promoting Utilization of LARCs

Community Health Workers (CHWs) require various resources to effectively promote the utilization of Long-Acting Reversible Contraceptives (LARCs) within their communities. These resources encompass both tangible and intangible assets necessary to support CHWs in their role as advocates, educators, and facilitators of LARC utilization (Nkole et al. 2021). Caballero et al. (2022) study on using a pediatric-based community health worker model to facilitate obtainment of contraceptives among Latino Immigrant parents with contraceptive needs; revealed that a comprehensive training programs are essential to equip CHWs with the knowledge, skills, and competencies needed to promote LARC utilization effectively. Training should cover topics such as family planning counseling, contraceptive methods, LARC provision, communication skills, cultural sensitivity, and confidentiality.

A study by Chin-Queen et al, (2019) on the evaluation of a pilot program for task sharing short and long-acting contraceptive methods in Burkina Faso, established that CHWs require access to educational materials, such as brochures, posters, pamphlets, and flip charts, to facilitate community education and awareness campaigns on

LARCs. These materials should contain accurate information about LARCs, their benefits, side effects, usage instructions, and where to access services. Based on the study findings by Asaolu et al. (2019) on the healthcare system indicators associated with modern contraceptive use in Ghana, Kenya, and Nigeria: evidence from the Performance Monitoring and Accountability; it was revealed that CHWs need access to a reliable supply of LARC commodities, including implants and intrauterine devices (IUDs), to meet the demand for contraceptive services within their communities. Ensuring consistent availability of LARCs through supply chain management and distribution mechanisms is essential to support CHWs in providing these methods.

Rattan et al. (2016) evaluated the rapid contraceptive uptake and changing method mix with high use of long-acting reversible contraceptives in crisis-affected populations in Chad and the Democratic Republic of the Congo. Based on the study findings, it was revealed that job aids, such as counseling guides, decision-making tools, and reference manuals, can assist CHWs in conducting effective family planning counseling sessions and supporting individuals in making informed choices about LARCs. These resources serve as quick references and reminders of key information during interactions with clients. Moreover, St. Clair et al. (2023) recommended that access to communication and information technology tools, such as mobile phones, tablets, or internet connectivity, can facilitate communication, data collection, and reporting by CHWs. Digital platforms and applications may also be utilized for training, data management, and monitoring of LARC utilization.

Azmat et al. (2021) examination on the accessibility and uptake of modern contraceptive methods in Pakistan—a critical view on what works, revealed that CHWs may require transportation assistance and logistical support to reach remote or underserved areas within their communities. Access to bicycles, motorcycles, or other means of transportation can facilitate CHWs' mobility and enable them to conduct outreach activities and home visits to promote LARC utilization. In addition, Olaniran et al. (2019) on the roles of community health workers who provide maternal and newborn health services: case studies from Africa and Asia; established that regular supervision and mentorship from qualified healthcare professionals are essential to support CHWs in their role and ensure adherence to quality standards in family planning

service delivery. Supervisors can provide guidance, feedback, and ongoing support to CHWs, helping them address challenges and enhance their effectiveness.

Wall et al. (2022) on the implementation and evaluation of a large-scale postpartum family planning program in Rwanda: study protocol for a clinic-randomized controlled trial, revealed that collaboration with community leaders, local organizations, and stakeholders is critical to mobilize support, raise awareness, and foster community acceptance of LARCs. Engaging community members through participatory approaches, community meetings, and advocacy campaigns strengthens CHWs' efforts and promotes sustainable behavior change. Therefore, by providing CHWs with these resources, health systems and organizations can empower them to effectively promote the utilization of LARCs and contribute to improved access to quality family planning services within communities. Thus, it is on this premise the current study sought to examine the resources available for CHWs that can enhance their participation in promoting utilization of LARCs among married women in Kilifi County, Kenya.

2.10 Factors Influencing the use of LARCs Among Married Women

Numerous factors influence the use of LARCs among married women. These include inadequate knowledge and information on LARCs. Women with limited education are less likely to comprehend the benefits of LARCs and use it (Kenya *et al.*, 2013). However, a survey by (Onono *et al.* 2014) revealed that more than 58% of the educated women, such as those with secondary and tertiary education, are not well informed about the benefits of the LARCs. There are also limited campaigns about the use of LARCs within the primary health sectors due to limited resources (Creanga *et al.*, 2011). This contributes to the unawareness of the LARCs alternatives among married women. Again, most women are misinformed about LARCs methods. For instance, (Juma *et al.* 2015) identified that than four out of seven women had a misconception about the LARCs. The common misinformation is that LARCs contributes to overly prolonged and permanent sterility after discontinuations (Sonalkar *et al.*, 2013). This results in apprehension concerning the use of LARCs among married women.

Religion also plays in the influencing the use of LARCs among married women (Alemayehu *et al.*, 2012). For example, the continuous Catholic position has been that any artificial interference with conception violates the primary purpose of marriage, which is procreation (Cleland *et al.*, 2012). In the Muslims community, the decision to have children is solely upon the father (Cleland *et al.*, 2012). Unfortunately, most men do not engage in family planning practices. Some of the cultural practices and beliefs, such as polygamy and the prestige of having many children also contribute to low consumptions of contraceptives, especially the LARCs (Cleland *et al.*, 2012).

Socioeconomic status of women also hinders them from using the LARCs. The majority of married women from low socioeconomic setting, who are poor, are unable to afford the LARCs even at the government subsidized charges (Hubacher *et al.*, 2013). This partly explains the high rate of unintended and unwanted pregnancies among poor married women. Socioeconomic status also contributes to the inaccessibility of LARCs among married women (Hubacher *et al.*, 2012).

Lastly, the use of LARCs is also influenced by personal attributes, such as perceptions attitude (Sedgh and Hussain, 2014). For instance, some women object to living with foreign objects in their bodies, such as IUCD and implants. (Ochako *et al* 2015) revealed that about 44% of women do not use the LARCs due to perceived fear, pain, and potential risks. Misinformation and limited knowledge contribute some of the attitudes and perceptions, and lack of awareness of the benefits of the LARCs (Tolley *et al.*, 2014). However, some of the attitudes are developed because of ineffective and poor-quality counseling of the clients concerning the LARCs. The health workers do not provide adequate information to the customer about LARCs for them to make informed choices.

2.11 Summary of Identified Gaps

Based on the existing literature and empirical review, the research gap on Community Health Workers (CHWs) in the promotion of contraceptives among women may encompass several areas where further investigation is needed. Limited research exists on the effectiveness of CHW-led interventions specifically aimed at promoting contraceptive use among women. There is a need for studies evaluating the impact of CHW-delivered contraceptive counseling, education, and provision services on

contraceptive uptake, continuation, and satisfaction among women. Understanding the barriers and facilitators that influence CHWs' engagement in promoting contraceptives among women is essential. Research could explore factors such as CHWs' training, knowledge, attitudes, beliefs, incentives, workload, supervision, and support systems, as well as community perceptions and acceptance of CHW-led contraceptive services. Research is needed to assess the quality of contraceptive services delivered by CHWs, including adherence to clinical guidelines, accuracy of information provided, counseling skills, and client-centered care. Studies examining the acceptability, feasibility, and safety of CHW-provided contraceptive methods, particularly long-acting reversible contraceptives (LARCs), are also lacking.

There is a gap in research on the role of CHWs in addressing sociocultural barriers to contraceptive use among women, such as stigma, misconceptions, gender norms, and partner involvement. Investigating CHWs' strategies for promoting culturally sensitive and gender-responsive contraceptive services could inform interventions to improve access and utilization among women. Limited research exists on the integration of CHWs into formal health systems and the coordination of their activities with other healthcare providers. Studying the organizational structures, referral mechanisms, supervision models, and collaboration strategies that facilitate effective CHW engagement in contraceptive promotion can help optimize their role within the health system. There is a need for studies assessing the impact of CHW programs on broader health outcomes beyond contraceptive use, such as maternal and child health indicators, unintended pregnancies, and reproductive health outcomes. Evaluating the cost-effectiveness and scalability of CHW-led interventions can provide insights into their long-term sustainability and public health impact. Thus, addressing these research gaps can contribute to the evidence base for strengthening CHW-led interventions in promoting contraceptives among women in Kilifi County, ultimately improving access to family planning services, reducing unmet need for contraception, and supporting women's reproductive health and rights.

2.12 Theoretical Framework

An appropriate theory for guiding Community Health Workers (CHWs) in the promotion of contraceptives among women is the Health Belief Model (HBM). The

Health Belief Model is a widely recognized behavioral theory that explains and predicts health behaviors by considering individuals' perceptions and beliefs about health-related issues. The Health Belief Model (HBM) developed by Baum *et al.* (1950) and modified by Carpenter (2010). It is a psychological model that explains and predicts people's health behaviors. Its main focus is on people's attitudes and beliefs, and how they influence behavior. The HBM holds that individuals must be aware of the possibility of risk of health consequences if they do not act early as a way of prevention (Glanz and Bishop, 2010). If they believe that the lack of early prevention has serious consequences, then they were to make the right choice that was beneficial in reducing their vulnerability to or severity of the consequences (Carpenter, 2010).

The HBM posits that individuals are more likely to adopt health behaviors if they perceive themselves to be susceptible to a health condition (e.g., unintended pregnancy) and believe that the condition's consequences (e.g., maternal health risks) are severe. CHWs can emphasize the risks associated with unintended pregnancies and the benefits of using contraceptives to prevent them, thereby influencing women's perceptions of susceptibility and severity (Desagne et al. 2019). According to Buckel et al.(2019) the HBM, individuals weigh the perceived benefits of adopting a health behavior (e.g., preventing pregnancy, spacing births) against the perceived barriers (e.g., side effects, cultural stigma) associated with it. CHWs can educate women about the benefits of contraceptive use, such as empowerment, reproductive autonomy, and improved maternal and child health, while addressing concerns and misconceptions about contraceptives.

The HBM suggests that individuals are more likely to take action if they receive cues or prompts that motivate them to do so. CHWs can serve as important cues to action by providing information, counseling, and referrals for contraceptive services, as well as by organizing community outreach activities, health education sessions, and peer support groups (Zerfu et al. 2018). Self-efficacy, or one's belief in their ability to perform a behavior, is a central construct in the HBM. CHWs can enhance women's self-efficacy in using contraceptives by offering practical support, addressing concerns, and building skills related to contraceptive decision-making, communication with partners, and method use (Olaniram et al. 2019)

The HBM recognizes that various individual and contextual factors, such as sociodemographic characteristics, knowledge, and past experiences, can influence health behaviors. CHWs can tailor their contraceptive promotion efforts to address the diverse needs, preferences, and circumstances of women within their communities, considering factors such as age, education, religion, and cultural norms (Fazal et al. 2023). By applying the principles of the Health Belief Model, CHWs can effectively engage with women, address barriers to contraceptive use, and empower them to make informed decisions about their reproductive health (Rattan et al. 2023). This theoretical framework provides a systematic approach to understanding and influencing health behaviors, guiding CHWs in their efforts to promote contraceptive utilization and improve reproductive health outcomes among women (Azmat et al. 2021). It is on this premise the current study adopted HBM to expound how participation of CHWs enhance utilization of LARCs among married women in Kilifi County, Kenya.

