UTILIZATION OF FAMILY PLANNING SERVICES AND ASSOCIATED FACTORS AMONG WOMEN AGED 18-49 YEARS LIVING WITH DISABILITY IN KAJIADO COUNTY, KENYA

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DECLARATION

I declare that this thesis is my own original work and has not been submitted for the award of a degree in any other university.

Signature…… Date……

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This thesis has been submitted for review with our approval as the University Supervisors.

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DEDICATION

This thesis is dedicated to my husband Thomas Mose and my son Emmanuel Ogato for their support, humble time and words of encouragement that kept me moving during the entire period of developing this piece of academic work.

To my mother for her prayers, moral support and for showing me the right path.

To my sisters and brothers for being their for me when I needed their time and support.

To my brother Sammy for walking with me all the way to-date.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS AND ACRONYMS

AIDS:	Acquired Immuno-Deficiency Syndrome
FGD:	Focused Group Discussion
FP:	Family Planning
HIV:	Human Immunodeficiency Virus
IUD:	Inter-uterine Device
KDHS:	Kenya Demographic and Health Survey
KII:	Key Informant Interviewee
KNBS:	Kenya National Bureau of Statistics
MMR:	Maternal Mortality Rate
MoH:	Ministry of Health
NACOSTI:	National Commission for Science, Technology and Innovation
NGO:	Non-governmental Organization s
PLWD:	People living with disability
RH:	Reproductive Health
SDGs:	Sustainable Development Goals
SPSS:	Statistical Package for Social Sciences
SRH:	Sexual and Reproductive Health
UNFPA:	United Nations Population Fund
USA:	United States of America
WHO:	World Health Organization
WWD:	Women with disability

OPERATIONAL DEFINITION OF TERMS

Accessibility: Refers to availability of family planning services within reasonable reach and of opening hours, appointment systems and other aspects of service organization and delivery allowing people to obtain the services when they need them (WHO, 2013).

Attitude: Refers to the way of thinking or feeling that affects a disabled person's behaviour towards family planning (Puspita *et al.,* 2018).

Awareness: Refers to a concern about and well informed interest in family planning (Al-Musa *et al.,* 2019).

Family planning: Refers to methods people use to attain their desired number of children and determine the spacing of pregnancies. It is achieved through use of contraceptive methods and the treatment of infertility (WHO, 2018).

Health System: Refers to all activities whose primary purpose is to promote, restore or maintain health (WHO, 2000)

People living with disability: Refers to persons who have a physical, intellectual, neurological and/or sensory impairment which is long-term or recurring (WHO, 2018)

Unmet need for family planning: Refers to women who are fecund and sexually active but are not using any method of contraception, and report not wanting any more children or wanting to delay the next child (WHO, 2018).

Utilization of family planning services: Refers to the quantity of family planning services used by women living with disabilities within a specified time period (Kasa et al., 2018).

ABSTRACT

Currently it is estimated that about 10 percent of the world's population experience some form of disability. Across the world, women with disabilities suffer more from poor maternal health outcomes as compared to their counterparts thus need contraception more. However, the rate of contraceptive use among women with disabilities is low despite their higher risk of pregnancy related complications. Therefore, this study sought to establish the utilization of family planning services and associated factors among women living with disabilities in Kajiado County, Kenya. The study specifically focused on socio-demographic factors, the nature of attitude towards family planning, family planning accessibility factors and awareness on utilization of family planning services among women living with disabilities. A cross-sectional descriptive study design that made use of both quantitative and qualitative data collection methods was used. Quantitative data was collected using semi-structured questionnaires from women with disabilities while qualitative data was collected using key informant interview schedules with selected Key Informants and Focused Group Discussion guides with primary respondents. The respondents were sampled from Kajiado Central, Kajiado North and Kajiado West sub-counties which were randomly selected. The study respondents were sampled using systematic sampling with a predetermined interval of 3. A total of 316 respondents were recruited for interview with the aid of disability registered groups; Key informants and focused group discussants were purposively selected for inclusion in the study. The researcher sought all required approvals from relevant authorities and obtained informed consent from respondents prior to the conduct of the study. Descriptive data was analyzed using Statistical Package for Social Sciences version 22.0 with the aid of Microsoft Excel program to generate frequency tables, graphs and pie-charts. Qualitative data results were triangulated with quantitative data as direct quotes or narrations as presented by focused group discussants and key informants. Inferential statistics were calculated using Chi-Square tests done at 95% confidence interval and a margin of error of 0.05 to establish the association between study variables. The results of this study revealed that 32.0% of women living with disability in Kajiado County utilized family planning services with 57% of respondents reporting to be having low awareness on family planning. The common method known by majority of respondents was injection (26.6%) and the common method of family planning method utilized by majority of respondents was Implant (31.2%). Majority of socio-demographic factors such as age (p=0.014), education (p.001), occupation (p=0.018) and level of family income (p=0.001) were significantly associated with utilization of family planning services. 61% of respondents had negative attitude towards family planning. The nature of attitude (p=0.001) was significantly associated with utilization of family planning services. Most of the family planning accessibility factors such as distance to the nearest health facility (p=0.024), cost of seeking family planning services (p=0.001) availability of family planning services (p=0.004) and healthcare workers friendliness (p=0.011) were significantly associated with utilization of family planning services. The study concludes that the rate of utilization of family planning services among women living with disability in Kajiado County was relatively low as compared to the general population. The study recommends scaling up and sensitization of family planning programs to increase utilization rates among women living with disability. These results would be useful to policy makers, health researchers and other stakeholders to develop action plans to improve the utilization of family planning services which would further lead to improved maternal outcomes as well reduce maternal deaths associated with pregnancy related complications among people living with disability.

CHAPTER ONE: INTRODUCTION

1.1 Background information

Family planning (FP) refers to practices that allow people to control the number of children and determine healthy spacing and timing of births between pregnancies (WHO, 2018). This is achieved through contraceptive use. Contraception has been captured as one of the priority areas addressed by the Sustainable Development Goals (SDGs). Across the world, the most vulnerable groups include women with disabilities who highly need contraception most (WHO, 2015). Currently it is estimated that about 10 percent of the world's population experience some form of disability. In fact, 67 percent of them live in poverty with females most affected. They possess the highest risk to health and have a great affinity to socio-economic vulnerabilities due to their diminished ability to respond, cope and counter livelihood shocks (World Bank, 2018).

In many societies in the world, people living with disabilities (PLWD) are socially and economically excluded from participating and utilizing important services (Ayiga and Kigozi, 2016). They live in poverty due to disparities in accessing health services, education and economic opportunities in society. The burden and effect of disability is higher in lower income generating countries especially in Sub-Saharan Africa. In these countries, women are more affected than their male counterparts (Naami, 2015). Disabled women are seen as outcasts and stigmatized in society as they are perceived to be asexual and thus unable to marry and raise children (Ganle et al., 2016).

Contraception is one of the rarely used Reproductive Health (RH) services among disabled women (Ganle *et al*., 2016). They are perceived not to be in need of

contraceptives and have inadequate contraception knowledge probably affecting their usage (Ahumuza et al., 2014). Low contraceptive uptake among the disabled results to high rates of unfulfilled need family planning need aimed at spacing, limiting or stopping childbearing. This has further led to heightened risks of unwanted and untimed pregnancies (Naami, 2015). FP prevents about a third of pregnancy related and neonatal deaths. Unplanned pregnancy may result to practice of unsafe abortions in developing countries, a major cause of maternal mortality (Ackerson and Zielinski, 2017). Despite delaying or preventing pregnancy playing a critical role in curbing complications associated with disparities in pregnancy outcomes, there is little information known on current FP utilization among disabled women (Wu *et al*., 2017).

1. 2 Statement of the problem

An estimated 10 per cent of the world's populations live with some form of disability. Women account for 50.4 per cent with 66 per cent of the disabled living in rural areas and 67 per cent living in poverty (WHO, 2013). Women with disabilities have the same sexual and reproductive health (SRH) needs as the people without disability hence require access to family planning services too. In Kajiado County only 36.7 per cent of women of reproductive age use family planning commodities with the disabled women accounting for even less. However, people with disabilities often face barriers to information and family planning services. The low contraception rate could be attributed to several factors including lack of information, cultural beliefs and practices, myths and misconceptions, commodity accessibility, limited choice of commodities and limited staff skills (Kajiado County Government, 2017).