2.13 Conceptual Framework

The conceptual framework (Figure 1.1) of this study is extrapolated from the set objectives through the logic modeling approach, which aided the mapping out the intended relationships and causal connections between the objective variables and their expected results. The objectives of this study focus on establishing the optimal ability of the CHWs in enhancing the use of contraceptives, particularly the LARCs among the married women. To understand the concept, the role of the CHWs in enhancing the use of LARCs among the married women is perceived at four interrelated levels, which include CHW performance, support system, and system setting (Figure 2.1).

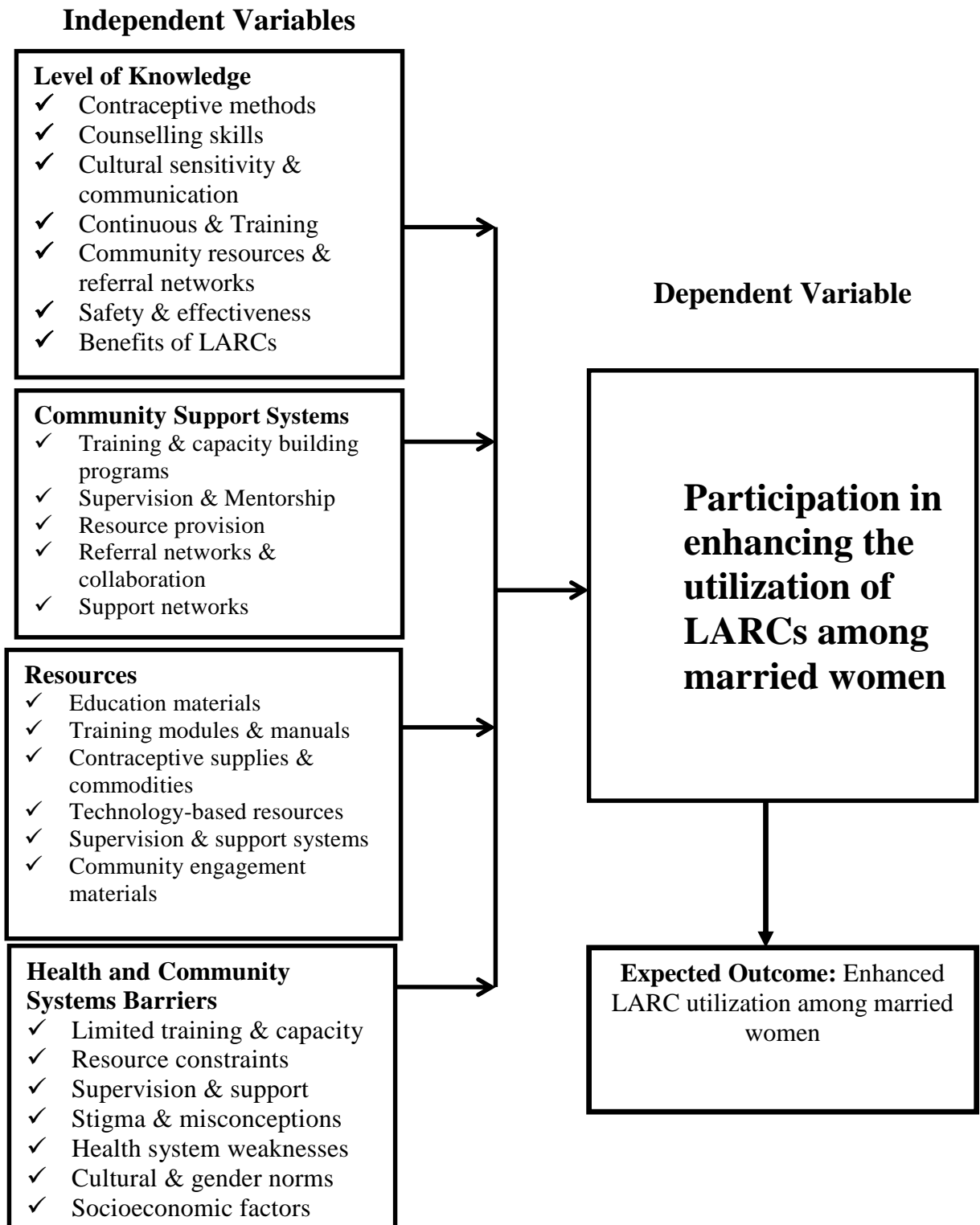


Figure 2.1: Conceptual framework for the Study

The level of knowledge of Community Health Workers (CHWs) on enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women is a critical factor that influences their effectiveness in promoting contraceptive use. A thorough understanding of LARCs and their benefits enables CHWs to provide accurate information, address misconceptions, and facilitate informed decision-making among married women.

Community support systems play a crucial role in empowering Community Health Workers (CHWs) to enhance the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women. These support systems provide CHWs with the resources, networks, and collaboration needed to effectively promote contraceptive use within communities. By establishing robust community support systems, CHWs are better equipped to overcome challenges, leverage resources, and mobilize community support to enhance the utilization of LARCs among married women. These support systems contribute to the sustainability and effectiveness of CHW-led initiatives in improving reproductive health outcomes and empowering women to make informed choices about their contraceptive options.

To enhance the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women, Community Health Workers (CHWs) require access to various resources that can support their efforts in promoting contraceptive use within communities. By providing CHWs with these resources, stakeholders can empower them to effectively promote LARCs among married women, increase contraceptive uptake, and contribute to improving reproductive health outcomes within communities.

In Kilifi County, Kenya, several health and community systems barriers hinder the participation of Community Health Workers (CHWs) in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women. Addressing these health and community systems barriers requires a comprehensive approach that involves strengthening CHWs' training and capacity, improving access to resources and support systems, addressing stigma and misconceptions,

strengthening the health system infrastructure, addressing socioeconomic disparities, and promoting cultural sensitivity and gender equity in contraceptive service delivery. By addressing these barriers, stakeholders can enhance CHWs' participation in promoting LARC utilization among married women in Kilifi County, Kenya, and improve reproductive health outcomes within the community.

CHAPTER THREE: MATERIALS AND METHODS

3.1 Introduction

This section explains the research methodology used in this study. The chapter focuses on the research design, study variables, study population, sampling techniques, research instruments, data collection techniques, data analysis and ethical considerations.

3.2 Location of the Study

The study area was carried out in Kilifi County, which is located in the former Coast Province. It is about 490 km southeast of Nairobi, the capital city of Kenya, and 60km north of Mombasa, it lies 3.2184° S, 40.1151° E and covers an extensive area of 12,609.74 square kilometers. The county shares border with Tana River, Mombasa, Taita Taveta and Kwale. Kilifi County is home to 1,109,735 people comprising of 48% males and 52% females as it was revealed in the 2009 National Census (KNBS, 2009) (Ngure, 2014). The health facilities include large hospitals such as Kilifi County Referral Hospital, Malindi Sub-County Hospital, Kaloleni Sub-County (Mariakani Hospital).

3.3 Research Design

This study employed a descriptive research design. A descriptive research design is a type of research methodology used to systematically describe and analyze the characteristics, behaviors, attitudes, opinions, or experiences of a particular population or phenomenon (Clark & Creswell, 2017). Descriptive research provides valuable insights into the nature of phenomena, informs hypothesis generation for future research, and serves as a foundation for further inquiry in various fields of study (Portney, 2020). Adopting a descriptive research design for studying the participation of Community Health Workers (CHWs) in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya, clearly outlined the specific objectives of the study, which may include assessing the current level of participation of CHWs in promoting LARC utilization, identifying barriers and facilitators to CHW involvement, exploring the

knowledge and attitudes of CHWs towards LARCs, and understanding the perceptions of married women regarding CHW-led contraceptive services. Descriptive research design enabled to define the study population, which consisted of CHWs working in Kilifi County, as well as married women of reproductive age (18-49 years) who reside in the county. It also enabled to consider including key stakeholders such as healthcare providers, community leaders, and policymakers for their perspectives on CHW involvement in LARC promotion. Lastly, descriptive research design was useful in analyzing quantitative data using descriptive statistics such as frequencies, percentages, means, and standard deviations to summarize demographic characteristics, knowledge levels, and utilization rates among CHWs and married women. Conduct thematic analysis or content analysis of qualitative data to identify recurring themes, patterns, and emergent categories related to CHW participation, barriers, and facilitators in promoting LARCs. Therefore, the current study found descriptive research design appropriate examine participation of Community Health Workers (CHWs) in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya.

3.4 Study Variables

3.4.1 Dependent Variable

The dependent variable for this study was the participation of CHWs in enhancing the use of LARCs among married women in Kilifi County.

3.4.2 Independent Variables

The level of Knowledge: This includes the Quality LARCs, Information to mothers, choice, and their advantages importance.

Community Support systems: This refers to the technical and social support and incentives the CHWs derive from the community or the health care system. This includes Focused Group sharing on the quick access and quality provision of LARCS over the others. Limited support reduces the role of CHWs in promoting the use of LARCs, while adequate support has a positive impact on promoting the utilization of LARCs.

Health and Community Barriers: These are the challenges faced by community and health systems that compromise the role of CHWs in promoting LARC utilization among married women. The high presence of barriers reduces the role or performance of the CHWs in enhancing the use of LARCs and vice versa.

Resources: These include Financial, Social and Political support to CHWs. Policies, organizations, facilities, time, and materials. Limited inputs impair the role of CHWs, and high inputs produce the opposite effect.

3.5 Study Population

The study population for investigating the participation of Community Health Workers (CHWs) in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya, would encompass CHWs who are actively engaged in providing healthcare services within Kilifi County. CHWs may be affiliated with local healthcare facilities, community-based organizations, or governmental health programs. The study would aim to assess their involvement in promoting LARCs, their knowledge, attitudes, and practices regarding contraceptive counseling, and the challenges they face in their roles. In addition, the primary beneficiaries of CHW-led contraceptive services are married women of reproductive age (typically defined as women aged 15-49 years). This group would represent the target population for assessing LARC utilization, contraceptive preferences, knowledge levels, and barriers to access. Sampling strategies would aim to capture a diverse range of married women, including those from different age groups, socioeconomic backgrounds, and geographic locations within Kilifi County. According to the report by USAID (2023) there were approximately 4000 CHWs in the county operating at different levels and capacities. These comprised of male (1748) and females (2252), young and old, highly and less educated individuals.

3.6 Inclusion and Exclusion Criteria

3.6.1 Inclusion Criteria

This study included all community health workers attached four Sub County Hospitals in Kilifi County. The CHWs must have been engaged in Family Planning Project for a minimum period of six months. The study included only CHWs who gave consent to participate in the study voluntarily.

3.6.2 Exclusion Criteria

This study excluded newly recruited CHWs who have not worked for more than six months. Those who did not give consent to participate in the study due to the low age limit or may have left to work in other places.

3.7 Sample Size and Sampling Techniques

3.7.1 Sample Size Determination

The study recruited 246 CHWs. This was determined Fishers *et al.* (1998) formula:-

$$n = \frac{Z^2 pq}{d^2}$$

Where

n = sample size

z = z-value corresponding to a 95% level of significance = 1.96

p = expected proportion of population of CHWs in Kilifi County = 0.2

q = (1-p) = (1-0.2) = 0.8

d = absolute precision (5%)

Therefore;

$$n = \frac{1.96^2 \times 0.2 \times 0.8}{0.005 \times 0.005}$$

$$n = 0.614656 / 0.0025$$

$$n = 246$$

3.7.2 Sampling Technique(s)

Stratified random sampling technique was employed. The method is used to facilitate the determination of a balanced sample of CHWs from the sampled health facilities. Three strata corresponding to the three health care facilities Malindi County Hospital, Kilifi County Referral Hospital, and Mariakani Sub County Hospital were identified (Table 3.1). To determine the proportionate number of representatives of CHWs the hospitals. However, at each stratum (hospital), the participants were randomly sampled.