Only 19 per cent of people living with disabilities (PLWD) have received secondary education (World Bank, 2018). Lack of information regarding contraceptive use has been reported to be one of the reasons for low contraceptive use not only among PLWD but also among the general population. Contraceptive usage has been associated with a number of myths and misconceptions such as reduced sex urge and infertility (WHO, 2018). This group of people is normally discriminated against and thus programs have not been set aside to address their FP needs (Kamundia, 2014). Health provider attitude towards the PLWD sometimes affect contraceptive usage among them. Poor attitude toward the disabled by the health care workers hinder them from seeking for RH services including FP commodities **(**Rogers, 2011).

1.3 Justification of the study

Despite efforts to control population growth across the world, women living with disability have been neglected and have poor access to family planning options available. The rate of contraceptive use in Kajiado County among women of childbearing age is 54.5% compared to the national rate of 58.0% (KDHS, 2014). There are more than 17464 people living with disability in Kajiado County with women being the majority. Despite delaying or preventing pregnancy playing a critical role in curbing complications in pregnancy related disparity outcomes, there is little information known on current family planning utilization among disabled women (Wu *et al.,* 2017). This therefore underpins the need for this study that allowed for exploration of utilization of family planning services among women living with disability in Kajiado County, Kenya.

1.4 Research questions

i. What are is the utilization rate of family planning services among women living with disability in Kajiado County?

ii. What are the socio-demographic factors influencing utilization of family planning services among women of reproductive age living with disability in Kajiado County?

iii. What is the level of awareness on family planning services among women of reproductive age living with disability in Kajiado County?

iv. What is the nature of attitude towards utilization of family planning services among women living with disability in Kajiado County?

v. What are the accessibility factors to utilization of family planning services among women of reproductive age living with disability in Kajiado County?

1.5 Null hypotheses

H_{01} Socio-demographic factors are not associated with utilization of family planning services among women living with disability in Kajiado County.

H_{02}: Awareness on family planning methods is not associated with utilization of family planning services among women living with disabilities in Kajiado County.

H_{03}: The individual attitude is not associated with utilization of family planning services among women living with disability in Kajiado County.

H_{04}: Accessibility factors are not associated with utilization of family planning services among women living with disability in Kajiado County.

1.6 Objectives of the study

The study was guided by a broad objective and four specific objectives.

1.6.1 Broad objective

The main objective of this research was to investigate factors associated with utilization of family planning services among women aged 18-49 years living with disability in Kajiado County.

1.6.2 Specific objectives

i. To establish the utilization of family planning services among women living with disability.

ii. To determine the socio-demographic factors influencing utilization of family planning services among women of reproductive age living with disability in Kajiado County.

iii. To establish to what extent awareness on family planning services influence utilization of family planning services among women of reproductive age living with disability in Kajiado County

iv. To determine the influence of the nature of attitude towards utilization of family planning services among women living with disability in Kajiado County.

v. To investigate the influence of accessibility factors on utilization of family planning services among women of reproductive age living with disability in Kajiado County.

1.7 Significance of the study

This study targets to benefit mainly the Government, the primary stakeholders in health and women of reproductive living with disability since this research was undertaken in a typical rural setting where access to family planning is poor. The findings of this study would also be valuable to other scholars and researchers as it would complement the existing literature and knowledge base. The study identifies the areas of contraception services which require support and strengthening to enhance community sensitization on the effects of low utilization of family planning among disabled women in society thus reduce mortality rates associated with unwanted pregnancies.

1.8 Conceptual framework

A conceptual framework is a representation which shows how variables relate in a study. The independent variables for this study include socio-demographic factors, awareness of family planning services, nature of attitude and accessibility factors. The dependent variable was utilization of family planning methods among women living with disability. The proposed relationship among variables was presented in Figure 1.1.