Table 3.1: Sample Size

Location	Approximate (%)	Number
Kilifi County Referral Hospital	2000/4000 x 246	123
Malindi Sub-County Hospital	1203/4000 x 246	74
Mariakani Sub-County Hospital	797/4000 x 246	49
Total		246

3.8 Research Instruments

Study questionnaires comprised of both closed and open-ended questions. These gave the respondents freedom of expressing themselves. Items in the questionnaire were categorized into four sections namely: level of knowledge of CHWs on the use of LARCs, support systems available for the CHWs, barriers that hinder the role of CHWs in enhancing the use of LARCs among married women and resources available for CHWs (Appendix I).

3.8.1 Validity of Research Instruments

The validity of the instrument was ascertained through pretesting. This involved randomly administering ten questionnaires to CHWs from each of the following facilities; Gede Health Centre, Vipingo and Majengo-Kanamai health Centres. This acted as a pretest survey and these were not to participate in the main study. This was also to prepare the research assistance for actual data collection, as debriefing sessions were organized to discuss the problems identified during the pre-testing. Research assistants were trained prior to the actual field study. Refined and a pretested

questionnaire was used, the accuracy of recording the information. However, the data collected during pre-testing was not included in the final data analysis.

3.8.2 Reliability of Research Instruments

The reliability of the instrument was ensured by support supervision of the research assistance. This was done randomly throughout the research period to address problems and clarify any challenge that may hinder good data collection. The questionnaires were checked for completeness and accuracy. The research instrument was more reliable since it gave a personal view of the participants.

3.9 Data Collection Techniques

3.9.1 Quantitative Data Collection

Data was collected by questionnaires (Appendix I). Based on the objectives, the questionnaire consisted of (how many) main sections. The first sections gathered basic bio data of the CHWs, such as age, gender, and level of education. The second section was used to collect data concerning the performance of the CHWs regarding output, outcome, and impacts. The third sections gathered information about the support systems available for the CHWs. The fourth section collected data on the barriers faced by the CHWs, while the last section focused on the resources available for the CHWs. The questions were close-ended to restrict the response of the participants and facilitated the collection of quantitative data. There was no list for the whole participant as permanent register but the key informant agreed to show it when the need arises,

3.9.2 Qualitative Data Collection

Qualitative data was collected through two methods. The first one was the Focus Group Discussion (FGD). Two groups of CHWs were formed randomly. However, there was special consideration to ensure gender balance and mixed level of experience among the CHWs in each cluster. The researcher was responsible for moderating the discussion in Kiswahili or English language as was preferred by the participants. Each group composed of eight (8) participant with almost equal gender

consideration During the group discussion, the researcher took notes in draft form and made observations. The second one was key informant interviews. The researcher also selected three key informants, who represented the three main County Hospitals (MCH nurses) who were the managers of the CHWs services within the selected hospitals. All the response was drafted as notes as used during qualitative analysis.

3.10 Data Analysis

3.10.1 Quantitative Data Analysis

The questionnaires were filled with serial numbers, and the principal researcher entered the data using the SPSS software package (SPSS v22) for windows. However, the preliminary frequencies were run and eyeballing to pick out any missing variables. The bivariate analysis was performed on the role of CHWs (dependent variable) and each potential factor, such as knowledge, support system, and resources availability (independent variables), associated with the role of CHWs individually.

3.10.2 Qualitative Data Analysis

The qualitative data was organized into themes and sub themes. This was possible due to master sheets use. If necessary for emphasis, some of the reported statements noted during focus group discussions or key informant interviews were quoted verbatim.

3.11 Logistical and Ethical Consideration

Approval for the study was sought from Kenyatta University Graduate School, Kenyatta University Ethics Review Committee (KU- ERC) Permission to carry out the study was sought from the National Council for Science, Technology, and Innovation, (NACOSTI) and authorization letters were served to Kilifi county, Department of Health. A further permit was obtained from the County government of Kilifi, department of Health that allowed the researcher to go ahead to collect data from respondents. The researcher served the respondents with an introductory letter from the research that explained the purpose of the study and sought their permission to participate in the study. No CHW was exposed to harm, allowed to disclose their personal information, or coerced to participate in the study. All information that was

obtained was treated confidentially, with the participants being assured of no risk in participating in the study. The researcher made sure that the participants who took part in the pre-test done in Vipingo and Majengo health centers did not participate in the main study.

CHAPTER FOUR: RESULTS

4.1 Introduction

This section presents data collected, results and discussions of the study findings on the role of Community Health Workers (CHWs) in enhancing utilization of long-acting and reversible contraceptives (LARCs) in married women in Kilifi County, Kenya. Data were collected by administering Simple structured questionnaires to community health workers. A total of 246 community health workers were sampled.

4.2 Response Rate

The study administered 246 questionnaires for data collection on participation of CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya. A total of 246 questionnaires were properly filled and returned. This represented 100 percent overall successful response rate. The 100 percent response rate was attributed to the use of self-administered questionnaire. Respondents were also assured of confidentiality of the information provided. Babbie (2018) suggested that a response rate of 50% is adequate 60% is good and 70% and above very good for analysis. Chen (2016) argued that the larger the response rate, the smaller the non-response error. This implies that 100 percent response rate was very appropriate for data analysis.

4.3 Socio-Demographic Characteristics of the Respondents

In determining the role of Community Health Workers (CHWs) in enhancing utilization of long-acting and reversible contraceptives (LARCs) in married women in Kilifi County.

Table 4.1: Socio-Demographic Characteristics of the Sample Respondents

	Status	Frequency (f)	Percentage (%)
Age	16- 25	101	41
	26-35	91	37
	36-49	54	22
Gender	Male	89	36
	Female	157	64
Marital status	Married	108	44
	Single	86	35
	Widow	30	12
	Divorced	22	9
Education Level	Not gone to school	54	22
	Primary	79	32
	Secondary	52	24
Family size	Post-secondary	54	22
	1 – 3	59	24
	4 – 7	187	76
Occupation	Employed	37	15
	Self-employed	69	29
	Unemployed	134	56
Work Experience	Employed	37	15
	1 – 2 years	12	5
	3 – 5 years	16	43
Religion	Above six years	128	52
	Christian	138	56
	Muslim	101	41
Marital status	Others	7	3
	Single	85	35
	Married	105	44
	Widow	28	12
	Divorced	22	9

According to the study, findings indicated that a majority (41%) of the sampled CHWs were aged between 26 – 35 years of age, 37% were aged between 16 – 25 years of age while a few (22%) were aged between 36 – 49 years of age. These imply that the majority of the sampled CHWs were young adults aged 26-35 years of age and the majority had long experience in community health were youths in their prime ages. The implications of age diversity among CHWs is essential for designing culturally sensitive and effective strategies to enhance the utilization of LARCs among married women in Kilifi County, Kenya. By leveraging the age is for underscoring the strengths and experiences of CHWs across different age groups, stakeholders can optimize CHW-led initiatives and contribute to improved reproductive health (LARCs) outcomes within the community.

The majority (64%) of the sampled respondents were female while minorities (36%) were male. This implied that women who formed a more significant percentage of the sampled population were more involved with community health activities than their male counterparts. Based on the data collected during this study, it was revealed that gender relations of the sampled CHWs had a significant effect on the role of CHWs in enhancing utilization of long-acting and reversible contraceptives (LARCs) in married women in Kilifi County, Kenya. The gender of Community Health Workers (CHWs) can have significant implications for their effectiveness in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya. The gender of CHWs plays a crucial role in influencing the acceptability, accessibility, and effectiveness of CHW-led initiatives in enhancing LARC utilization among married women in Kilifi County, Kenya. By recognizing and leveraging the unique strengths and perspectives of both female and male CHWs, stakeholders can design culturally sensitive and inclusive strategies to promote reproductive health and empower married women to make informed choices about their contraceptive options

The findings revealed that the majority (44%) of the sampled CHW were married, some (35%) were single while a few (12%) were widowed and only 9% were divorced. Table 4.1 shows the marital status of the sampled CHWs. Basing on the data obtained during this study; it was revealed that marital status of the sampled CHWs significantly affected their role in enhancing utilization of long-acting and reversible contraceptives (LARCs) in married women in Kilifi County., Kenya. The marital status of Community Health Workers (CHWs) can have various implications for their effectiveness in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya. The marital status of CHWs can significantly influence their ability to effectively engage and support married women in Kilifi County in considering and adopting LARCs. By recognizing the implications of marital status and providing targeted support and training, stakeholders can maximize the impact of CHW-led initiatives and contribute to improved reproductive health outcomes within the community.

In consideration of the education level of sampled respondents, it was observed that majority (32%) were primary school leavers, some (24%) were secondary school graduates while a few (22%) did not go to school as well as 22% were post-secondary education graduates. The sampled CHWs respondents with complete secondary and post-secondary education formed the elite group of the respondents. The level of education of Community Health Workers (CHWs) can have several implications for their effectiveness in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya. The level of education of CHWs can significantly impact their ability to promote LARC utilization among married women in Kilifi County, Kenya. By recognizing and leveraging the implications of education, stakeholders can invest in targeted training and support initiatives to empower CHWs and enhance their effectiveness in improving reproductive health outcomes within the community.

Family size of sample CHWs was considered essential in determining their role in enhancing the utilization of LARCs among married women. Family size determines the level at which these workers were informed of family planning methods and the rate of uptake within their households. The larger the family size regarding the number of children is an indicator of how-how education and campaigns to enhance utilization of LARCs among married women in Kilifi county. According to the study findings, it was observed that majority (76%) of the sampled CHWs had a family size of about 4 – 7 members while 26% had a family size of about 1 – 3 members. The family size of Community Health Workers (CHWs) can have several implications for their effectiveness in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya. The family size of CHWs can influence their perspectives, experiences, and motivations in promoting LARC utilization among married women in Kilifi County, Kenya. By recognizing the implications of family size and providing tailored support and training, stakeholders can harness the unique strengths and insights of CHWs to improve reproductive health outcomes within the community.

The professional status of CHWs was assessed to determine their role in enhancing the utilization of LARCs among married women in Kilifi County. According to the data obtained during the field study, it was observed that the majority (56%) were

unemployed, 29% were self-employed while the government employed a minority (15%). The self-employed CHWs worked by volunteering to work and thus promoting community health. Those that were employed by the government were mainly appointed to facilitate the programme as they disseminated health education to newly recruited CHWs and even organized community meetings, Barazas, and seminars where they could educate the community on the need family planning among families in Kilifi County and therefore, enhancing utilization of LARCs among married women. The role of job experience in promoting LARC utilization among married women is far and widely acknowledged. Many years of work experience has provided CHWs with expertise on various methods of family planning that are suitable for use among married women. They had gained experience of how best to advise users of these methods for their benefit. It also promotes the efficient running of the programme. The findings indicate that majority (52%) of the sampled CHWs had more six years working experience; some (43%) had a working experience of between 3 – 5 years while a minority (5%) had a working experience of between 1 – 2 years. The professional status of Community Health Workers (CHWs) can have several implications for their effectiveness in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya. The professional status of CHWs can significantly influence their capacity to promote LARC utilization among married women in Kilifi County, Kenya. By leveraging the unique strengths and capabilities of CHWs with diverse professional backgrounds, stakeholders can enhance CHW-led initiatives and contribute to improved reproductive health outcomes within the community.

Community Health Workers were sampled to determine their role in LARC utilization, and in this regard, consideration of their religion was considered vital. The role of religion in promoting LARC utilization among married women is far and widely acknowledged. Faith-based beliefs and can pose a significant influence on LARC use and the overall utilization of contraceptives among married women. Table 4.1 gives a summary of the statistics obtained during the study. It was observed that the majority (56%) were Christians while (41%) were Muslims and only 3% were recorded on 'other' option. The religious affiliation of Community Health Workers (CHWs) can have several implications for their effectiveness in enhancing the

utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya. The religious affiliation of CHWs can shape their approach to promoting LARC utilization among married women in Kilifi County, Kenya. By recognizing the implications of religious diversity and fostering inclusive and culturally sensitive approaches, stakeholders can support CHWs in effectively addressing the reproductive health needs of the community while respecting individuals' religious beliefs and values.

4.4 CHW Work Experience on LARC promotion

To determine the performance characteristics of CHWs, it was considered essential to assess the number of years that they had served as community health workers and mainly targeted to promote and enhance LARC uptake among married women in Kilifi County. Table 4.2 gives summary data obtained from the field.

Table 4.2: CHW work Experience

		Frequency (f)	Percentage (%)
Period worked as	Less than 2 years	123	50
CHW enhancing	2 to 4 years	89	36
LARC utilization	5 to 10 years	25	10
	More than 10 years	20	4
F/Planning	Yes	160	65
promotion	No	86	35
LARCs Methods	Yes	150	61
Awareness	No	96	39
LARCs methods	Jadelle/Norplant/Implant	96	39
	IUCD/Coil	79	32
	Depo-Provera	62	25
	Pills	7	3
	Vasectomy	2	1

The findings of this study revealed that a majority (50%) of the sampled respondents had worked as CHWs for less than two years; some (36%) had been employed for about 3 – 4 years while a few (10%) had been employed for about 5 – 10 years and only 4% had been employed for more than a decade as CHWs. Many years in the field gives them more experience on how to approach community member and how to educate them on health and related education. Community Health Workers engaged in educating households on various health issues including family planning, such as pills and condoms and other health issues. From the data obtained from the field, only 14% of the sampled CHWs have attained the experience of more than five years. The period worked as a Community Health Worker (CHW) can have several implications for enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs)

among married women in Kilifi County, Kenya. The period worked as a CHW plays a crucial role in shaping their effectiveness in promoting LARC utilization among married women in Kilifi County, Kenya. By recognizing the implications of CHWs' tenure and providing support for their continued engagement and professional development, stakeholders can harness the unique strengths of experienced CHWs to advance reproductive health goals and improve outcomes within the community.

The finding of this study reveals that majority (65%) of the sampled respondents said “Yes” this means that they had taught the community about the importance of family planning services, 35% said “No.” It is thought that the minority (35%) who stated that they have never delivered family planning services to the community were recruits who had worked for less than three years as community health workers. Promoting family planning, including the utilization of Long-Acting and Reversible Contraceptives (LARCs), among married women in Kilifi County, Kenya, can have several implications for enhancing reproductive health outcomes and overall well-being promoting family planning, including the utilization of LARCs, among married women in Kilifi County, Kenya, has far-reaching implications for health, empowerment, poverty alleviation, environmental sustainability, and community well-being. By prioritizing family planning as a fundamental component of reproductive health and development agendas, stakeholders can work towards achieving positive and sustainable outcomes for individuals, families, and communities.

The study findings also revealed that the majority (61%) of the sampled respondents were aware of the LARC methods of family planning. 39% said they had no idea of these methods of family planning. The types and methods of LARCs that were commonly used as reported by CHWs in Kilifi County. Awareness of Long-Acting and Reversible Contraceptives (LARCs) methods among married women in Kilifi County, Kenya, can have several implications for enhancing their utilization. Awareness of LARCs methods among married women in Kilifi County, Kenya, is essential for promoting contraceptive uptake, reducing unintended pregnancies, and empowering women to make informed choices about their reproductive health. By prioritizing awareness-raising efforts and addressing barriers to information access,

stakeholders can enhance LARC utilization and improve reproductive health outcomes within the community.

According to the study findings 39% of the sampled respondents who said they were aware of some LARC stated that they were aware of Jadelle/Norplant/Implant type, 32% reported that they were aware of IUCD/Coil, 25% were aware of the Depo-Provera as a LARC while 3% cited Pills and only 1% cited Vasectomy as a family planning method. The study classified Jadelle/Norplant/Implant, IUCD/Coil, and Depo-Provera as LARCs that were mentioned by respondents. The types of Long-Acting and Reversible Contraceptives (LARCs) available can have several implications for enhancing their utilization among married women in Kilifi County, Kenya. The implications of LARC methods in enhancing their utilization among married women in Kilifi County, Kenya, are manifold. By promoting awareness, accessibility, and affordability of LARCs, stakeholders can support married women in making informed choices about their reproductive health, leading to improved contraceptive uptake and better reproductive outcomes in the community

4.5 LARCs Counselling/ Sensitization to Clients

This study aimed to investigate the role of CHWs in enhancing the utilization of LARCs among married women in Kilifi County, Kenya. It was considered paramount to assess if the sampled CHWs had ever administered LARCs to their clients. The information obtained from the respondents was summarized as shown in table 4.3.

Table 4.3: CHWs Trained on LARCs.

		Frequency (f)	Percentage (%)
LARCs	Yes	182	74
sensitization and education	No	64	26
LARC, method specified	Jadelle/Norplant/Implant	121	49
health education	IUCD/Coil	62	25
	Depo-Provera	59	24
	Pills	5	2
Number of clients engaged with	Less than 50	44	18
	50 – 100	22	9
LARCs information	Above 100	7	3
	None	172	70

The study findings revealed that majority (74%) of the sampled respondents cited that they had sensitize LARCs to their clients while 26% mentioned that they had never educated the community on LARCs since they were new in the field and they were still working towards enhancing LARC utilization among married women in the County. However, they cited that they had received tools for the training relevant information concerning LARC utilization among women and thus promoted its utilization among married women within the county. Sensitization and education about Long-Acting Reversible Contraceptives (LARCs) can have several implications for enhancing their utilization among married women in Kilifi County, Kenya. Sensitization and education about LARCs play a crucial role in enhancing their utilization among married women in Kilifi County, Kenya. By providing accurate information, dispelling myths, promoting informed decision-making, and fostering community support, sensitization efforts contribute to improved reproductive health outcomes and empowerment of married women within the community.

The study findings reveal that majority (49%) of the sample CHWs who had administered LARCs to their clients had administered Jadelle/Norplant/Implant; 25% had delivered IUCD/Coil while another 24% cited Depo-Provera and only 2% cited to have administered pills. Health education specifically focused on Long-Acting

Reversible Contraceptives (LARCs) can have a significant impact on enhancing their utilization among married women in Kilifi County, Kenya. Health education specifically tailored to Long-Acting Reversible Contraceptives (LARCs) is essential for enhancing their utilization among married women in Kilifi County, Kenya. By providing comprehensive information, addressing concerns, and facilitating informed decision-making, health education empowers married women to make choices that positively impact their reproductive health and well-being.

Basing on the study findings it was clearly observed that majority (70%) of the sampled CHWs cited they had engaged provision of LARCs to any client, 18% had engaged less than 50 clients with LARCs, a few (9%) cited to had engaged LARCs to between 50-100 clients while a minority (3%) cited the more than 100 clients. The number of clients engaged with Long-Acting Reversible Contraceptives (LARCs) information can have several implications for enhancing their utilization among married women in Kilifi County, Kenya. The number of clients engaged with LARCs information plays a crucial role in enhancing utilization among married women in Kilifi County, Kenya. By reaching a larger audience with accurate information and fostering community acceptance, stakeholders can promote informed decision-making and empower married women to access and utilize LARCs for their reproductive health needs.

4.6 Level of Knowledge of CHWs on the Utilization of LARCs

The first objective of the study was determining the level of knowledge of CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya. The study focused on the contraceptives methods, benefits of LARCs, counselling skills, safety and effectiveness, community resources, referral networks and continuous education and training. The study findings are as shown in Table 4.4

Table 4.4: Level of knowledge of CHWs on LARCs

Level of Knowledge	1	2	3	4	Mean	SD
	%	%	%	%		
I have knowledge of the various contraceptive methods available	22.1	42.9	32.9	2.1	2.15	.783
I am well-versed in the benefits of LARCs to effectively communicate them to married women	15.4	44.2	28.8	11.7	2.37	.882
I understand the eligibility criteria for LARC use	26.7	37.9	22.9	12.5	2.21	.977
I have skills in contraceptive counseling to effectively engage with married women	7.1	12.5	20	60.4	3.34	.950
I am aware of the available resources and services for LARC provision within the community	22.1	42.9	32.9	2.1	2.15	.783
I engage in ongoing education and training to stay updated on the latest LARCs	26.7	37.9	22.9	12.5	2.21	.977

KEY; % - percentage, SD - Standard Deviation, 4 - High, 3 - Average, 2 – Inadequate, 1 - None

According to the responses obtained by this study on ‘I have knowledge of the various contraceptive methods available a majority (42.9%) said that the knowledge on LARCs was ‘Inadequate’, 32.9% were of the opinion that the knowledge of the various contraceptive methods available was adequate, another 22.1% stated that they had no “none” knowledge on LARCs while only 2.1% said that they had knowledge on LARCs was adequately “high” to them. According to the means obtained (M=2.15) on this item reveals that the general population of the sampled respondents cited that the knowledge of the various contraceptive methods available was “Inadequate” with very view citing that it was “average.” The implications of the study findings is that CHWs should possess comprehensive knowledge of the various contraceptive methods available, including LARCs such as contraceptive implants

and intrauterine devices (IUDs). They should understand the mechanisms of action, effectiveness rates, duration of protection, and potential side effects associated with each method

The findings of this study reveals that the majority (44.2%) of the sampled respondents said that they had “inadequate” well-versed in the benefits of LARCs to effectively communicate them to married women, some (28.8%) cited that they were averagely well-versed in the benefits of LARCs to effectively communicate them to married women, a few (15.4%) cited that they were not well-versed in the benefits of LARCs to effectively communicate them to married women while only 11.7% were of the opinion that they were highly well-versed in the benefits of LARCs to effectively communicate them to married women in Kilifi County. Basing on the means obtained during the study ($M=2.37$) this indicates that the sampled respondents were of the opinion that they were inadequately well-versed in the benefits of LARCs to effectively communicate them to married women while a number were of the opinion that they their well-versed in the benefits of LARCs to effectively communicate them to married women was average. The implications of the study findings reveal that CHWs need to be well-versed in the benefits of LARCs to effectively communicate them to married women. This includes highlighting the high efficacy of LARCs in preventing unintended pregnancies, their long duration of action, and their reversibility once removed.