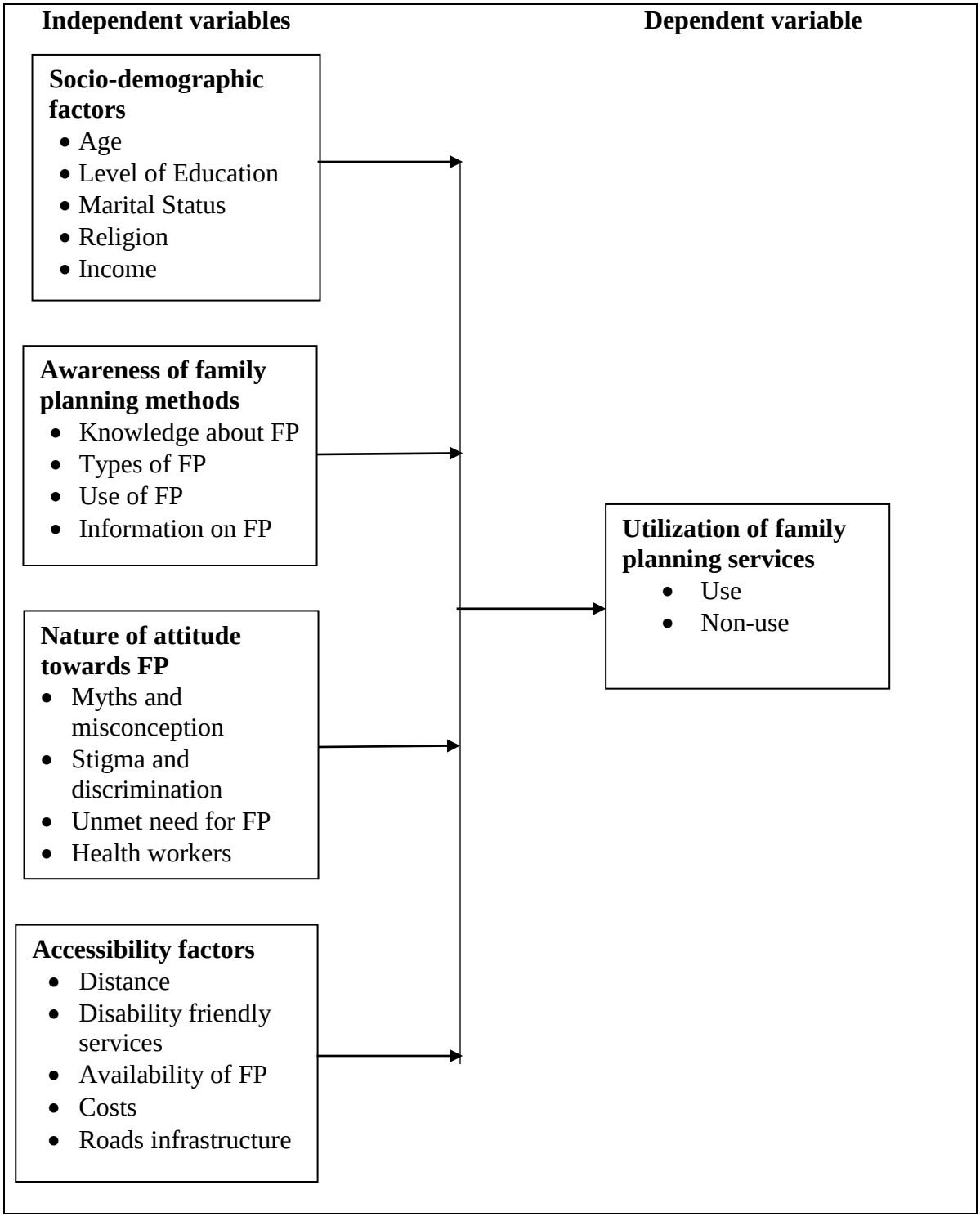

Fig 1.1: The conceptual framework

Source: Adopted and modified from literature review (2018).

CHAPTER TWO: LITERATURE REVIEW

2.1 Over-view of Contraceptive usage

It is estimated that globally 55% of married people are not using contraceptives despite being able to bear children. It was further revealed that 57% of women who were aged 18-49 were not using any form of contraceptives in 2012 (WHO, 2014). Among the 222 million clients who were unable to access contraceptives majority came from Asia (97million) and Sub-Saharan Africa (53million). This was mainly attributed to religious and political reasons (Hurt, 2013).

Despite the reported increase in contraceptive usages from 5% in early 90s to about 30% in 2006 still much needs to be done to reach the WHO recommended targets (Cleland *et al*., 2013). Women still resort to unsafe sexual activities which mostly leads to about 3% seeking for unsafe abortions due to poverty, restrictive abortion laws, inaccessibility of FP. Countries should copy Zimbabwe, South Africa, and Botswana which have been able to set up successful programs on family planning (Rasch, 2013). Going by the World Bank collection of development indicators (WHO 2014), the Kenyan contraceptive use of women of ages 15-49 was at 66.3% in 2015.