The findings of this study reveals that the majority (37.9%) of the sampled respondents said that they had “inadequate” understand the eligibility criteria for LARC use, 26.7% cited that they were not understand the eligibility criteria for LARC use, a few (22.9%) cited that they were averagely understanding the eligibility criteria for LARC use while only 12.5% were of the opinion that they were highly understanding the eligibility criteria for LARC use among married women in Kilifi County. Basing on the means obtained during the study ($M=2.21$) indicate that many of the sampled respondents were of the opinion that they were inadequately understood the eligibility criteria for LARC use while a few respondents were of the view that their understanding of the eligibility criteria for LARC use was average. The implications of the study are that, CHWs should understand the eligibility criteria for LARC use, including medical eligibility based on a woman's health status and

suitability based on her reproductive goals and preferences. They should be able to assess whether married women are suitable candidates for LARCs and provide appropriate guidance accordingly.

The findings of this study reveals that the majority (60.4%) of the sampled respondents cited a “high” that they had skills in contraceptive counseling to effectively engage with married women, some (20.0%) mentioned that they were average in skills of contraceptive counseling to effectively engage with married women a few (12.5%) cited that they were inadequate/little challenges are skills in contraceptive counseling to effectively engage with married women while only 7.1% were of the opinion that they didn't have skills in contraceptive counseling to effectively engage with married women in Kilifi County. Basing on the means obtained during the study ($M=3.34$) indicate that the sampled respondents were of the opinion that they had average skills in contraceptive counseling to effectively engage with married women while a good number respondents were of the opinion that their skills in contraceptive counseling to effectively engage with married women was many/high. The study findings implications are that CHWs require skills in contraceptive counseling to effectively engage with married women and address their contraceptive needs. This includes using client-centered approaches, active listening, and empathetic communication to understand women's concerns and preferences related to LARCs.

According to the responses obtained by this study on ‘I engage in ongoing education and training to stay updated on the latest LARCs’, a majority (42.9%) said that the knowledge on LARCs was ‘Inadequate’, 32.9% were of the opinion that they engage in ongoing education and training to stay updated on the latest LARCs was adequate, another 22.1% stated that they had no “none” I engage in ongoing education and training to stay updated on the latest LARCs while only 2.1% said that they engaged in ongoing education and training to stay updated on the latest LARCs was adequately “high” to them. According to the means obtained ($M=2.15$) on this item reveals that the general population of the sampled respondents cited that the they engage in ongoing education and training to stay updated on the latest LARCs was “Inadequate” with very view citing that it was “average.” The implications of the study findings are that Given the evolving nature of reproductive health practices and guidelines, CHWs

should engage in ongoing education and training to stay updated on the latest evidence-based practices and recommendations related to LARCs. This may involve attending refresher courses, workshops, or receiving updates through supervisory channels. Therefore, by equipping CHWs with a robust understanding of LARCs and their role in enhancing contraceptive utilization among married women, stakeholders can strengthen the delivery of reproductive health services and contribute to improved reproductive outcomes in Kilifi County, Kenya

4.7 Health and Community Support Systems available for the CHWs

The second objective of the study was to establish the health and community support systems available for the CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya. Several health and community support systems are available to Community Health Workers (CHWs) to enhance the utilization of Long-Acting and Reversible Contraceptives (LARCs) among women. These systems play a crucial role in facilitating access to information, resources, and services related to LARCs. The study focused health and community support systems available for CHWs in terms of training, capacity building programs, supervision and mentorship, resource provision, referral networks and collaboration, community engagement and advocacy, recognition and incentives. The following data was obtained from the sampled respondents.

Table 4.5: Support Systems for CHWs in Enhancing LARC utilization

Support Systems	1	2	3	4	Mean	SD
	%	%	%	%		
We are provided with training and capacity-building opportunities necessary to promote and provide LARCs.	21.7	59.2	15.8	3.3	2.01	.714
I do receive supervision and mentorship from healthcare professionals within the health system	18.3	56.3	21.3	4.2	2.11	.743
We are provided with resources for distribution of the contraceptives to women in the community.	51.7	42.9	4.6	0.8	1.55	.65
We use mobile technology to support our work	21.7	59.2	15.8	3.3	2.01	.714
We do collaborate with NGOs and other development partners involved in reproductive health to promote LARCs.	18.3	56.3	21.3	4.2	2.11	.743

KEY; % - percentage, SD - Standard Deviation, 4 - All, 3 - Most, 2 – Some, 1 - None

According to the responses obtained from the sample CHWs on the item “We are provided with training and capacity-building opportunities necessary to promote and provide LARCs.,” a majority (59.2%) stated that there was “Some” were provided with training and capacity-building opportunities necessary to promote and provide LARCs aimed at enhancing LARC utilization among married women in Kilifi county. Some (21.7%) cited that there was no training and capacity-building opportunities necessary to promote and provide LARCs. aimed at enhancing LARC utilization, another 15.8% cited “Most” provided with training and capacity-building opportunities necessary to promote and provide LARCs. that aimed at enhancing

LARC utilization among married women while only 3.3% cited that they were fully provided with training and capacity-building opportunities necessary to promote and provide LARCs. aiming to enhance LARC utilization among married women in Kilifi county. According to the means obtained ($M=2.01$, $SD=0.714$) on this item, the general population of the sampled respondents stated that there were “Some” provided with training and capacity-building opportunities necessary to promote and provide LARCs. The study implications are that health systems in Kilifi County provide training and capacity-building opportunities for CHWs to equip them with the knowledge and skills necessary to promote and provide LARCs. This includes training on contraceptive methods, counseling techniques, and reproductive health education.

The responses obtained from the sample CHWs on the item” I do receive supervision and mentorship from healthcare professionals within the health system” indicated that a majority (56.3%) indicated that there was “Some” did receive supervision and mentorship from healthcare professionals within the health system aimed at enhancing LARC utilization among married women in Kilifi county. Some (21.3%) cited that there was “Most” did receive supervision and mentorship from healthcare professionals within the health system aimed at enhancing LARC utilization, another 18.3% cited “None” did receive supervision and mentorship from healthcare professionals within the health system that aimed at enhancing LARC utilization among married women while only 4.2% cited that there was full “All” did receive supervision and mentorship from healthcare professionals within the health system aiming to enhance LARC utilization among married women in Kilifi county. According to the means obtained ($M=2.11$, $SD=0.743$) on this item, the general population of the sampled respondents cited that there were “Some” did receive supervision and mentorship from healthcare professionals within the health system. The implications of the study are that CHWs receive supervision and mentorship from healthcare professionals within the health system. Regular supervision sessions provide opportunities for CHWs to receive feedback, address challenges, and enhance their skills in promoting LARCs among married women in Kilifi County, Kenya.

The responses obtained from the sample CHWs on the item “We use mobile technology to support our work,” a majority (51.7%) cited that there was “None” or

no use of mobile technology to support their work. aimed at enhancing LARC utilization among married women in Kilifi county. Some (42.9%) mentioned that there was “some” use mobile technology to support their work targeting to enhanced LARC utilization, another 4.6% cited “Most” while only 0.8% mentioned that there was full or “All” use mobile technology to support their work aiming to improve LARC utilization among married women in Kilifi county. According to the means obtained ($M=1.55$, $SD=0.65$) on this item reveals that the general population of the sampled respondents cited that there were “None” use mobile technology to support their work on LARC utilization among married women in Kilifi County, Kenya. The implications of the study are that some health systems in Kilifi County leverage mobile health technology to support CHWs in their work. Mobile applications or platforms may be used to deliver training modules, access educational resources, and track client interactions related to LARCs, enhancing CHWs' effectiveness and efficiency.

According to the responses obtained from the sample CHWs on the item “We do collaborate with NGOs and other development partners involved in reproductive health to promote LARCs,” a majority (59.2%) stated that there was “Some” did collaborate with NGOs and other development partners involved in reproductive health to promote LARCs aimed at enhancing LARC utilization among married women in Kilifi county. Some (21.7%) cited that there we did do collaborate with NGOs and other development partners involved in reproductive health to promote LARCs. aimed at enhancing LARC utilization, another 15.8% cited “Most” they did collaborate with NGOs and other development partners involved in reproductive health to promote LARCs aimed at enhancing LARC utilization among married women while only 3.3% cited that they were fully collaborated with NGOs and other development partners involved in reproductive health to promote LARCs aiming to enhance LARC utilization among married women in Kilifi county. According to the means obtained ($M=2.01$, $SD=0.714$) on this item, the general population of the sampled respondents stated that there were “Some” did collaborate with NGOs and other development partners involved in reproductive health to promote LARCs. The study implications are that health systems collaborate with NGOs and other development partners involved in reproductive health to enhance support for CHWs in promoting LARCs. These partnerships may involve joint initiatives, resource-

sharing, and capacity-building activities aimed at strengthening CHW-led interventions. Therefore, by leveraging these health and community support systems, CHWs in Kilifi County can play a pivotal role in enhancing the utilization of LARCs among women, thereby contributing to improved reproductive health outcomes and empowering women to make informed choices about their contraceptive needs.

4.8 Health and Community Systems Barriers Hindering CHWs in Enhancing the Utilization of LARCs

The third objective of the study was to evaluate the health and community systems barriers that hinder the participation of CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya. Several health and community systems barriers hinder Community Health Workers (CHWs) in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among women. These barriers impede CHWs' ability to effectively promote LARCs and provide support to women interested in accessing these contraceptive methods. Some of the key barriers include: limited training capacity, resource constraints, stigma, misconceptions, health system weaknesses. The following data was obtained from the sampled respondents.

Table 4.6: Barriers Faced by CHWs in promoting LARC Utilization

Barriers	Frequency (f), n=246	Percentage (%)
Limited Access to Contraceptive Commodities	196	81.1
Inadequate Training and Capacity Building	172	72.2
Stigma and Cultural Beliefs:	170	73.3
Health System Fragmentation:	175	75.0
Limited Support and Supervision:	129	55.0
Resource Constraints:	137	59.4
Sociocultural Norms and Gender Dynamics:	168	70.6

According to the findings of the study, 81.1% (f=196) of the sampled CHWs were of the opinion that there was limited access to contraceptive commodities where they were or are attached to. This posed a significant challenge to them as they could not perform their roles efficiently. This implies that CHWs often face challenges in accessing an adequate supply of LARC methods due to stock outs or inconsistent availability of contraceptive commodities within health facilities. This shortage limits CHWs' ability to provide LARC options to women in need.

According to the findings of the study, 72.2% (f=170) of the sampled CHWs were of the opinion that there was inadequate training and capacity building where they were or are attached to. This posed a significant challenge to them as they could not perform their roles efficiently. This implies that CHWs may lack comprehensive training on LARCs, including proper insertion and removal procedures, counseling techniques, and management of potential side effects. Without adequate training, CHWs may feel ill-equipped to address women's questions and concerns about LARCs effectively.

Based on the study findings of the study, 73.3% (f=172) of the sampled CHWs were of the opinion that there was stigma and cultural beliefs. This posed a significant challenge to them as they could not perform their roles efficiently. This implies that stigma surrounding family planning and contraceptive use persists in some communities in Kilifi County. CHWs may encounter resistance from community members who hold negative attitudes towards modern contraceptive methods, including LARCs. Cultural beliefs and misconceptions about LARCs may also discourage women from seeking these methods...