Contraceptive helps individuals in planning number and spacing of births. They help in reducing complications associated with pregnancy and child delivery (WHO, 2015). Previous research findings from developing countries have shown that using family planning methods may avert 32% of all deaths that are maternal in nature and nearly 10% of those that occur in childhood, while but at the same time reduce poverty and hunger rates (Kamundia, 2014). At the same time, the use of contraceptives helps in

economically empowering women especially those living with disability. Thus, adequate information regarding family planning should be provided to enable women make informed decisions on their fertility (Gwamaka, 2013).

Women living with disability are the most affected with low rates of utilizing family planning services. Reducing unmet need for contraceptives through their increased use is key to enhancing maternal health, reduced child deaths and combating the effects associated with HIV/AIDS in the society (Susheela *et al.,* 2014). In Ethiopia research results showed that the rate of contraceptive use was 53.3per cent (Endriyas *et al*., 2017). In study done among street women's contraception use in Ethiopia, it was revealed that 47.1 per cent had ever used with 34.3 per cent being current users (Megabiaw, 2012). In Nigeria's Bauchi state, 46.9 per cent of women of reproductive age were on contraceptive use (Ekpenyong *et al*., 2018).

In United States of America, about 73 per cent disabled women at risk of unplanned pregnancy were on contraceptives. Use of modern contraceptive methods was hindered by presence of disability (Wu *et al.,* 2017). In Ethiopia, the rate of utilization of family planning among all women of reproductive age stood at 33.7% (Mesfin *et al*., 2019). According to a study done in Talensi District in Ghana on factors influencing family planning among women living with disability, it was reported that only 18.0% of women utilized family planning (Apanga & Adam, 2015). In a study on access to and uptake of contraceptives by women with disabilities, it was concluded that 26.1% of respondents interviewed used contraceptives (Ayiga & Kigozi, 2016). In another study on use of

modern contraceptive among women living with disability, it was concluded that 59.3% of respondents had utilized family planning services (Gul & Koruk, 2015).

The type of family planning method also plays a key role on the utilization of family planning services among women of reproductive age. Married women are more likely to use long acting methods while unmarried women are more likely to use short acting methods. A study done in United States of America among women with cognitive disability, it was shown that female sterilization was the most common method of family planning used (Li *et al.,* 2018). In another study done on contraceptive use among women with learning disability, it was concluded that implants were the most common method of family planning used by majority of respondents (Ledger *et al.,* 2016). According to a study done on contraceptive use at last intercourse among reproductive age women with disability, it was concluded that women with disabilities were more likely to seek for long acting family planning methods than women without disabilities (Haynes *et al.,* 2018).

Female sterilization is the common used type of contraceptive according to research findings. Intra-uterine device (IUD) and the contraceptive pill follow closely in that order. Other methods used include injections, withdrawal and male condoms (WHO, 2018). In Sub Saharan Africa, injection is the common method of family planning used among people living with disability followed by implants (UNFPA, 2013). In Nepal, pills are commonly used among women living with disabilities followed by injections (Pokharel *et al.,* 2018).

Findings from Ghana indicated that majority of deaf study participants were not familiar with methods of preventing pregnancies (Mprah *et al.,* 2017). Baines and Gauvin (2014) argued that injectable is the most common birth control options used in less developed countries. According to Cameroon and Ethiopia, the most modern contraceptive method used among disabled women was condoms (Vlassoff *et al.,* 2014). In Kenya most common family planning method among the women living with disabilities is the use of implants followed by injections (Agesa, 2016).

2.2 Awareness on family planning services

Research across the world has shown that the rates of awareness with regards to family planning have been high despite reduced rates of utilization. This may be because family planning is part of the sexual and reproductive health of women which is a sensitive issue always discussed across a variety of forums (Mprah *et al.,* 2017). A study done in Talensi District in Ghana on factors influencing family planning among women living with disability revealed that majority of the respondents were aware of family planning services (Apanga & Adam, 2015). According to a systematic review of studies from Kenya, Nepal and Uganda on intersecting sexual and reproductive health and humanitarian settings, it was revealed that majority of the respondents had low awareness regarding family planning services (Tenabe *et al.,* 2015). In other studies, awareness has been associated with utilization of family planning services. A study done in Saudi Arabia it was shown that people who were aware of the existence of family planning services were more likely to use family planning services (Elgharabway *et al.,* 2015).