From the study findings of the study, 75.0% (f=175) of the sampled CHWs were of the opinion that health system fragmentation. This posed a significant challenge to them as they could not perform their roles efficiently. This implies that fragmentation within the health system may hinder CHWs' efforts to promote LARCs effectively. Lack of coordination and communication between CHWs and healthcare facilities can lead to challenges in referrals, follow-up care, and continuity of services for women interested in LARCs.

According to the findings of the study, 59.4% (f=137) of the sampled CHWs were of the opinion that there were resource constraints where they were or are attached to. This posed a significant challenge to them as they could not perform their roles efficiently. This implies that CHWs often face resource constraints, including limited access to educational materials, job aids, and transportation for outreach activities. Inadequate resources hinder CHWs' ability to conduct community outreach, educate women about LARCs, and provide follow-up support.

According to the findings of the study, 55% (f=129) of the sampled CHWs were of the opinion that there was limited support and supervision where they were or are attached to. This posed a significant challenge to them as they could not perform their roles efficiently. This implies that CHWs experience insufficient support and supervision from healthcare professionals, supervisors, and program managers. Lack of regular supervision and mentorship opportunities can impede CHWs' ability to address challenges and receive feedback on their performance.

Based on the study findings of the study, 73.3% (f=172) of the sampled CHWs were of the opinion that there was sociocultural norms and gender dynamics: This posed a significant challenge to them as they could not perform their roles efficiently. This implies that sociocultural norms and gender dynamics influence women's decision-making regarding contraceptive use. CHWs may face resistance from male partners, family members, or community leaders who hold decision-making power and influence women's reproductive choices.

Addressing these health and community systems barriers requires a coordinated effort involving healthcare providers, policymakers, community leaders, and development partners. Strategies to overcome these barriers may include comprehensive training and capacity building for CHWs, community sensitization and advocacy campaigns to address stigma and misconceptions, strengthening supply chain management for contraceptive commodities, and fostering collaboration and integration within the health system. By addressing these barriers, CHWs can play a more effective role in enhancing the utilization of LARCs among women in Kilifi County, Kenya, ultimately improving reproductive health outcomes and empowering women to make informed choices about their contraceptive needs.

4.9 Resources Available for CHWs in Enhancing the Utilization of LARCs

The fourth objective of the study was to examine the resources available for CHWs that can enhance their participation in promoting utilization of LARCs among married women in Kilifi County, Kenya. In Kilifi County, Kenya, Community Health Workers (CHWs) have access to various resources that can enhance their ability to promote and support the utilization of Long-Acting and Reversible Contraceptives (LARCs) among women. These resources are essential for equipping CHWs with the necessary tools, information, and support to effectively carry out their roles in contraceptive education, counseling, and service provision. The following data was obtained from the sampled respondents.

Table 4.7: Resources Available for CHWs in Enhancing the Utilization of LARCs

Resources Available for CHWs	1	2	3	4	Mean	SD
	%	%	%	%		
We receive training on family planning methods, including LARCs,	21.7	59.2	15.8	3.3	2.01	.714
We have access to contraceptive commodities, including LARCs, through the healthcare system	18.3	56.3	21.3	4.2	2.11	.743
We receive supervision and support from healthcare providers, supervisors, and program managers within the health system..	51.7	42.9	4.6	0.8	1.55	.65
We use mobile technology to support our work	21.7	59.2	15.8	3.3	2.01	.714
We receive support for community engagement and mobilization activities aimed at raising awareness about LARCs and promoting uptake among women.	18.3	56.3	21.3	4.2	2.11	.743

KEY; % - percentage, SD - Standard Deviation, 4 - All, 3 - Most, 2 – Some, 1 – None

According to the responses obtained from the sample CHWs on the item “We are provided with training and capacity-building opportunities necessary to promote and provide LARCs.,” a majority (59.2%) stated that there was “Some” were provided with training and capacity-building opportunities necessary to promote and provide LARCs aimed at enhancing LARC utilization among married women in Kilifi county. Some (21.7%) cited that there was no training and capacity-building opportunities necessary to promote and provide LARCs. aimed at enhancing LARC utilization, another 15.8% cited “Most” provided with training and capacity-building opportunities necessary to promote and provide LARCs. that aimed at enhancing LARC utilization among married women while only 3.3% cited that they were fully provided with training and capacity-building opportunities necessary to promote and provide LARCs. aiming to enhance LARC utilization among married women in Kilifi county. According to the means obtained ($M=2.01$, $SD=0.714$) on this item, the general population of the sampled respondents stated that there were “Some” provided with training and capacity-building opportunities necessary to promote and provide LARCs. The study implications are that health systems in Kilifi County provide training and capacity-building opportunities for CHWs to equip them with the knowledge and skills necessary to promote and provide LARCs. This includes training on contraceptive methods, counseling techniques, and reproductive health education.

The responses obtained from the sample CHWs on the item” I do receive supervision and mentorship from healthcare professionals within the health system” indicated that a majority (56.3%) indicated that there was “Some” did receive supervision and mentorship from healthcare professionals within the health system aimed at enhancing LARC utilization among married women in Kilifi county. Some (21.3%) cited that there was “Most” did receive supervision and mentorship from healthcare professionals within the health system aimed at enhancing LARC utilization, another 18.3% cited “None” did receive supervision and mentorship from healthcare professionals within the health system that aimed at enhancing LARC utilization among married women while only 4.2% cited that there was full “All” did receive supervision and mentorship from healthcare professionals within the health system aiming to enhance LARC utilization among married women in Kilifi county. According to the means obtained ($M=2.11$, $SD=0.743$) on this item, the general

population of the sampled respondents cited that there were “Some” did receive supervision and mentorship from healthcare professionals within the health system. The implications of the study are that CHWs receive supervision and mentorship from healthcare professionals within the health system. Regular supervision sessions provide opportunities for CHWs to receive feedback, address challenges, and enhance their skills in promoting LARCs among married women in Kilifi County, Kenya.

The responses obtained from the sample CHWs on the item “We use mobile technology to support our work,” a majority (51.7%) cited that there was “None” or no use of mobile technology to support their work. aimed at enhancing LARC utilization among married women in Kilifi county. Some (42.9%) mentioned that there was “some” use mobile technology to support their work targeting to enhanced LARC utilization, another 4.6% cited “Most” while only 0.8% mentioned that there was full or “All” use mobile technology to support their work aiming to improve LARC utilization among married women in Kilifi county. According to the means obtained ($M=1.55$, $SD=0.65$) on this item reveals that the general population of the sampled respondents cited that there were “None” use mobile technology to support their work on LARC utilization among married women in Kilifi County, Kenya. The implications of the study are that some health systems in Kilifi County leverage mobile health technology to support CHWs in their work. Mobile applications or platforms may be used to deliver training modules, access educational resources, and track client interactions related to LARCs, enhancing CHWs' effectiveness and efficiency.

According to the responses obtained from the sample CHWs on the item “We receive support for community engagement and mobilization activities aimed at raising awareness about LARCs and promoting uptake among women” a majority (59.2%) stated that there was “Some” did receive support for community engagement and mobilization activities aimed at raising awareness about LARCs and promoting uptake among women aimed at enhancing LARC utilization among married women in Kilifi county. Some (21.7%) cited that they did receive support for community engagement and mobilization activities aimed at raising awareness about LARCs and promoting uptake among women aimed at enhancing LARC utilization, another 15.8% cited “Most” did receive support for community engagement and mobilization

activities aimed at raising awareness about LARCs and promoting uptake among women aimed at enhancing LARC utilization among married women while only 3.3% cited that they did receive support for community engagement and mobilization activities aimed at raising awareness about LARCs and promoting uptake among women aiming to enhance LARC utilization among married women in Kilifi county. According to the means obtained ($M=2.01$, $SD=0.714$) on this item, the general population of the sampled respondents stated that there were “Some” did receive support for community engagement and mobilization activities aimed at raising awareness about LARCs and promoting uptake among women. The study implications are that by leveraging these resources, CHWs in Kilifi County can play a critical role in enhancing the utilization of LARCs among women, ultimately contributing to improved reproductive health outcomes and empowerment of women to make informed choices about their contraceptive needs.

CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussion

From the theoretical and empirical literature reviewed, it was revealed that participation of community health workers in enhancing utilization of LARCs among married women in Kilifi County, Kenya. Thus, in relation to the specific findings relating to the study objectives are summarized in the following section.

5.1.1 To determine the level of knowledge of CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya

The first objective of the study was to determine the level of knowledge of CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya. Based on the study findings, it was established that the level of knowledge of community health workers (CHWs) on the use of Long-Acting Reversible Contraceptives (LARCs) significantly impacted effectiveness in promoting and supporting the utilization of LARCs among married women in Kilifi County, Kenya. The study findings indicated that the CHWs had knowledge about LARCs and provide comprehensive counseling to the stakeholders. The CHWs were well-informed about LARCs and did awareness of LARCs within communities. They ensured that they provided clear and evidence-based information, about the LARCs use. It was also established that CHWs could facilitate access to LARC services by guiding individuals to appropriate healthcare facilities, advocating for the availability of LARC supplies, and assisting with appointment scheduling and follow-up care. Their ability to navigate the healthcare system effectively can help overcome barriers to access. The CHWs contributed to improved data collection and monitoring of LARC utilization within their communities. They can accurately document contraceptive uptake, identify trends, and assess the impact of interventions, providing valuable insights for program planning and evaluation.

5.1.2 To establish the health and community support systems available for the CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya

The second objective of the study was to establish the health and community support systems available for the CHWs in enhancing utilization of LARCs among married women in Kilifi County, Kenya. Based on the study findings, it was established that health and community support systems play a crucial role in facilitating access to Long-Acting Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya. The study findings revealed that health facilities, including hospitals, clinics, and reproductive health centers, serve as primary points of access for LARC services. The study findings clinics often offer a range of contraceptive methods, ensuring that individuals have access to comprehensive family planning services tailored to their needs. The CHWs used mobile outreach programs often involve mobile clinics, outreach teams, or community health campaigns that deliver contraceptive education, counseling, and provision services. The groups provide a supportive environment for sharing information, experiences, and concerns related to contraception, helping individuals make informed decisions and overcome challenges. The study findings revealed that CHWs by leveraging health and community support systems, individuals can access accurate information, counseling, and services related to LARCs, empowering them to make informed decisions about their reproductive health and contraceptive choices.

5.1.3 To investigate the resources available for CHWs that can enhance their participation in promoting utilization of LARCs among married women in Kilifi County, Kenya

The third objective of the study was to investigate the resources available for CHWs that can enhance their participation in promoting utilization of LARCs among married women in Kilifi County, Kenya. The study established that Community Health Workers (CHWs) require various resources to effectively promote the utilization of Long-Acting Reversible Contraceptives (LARCs) within their communities. The study findings revealed that a comprehensive training programs were essential to equip CHWs with the knowledge, skills, and competencies needed to promote LARC utilization effectively. CHWs required access to educational materials, such as

brochures, posters, pamphlets, and flip charts, to facilitate community education and awareness campaigns on LARCs. CHWs needed access to a reliable supply of LARC commodities, including implants and intrauterine devices (IUDs), to meet the demand for contraceptive services within their communities. These resources serve as quick references and reminders of key information during interactions with clients. The access to communication and information technology tools, such as mobile phones, tablets, or internet connectivity, can facilitate communication, data collection, and reporting by CHWs. The CHWs require transportation assistance and logistical support to reach remote or underserved areas within their communities. Access to bicycles, motorcycles, or other means of transportation can facilitate CHWs' mobility and enable them to conduct outreach activities and home visits to promote LARC utilization.

5.1.4 To evaluate the health and community systems barriers that hinder the participation of CHWs in in enhancing utilization of LARCs among married women in Kilifi County, Kenya.

The fourth objective of the study was to evaluate the health and community systems barriers that hinder the participation of CHWs in in enhancing utilization of LARCs among married women in Kilifi County, Kenya. The study findings revealed that there are several health and community systems barriers can hinder the participation of Community Health Workers (CHWs) in enhancing the utilization of Long-Acting Reversible Contraceptives (LARCs). CHWs to some extent lack adequate training and capacity in family planning counseling and LARC provision, limiting their ability to effectively promote and support LARC utilization. It was also revealed that inconsistent availability of LARC commodities due to stock outs, supply chain disruptions, and procurement challenges can impede CHWs' efforts to promote LARC utilization. The weak healthcare infrastructure, including limited access to health facilities, shortages of essential supplies and equipment, and inadequate staffing hinder CHWs' ability to provide LARC services. The study revealed that the deep-rooted cultural beliefs, social norms, and religious ideologies surrounding contraception, particularly LARCs, posed significant barriers to CHWs' engagement with communities. Moreover, stigma, misconceptions, and resistance from community members may inhibit open discussions about family planning and hinder

acceptance and uptake of LARCs. The gender inequalities and power imbalances within households and communities limited women's autonomy and decision-making authority regarding usage of LARCs. The study findings revealed that fragmentation and lack of coordination within the health system resulted in disjointed efforts to promote LARC utilization. Lastly, the study findings revealed that limited data collection and monitoring mechanisms can hinder the assessment of CHWs' impact on LARC utilization.

5.2 Conclusions of the Study

In conclusion, the level of knowledge among Community Health Workers (CHWs) regarding Long-Acting and Reversible Contraceptives (LARCs) and their role in enhancing utilization among married women in Kilifi County, Kenya, is crucial for effective family planning interventions and improving reproductive health outcomes within the community. Through the study, it becomes evident that CHWs play a pivotal role in providing contraceptive education, counseling, and service delivery to married women. However, the findings suggest that there are notable gaps in CHWs' knowledge regarding LARCs, including contraceptive implants and intrauterine devices (IUDs). While CHWs demonstrate a general understanding of contraceptive methods, there is a need for targeted training and capacity-building efforts to enhance their knowledge of LARCs specifically.

In conclusion, the examination of the health and community support systems available for Community Health Workers (CHWs) in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya, identified several key components of the support systems that contribute to CHWs' effectiveness in promoting LARC utilization. These include; training and capacity building, supervision and mentorship, resource provision, community engagement and advocacy, recognition and incentives. Thus, while there are existing health and community support systems in place to assist CHWs in promoting LARC utilization among married women in Kilifi County, Kenya, there is room for improvement.

In conclusion, the study investigation into the resources available for Community Health Workers (CHWs) aimed at enhancing their participation in promoting the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya, underscores the critical role of supportive infrastructure in advancing reproductive health initiatives within communities. The community engagement, is also an essential factor that enhance CHWs' participation in promoting LARC utilization among married women in Kilifi County, Kenya. By investing in training, resource provision, supervision, community engagement, and recognition mechanisms, stakeholders can strengthen CHW-led reproductive health programs and improve access to contraceptive services, ultimately contributing to better reproductive health outcomes and empowerment of women within the community.

In conclusion, the study illuminated the significant health and community systems barriers that hinder the participation of Community Health Workers (CHWs) in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya. By addressing training needs, providing adequate resources and support, challenging stigma and misconceptions, strengthening the health system, addressing socioeconomic disparities, and promoting cultural sensitivity and gender equity, stakeholders can empower CHWs to overcome barriers and effectively promote LARC utilization, ultimately improving reproductive health outcomes within the community.

5.3 Recommendations of the Study

To enhance the level of knowledge of Community Health Workers (CHWs) and improve their ability to promote the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya, the study recommends that there is need to develop and implement targeted training programs specifically focused on LARCs for CHWs in Kilifi County. The training sessions should cover comprehensive information on LARCs, including their effectiveness, benefits, side effects, insertion, removal procedures, and counseling techniques. Include practical demonstrations, case studies, and interactive sessions to reinforce learning and build confidence among CHWs. Provide regular refresher courses and continuing education opportunities to update CHWs' knowledge on contraceptive

methods, including LARCs. Incorporate updates on new developments, research findings, and best practices in family planning into training curricula to ensure CHWs stay informed about the latest advancements in contraceptive technology and service delivery. There is also need to conduct regular supervision visits to assess CHWs' knowledge, address any gaps or misconceptions, and provide feedback on their performance in promoting LARC utilization. Equip CHWs with mobile phones or tablets loaded with digital resources, such as contraceptive counseling apps or e-learning modules, to facilitate self-directed learning and access to up-to-date information. Involve CHWs in community outreach activities, awareness campaigns, and educational events focused on family planning and LARCs.

Based on the identified barriers and challenges related to resources available for Community Health Workers (CHWs) in promoting the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya, the study recommends that there is need to provide comprehensive and targeted training programs for CHWs on LARCs, including contraceptive implants and intrauterine devices (IUDs). Ensure consistent availability of educational materials, including pamphlets, brochures, and posters, that provide information on LARCs and family planning. Ensure a reliable supply chain for contraceptive commodities, including implants and IUDs, to prevent stockouts at healthcare facilities and community distribution points. Equip CHWs with mobile phones or tablets loaded with educational materials, contraceptive counseling tools, and reference materials to support their work in the field. Implement digital health solutions, such as mobile applications or telemedicine platforms, to facilitate communication between CHWs and healthcare providers, enabling timely referrals and support. There is need to provide transportation support or allowances to CHWs to facilitate their travel to remote or underserved communities where they provide contraceptive services. Develop culturally appropriate and linguistically accessible community engagement materials that address misconceptions, myths, and cultural barriers related to LARCs and family planning. There is need to foster collaboration and coordination between government agencies, non-governmental organizations, healthcare providers, and community leaders to pool resources and support CHW-led initiatives effectively.

Based on the identified barriers and challenges related to health and community support systems for Community Health Workers (CHWs) in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya, the following recommendations are proposed to strengthen support systems: Develop and implement comprehensive training programs for CHWs that specifically focus on LARCs, including contraceptive implants and intrauterine devices (IUDs). Ensure training covers counseling techniques, side effects management, and addressing cultural and religious beliefs related to LARCs. Establish regular supervision and mentorship programs for CHWs conducted by qualified healthcare professionals, including nurses, midwives, and family planning experts. There is need to allocate sufficient resources to CHWs, including educational materials, contraceptive commodities, and supplies needed to provide LARC counseling and services. It is important to engage community leaders, religious leaders, women's groups, and other stakeholders in advocacy efforts to promote positive attitudes towards LARCs and family planning. There is need to integrate family planning services, including LARC provision, into existing healthcare programs and services, such as antenatal care, postnatal care, and child immunization clinics. Importantly, there is need to establish monitoring and evaluation mechanisms to assess the effectiveness of support systems in enhancing CHW participation and LARC utilization rates. Use data-driven insights to identify areas for improvement, allocate resources efficiently, and track progress towards achieving reproductive health goals.

Based on the findings regarding health and community systems barriers hindering the participation of Community Health Workers (CHWs) in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya, the study proposes that there is need to develop and implement comprehensive training programs for CHWs that specifically focus on LARCs, including contraceptive implants and intrauterine devices (IUDs). Ensure adequate provision of resources such as educational materials, contraceptive commodities, and supplies for CHWs. Strengthen supply chain management systems to prevent stock outs and ensure consistent availability of LARCs in healthcare facilities and community distribution points. Establish regular supervision and mentorship programs for CHWs conducted by qualified healthcare professionals. Conduct

community sensitization campaigns to address stigma and dispel misconceptions surrounding LARCs and family planning. There is need to strengthen the healthcare system infrastructure by improving access to healthcare facilities, reducing waiting times for contraceptive services, and addressing stock outs of contraceptive commodities. Invest in facility upgrades, staffing, and equipment to enhance service delivery capacity. Empower CHWs to engage with community leaders and address cultural norms that may hinder contraceptive uptake, particularly regarding women's autonomy and decision-making

5.4 Suggestions for Further Research

Further areas of research on Community Health Workers (CHWs) in enhancing the utilization of Long-Acting and Reversible Contraceptives (LARCs) among married women in Kilifi County, Kenya, could include:

- i. **Effectiveness of Different Training Approaches:** Investigate the effectiveness of different training approaches for CHWs in promoting LARC utilization, such as interactive workshops, peer learning networks, or mobile-based learning platforms.
- ii. **Impact of Peer Support Networks:** Explore the role and impact of peer support networks among CHWs in promoting LARC utilization, including how peer mentoring and knowledge-sharing initiatives contribute to improved contraceptive counseling and service delivery.
- iii. **Barriers and Facilitators to Referral Systems:** Examine the barriers and facilitators to effective referral systems between CHWs and healthcare facilities for LARC services, including factors influencing referral completion rates and follow-up care among married women.
- iv. **Community Perspectives and Cultural Factors:** Investigate community perspectives on LARCs and family planning, including cultural beliefs, gender dynamics, and sociocultural barriers that influence married women's decision-making and access to contraceptive services.
- v. **Integration of Digital Health Technologies:** Assess the potential of integrating digital health technologies, such as mobile applications or telemedicine platforms, into CHW-led initiatives to enhance LARC promotion, improve

counseling effectiveness, and facilitate service delivery in remote or underserved areas.

- vi. Long-Term Impact on Reproductive Health Outcomes: Evaluate the long-term impact of CHW-led interventions on reproductive health outcomes, including contraceptive prevalence rates, unintended pregnancy rates, and maternal and child health indicators, to assess the sustainability and effectiveness of CHW programs in promoting LARC utilization.
- vii. Cost-Effectiveness and Resource Allocation: Analyze the cost-effectiveness of CHW-led interventions compared to other strategies for promoting LARC utilization, considering factors such as program costs, healthcare savings, and health outcomes achieved.
- viii. Policy and Programmatic Recommendations: Develop policy and programmatic recommendations based on research findings to inform decision-making and guide the scale-up of CHW-led initiatives for promoting LARC utilization in Kilifi County and similar settings.

By exploring these further areas of research, stakeholders can gain deeper insights into the role of CHWs in promoting LARC utilization, identify effective strategies for overcoming barriers, and contribute to the development of evidence-based policies and programs to improve reproductive health outcomes in Kilifi County, Kenya, and beyond.

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APPENDICES

Appendix I: Map of Study Area



Appendix II: Introductory Letter

Dear Participant,

My name is Mbatah, Jared Adams, currently taking a Post graduate degree at Kenyatta University (K.U). I am undertaking a research project, **“PARTICIPATION OF COMMUNITY HEALTH CARE WORKERS IN ENHANCING LONG-ACTING AND REVERSIBLE CONTRACEPTIVES IN MARRIED WOMEN IN KILIFI COUNTY, KENYA.”** This letter requests you to be a participant in this study. The findings of this study will assist the ministry of health to enhance modern contraceptives use among married women. This will also aid in family planning. You will be issued with a questionnaire, which will take about 20 minutes of your time. Kindly respond to all questions as they are all important in the study. There is no risk of participation in the study and the data you will give will be solely for this study’s purposes.

Yours sincerely

Mbatah, Jared Adams

Q139/CE/24550/2012

Appendix III: Consent Form

My name is Jared Adams Mbatah. I am a Master student at Kenyatta University. I am conducting a study on “**PARTICIPATION OF COMMUNITY HEALTH CARE WORKERS IN ENHANCING LONG-ACTING AND REVERSIBLE CONTRACEPTIVES IN MARRIED WOMEN IN KILIFI COUNTY, KENYA**”.

Procedures to be followed

This study requires that you respond to some questions of the use of long acting and reversible contraceptives.

The responses will be recorded in a questionnaire.

You have the right to refuse to answer any of the questions and there will be no risk to you.

Participation in this study is voluntary and you are free to ask any questions anytime.

Discomforts and Risks

You may be asked some uncomfortable questions during this study. You may refuse to answer the questions and stop the interview if you so desire. This will not expose you to any risk whatsoever.

Benefits

This study will help you learn some of the gaps in the use of LARCs. Your issues may also be addressed by the interviewer.

Rewards

This study has no reward, in any form.

Confidentiality

Kindly note that the interviews for the study will be done in the household and at secluded places in health facilities. Your name will not be indicated in the questionnaire. The data will be stored safely for analysis.

Contact information

For any queries, you may contact Prof. Margret Karaka on 0721817521 or Dr. Purity Nguhiu on 0722737711, as my Supervisors or Kenyatta University Ethical Review Committee Secretariat on chairman.kuerc@ku.ac.ke or secretary.kuerc@ku.ac.ke or ercku2008@gmail.com.

Participants' statement

I have understood the information as regards my participation. I am free to ask questions and all the queries I had have been answered satisfactorily.

This exercise is voluntary and I understand that the information I will give will be treated with utmost confidentiality. I have also been advised that I can leave the interview at any time. I understand that I will not be victimized due to the responses I will give in the study nor by my leave from the study.

Name of participant _____

Signature/ Thumbprint _____ Date _____

Investigators statement

I, the undersigned, have explained to the volunteer in a language he/she understands the procedures to be followed in the study and the risks and the benefits involved.

Name of interviewer _____

Signature/ Thumbprint _____

Appendix IV: Questionnaire**Section I: Socio-Demographic Data**

(Kindly tick one where appropriate)

1. Age

16 – 25 ()

26 – 35 ()

36 – 49 ()

Above 50 ()

2. Religion:

Christian ()

Muslim ()

Other (specify) _____

3. Marital status:

Single ()

Married ()

Widow ()

Divorce ()

4. Occupation:

Self-employed ()

Unemployed ()

Employed ()

5. Educational level:

Never gone to school ()

Primary ()

Secondary ()

Post-secondary ()

Section II: CHW Performance

6. How long have you practiced as CHW?

Less than 2 year []

2-4 []

5-10 []

More than 10 []

7. Have delivered family planning services in your community?

YES []

NO []

8. Are you aware of Long-acting Reversible Contraceptives (LARCs) methods?

Yes []

No []

9. Have you ever given information or advice about LARCs to any client?

Yes []

No []

10. How many clients have you served with the LARCs methods in a month?

None []

Less than 10 []

50-100 []

Above 100 []

11. Kindly rate your level of knowledge, competence, productivity, and morale in the table below (*kindly tick one box per item*)

Output performance	None	Inadequate	Average	High
Level of Knowledge				
I have knowledge of the various contraceptive methods available				
I am well-versed in the benefits of LARCs to effectively communicate them to married women				
I understand the eligibility criteria for				

LARC use				
I have skills in contraceptive counseling to effectively engage with married women				
I am aware of the available resources and services for LARC provision within the community				
I engage in ongoing education and training to stay updated on the latest LARCs				

12. How often do you participate in training, continuous education or workshops on LARCs use every month?

None []

Less often []

More often []

13. Since you started engaging in providing the family planning services, how do you assess the outcome and impacts your service? (*kindly tick one box per outcome/impact*)

Outcome/Impact	Decreased	Constant	unaware	Increased
The rate of use of LARCs among your clients				
Number of unintended and unplanned pregnancy among your clients				

Section III: Support Systems

14. Do you get the following support from the healthcare facility you are attached to or community you are working in?

Support system	None	Some	Most	All
We are provided with training and capacity-building opportunities necessary to promote and provide LARCs.				
I do receive supervision and mentorship from				

healthcare professionals within the health system				
We are provided with resources for distribution of the contraceptives to women in the community.				
We use mobile technology to support our work				
We do collaborate with NGOs and other development partners involved in reproductive health to promote LARCs.				
Had	had	had	had	had
Any other, specify				

Section IV: Barriers

15. Kindly tick the barriers you have experienced in your work as a CHW in issuing family planning methods to clients

Barriers	Tick
Limited Access to Contraceptive Commodities	
Inadequate Training and Capacity Building	
Stigma and Cultural Beliefs:	
Health System Fragmentation:	
Limited Support and Supervision:	
Resource Constraints:	
Sociocultural Norms and Gender Dynamics:	

Appendix V: Graduate School Approval Letter



KENYATTA UNIVERSITY GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA

Website: www.ku.ac.ke

Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School

DATE: 27th July 2016

TO: Jared Adams Mbatah
C/o Population & Reproductive Health.

REF: Q139/CE/24550/12

SUBJECT: APPROVAL OF RESEARCH PROPOSAL
=====

This is to inform you that Graduate School Board, at its meeting of 27th July 2016, approved your Research Proposal for the M.P.H Degree. Entitled, "Role of Community Health Workers in Enhancing Utilisation of Long Acting and Reversible Contraceptives among Married Women in Kilifi-Kenya".

You may now proceed with data collection, subject to clearance with the Permanent Secretary, Ministry of Higher Education, Science and Technology.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking forms per semester. The form has been developed to replace the progress report forms. The supervision Tracking Forms are available at the University's website under Graduate School webpage downloads.

Thank you.

ANNBELL MWANIKI
FOR: DEAN, GRADUATE SCHOOL

c.c. Chairman, Department of Population and Reproductive Health

Supervisors:

1. Prof. Margaret Keraka
C/o Department of Environmental & Population Health
Kenyatta University
2. Dr. Purity N. Nguhiu
C/o Department of Agricultural Resource Management
Kenyatta University

Appendix VI: Introductory Letter to NACOSTI



**KENYATTA UNIVERSITY
GRADUATE SCHOOL**

E-mail: dean-graduate@ku.ac.ke

Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: Q139/CE/24550/12

DATE: 27th July 2016

Director General,
National Commission for Science, Technology
& Innovation
P.O. Box 30623-00100,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MBATAH JARED ADAMS- REG. NO. Q139/CE/24550/12

I write to introduce Mr. Mbatah Jared Adams who is a Postgraduate Student of this University. He is registered for M.P.H degree programme in the Department of Population and Reproductive Health.

Mr. Mbatah intends to conduct research for an M.P.H Proposal entitled, "Role of Community Health Workers in Enhancing Utilisation of Long Acting and Reversible Contraceptives among Married Women in Kilifi-Kenya".

Any assistance given will be highly appreciated.

Yours faithfully,



MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL

AM/nn

Appendix VII: Kilifi County Permit

COUNTY GOVERNMENT OF KILIFI
DEPARTMENT OF HEALTH SERVICES

When Replying quote
Email: chmtkilifi@gmail.com
REF: KLF/DOH/RESEARCH /VOL.1/115



P. O. Box 9-80108
Kilifi
Date: 17th August 2017

OFFICE OF THE COUNTY DIRECTOR HEALTH & SANITATION SERVICES

Jared Adams Mbatah,
Q139/CE/24550/2012,
Kenyatta University.

Dear Sir,

RE: DEPARTMENTAL AUTHORIZATION FOR RESEARCH ON ROLE OF COMMUNITY HEALTH WORKERS IN ENHANCING UTILISATION OF LONG-ACTING AND REVERSIBLE CONTRACEPTIVES AMONG MARRIED WOMEN IN KILIFI COUNTY, KENYA.

The Kilifi County Department of Health Services is in receipt of your letter requesting to conduct a study on "Role Of Community Health Workers In Enhancing Utilisation Of Long-Acting And Reversible Contraceptives Among Married Women In Kilifi County, Kenya" together with the protocol, institutional ethical and scientific approval and NACOSTI permit Ref: NACOSTI/P/17/30766/14462.

The Department is pleased to grant you authorization to conduct your study within Kilifi County in line with ethical consideration and approved study protocol, and within the expiry date of your NACOSTI approval **22nd September, 2018.**

It is required that you engage the **Medical Superintendents** and facility in-charge for Kilifi County, Malindi and Mariakani hospitals and Gede health centre prior to commencing data collection.

Upon completion of the study, you will be required to share your study findings, conclusion and recommendations with the Department of Health Services, Kilifi County.

KILIFI COUNTY
Department Of Health
★ *Eva Langat* ★
17 AUG 2017
Eva Langat
P. O. Box 9 - 80108
Research Director
KILIFI COUNTY, KENYA

Appendix VIII: Research Authorization NACOSTI



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone 020 400 7000,
0718788787, 0735404245
Fax: +254-20-318245,318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI Upper Kabete
Off Wanyuki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref No. NACOSTI/P/17/30766/14462

Date 22nd September, 2017

Jared Adams Mbatah
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Role of community health workers in enhancing utilization of long acting and reversible contraceptives among married women in Kilifi County, Kenya.”* I am pleased to inform you that you have been authorized to undertake research in Kilifi County for the period ending 22nd September, 2018.

You are advised to report to the County Commissioner, the County Director of Education and the County Director of Health Services, Kilifi County before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit a copy of the final research report to the Commission within one year of completion. The soft copy of the same should be submitted through the Online Research Information System.

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

Copy to:

The County Commissioner
Kilifi County.

CONDITIONS

1. The License is valid for the proposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
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REPUBLIC OF KENYA



National Commission for Science,
Technology and Innovation

**RESEARCH CLEARANCE
PERMIT**

Serial No.A **15938**

CONDITIONS: see back page

**THIS IS TO CERTIFY THAT:
MR. JARED ADAMS MBATAH
of KENYATTA UNIVERSITY, 0-40300
HOMA BAY,has been permitted to
conduct research in Kilifi County**

**Permit No : NACOSTI/P/17/30766/14462
Date Of Issue : 22nd September,2017
Fee Received :Ksh 1000**

**on the topic: *ROLE OF COMMUNITY
HEALTH WORKERS IN ENHANCING
UTILIZATION OF LONG ACTING AND
REVERSIBLE CONTRACEPTIVES AMONG
MARRIED WOMEN IN KILIFI
COUNTY,KENYA.***



**for the period ending:
22nd September,2018**

.....
**Applicant's
Signature**

Kalenwa
.....
**Director General
National Commission for Science,
Technology & Innovation**