Several challenges have been reported to bar women with disability from using family planning services. Some fear developing complications associated with use of family planning. A study done in Durban in South Africa on access to sexual and reproductive health services among people with disability reported that majority of the respondents reported that cost of accessing reproductive health services was the main hindrance (Mavuso & Maharaj, 2015). In another study done in Ethiopia on contraceptive utilization and associated factors revealed that myths and misconceptions such as weight gain, sexual urge and infertility affected their uptake among women of reproductive age (Endriyas *et al.*, 2017). In Nigeria use of family planning services was greatly attributed to husband's acceptance (Ekpenyong *et al*., 2018). The major reason of lack of contraceptive use among women of reproductive age in Ghana was opposition from husbands (Apanga *et al.*, 2015). Lack of social approval from family members is a major barrier to contraceptive use in many developing countries (Machiyama *et al.*, 2017; Ganle *et al*., 2016).

Perceived risk of getting unintended pregnancy may affect the utilization of family planning services. Those who rarely engage in sexual intercourse are less likely to use contraceptives. A study done on use of reversible contraceptive methods among USA women with physical or sensory disability, revealed majority of the respondents of the respondents were at risk of unplanned pregnancy (Wu *et al*., 2017). Other studies have also reported a significant association between risk of getting unwanted pregnancy and utilization of family planning services. According to a study done on contraceptive use among women with intellectual and developmental disabilities, it was reported that those

who thought that they were at risk of unplanned pregnancy utilized family planning services at their disposal (Brown *et al.*, 2018).

Engaging partners before use of family planning plays a critical role in utilization of family planning. Women are a weaker sex and are always not involved in safer sex due to the effects of male dominance in African (Mavuso & Maharaj, 2015). The lack of opportunities for negotiation for use family planning among partners among in women with disabilities has also been established by studies such as (Alhusen et al., 2019). In another study done in Sindh, Pakistan on assessing the knowledge and practice of contraceptive use, it was reported that more than a third of the respondents were unable to negotiate for condom use (Talpur et al., 2017). The convincing power of negotiation where women are more likely to use family planning when they discuss their sexual life with their partners may be of great importance.

2.3 Socio-demographic factors influencing utilization of family planning services

An individual client characteristic is one of the factors that may determine utilization and access to health services among populations. Utilization of family planning services have been hindered by individual factors exhibited by disabled women of reproductive age (Gaeteno *et al.*, 2014). Disabled women always lack family support towards meeting their reproductive health services. According to a study done in Durban in South Africa, most people with disability have also been reported to be low income earners (Mavuso & Maharaj, 2015). In a study done in Northwest Ethiopia on unmet need of family planning among women of reproductive age with disability, it was revealed that most of the

respondents had a lower family monthly income (Tessema *et al*., 2015). Income has been associated with utilization of family planning services.

Women with disability are less empowered in terms of access to family planning services available for use due to the nature of their disability. The more educated a person is regarding contraceptive use the more likely she is to use the services (Aderemi *et al*., 2013). People living with disability are less educated with education resulting to high illiteracy levels (Davidson *et al.,* 2016). According to a qualitative study done in Ghana on challenges facing women with disability, it was revealed that majority of respondents had no formal education (Ganle et al., 2016). In Nigeria, majority of women of reproductive age with disability had lower than secondary level of education (Obasohan, 2015). This means they lack adequate access information regarding family planning methods and their effects. A study done in USA on use of reversible contraceptive methods among women with physical or sensory disabilities, most women of reproductive age with disability who had college education were more likely to use family planning (Wu et al., 2017).

Religion has been documented to be contributing to low contraceptive usage. Some Christians are advised against use of contraceptive use as they are told it is against the biblical teachings. Thus these people do not use the family planning and thus ending up with unplanned pregnancies some of which leads to unsafe abortions and related complications (Gaeteno et al., 2014). It has also been documented that women perceived that if they utilized family planning they could become sexually promiscuous since they would not become pregnant and thus will predispose them to sexually transmitted infections (Eliasson et al., 2014).

According to a study done on accessibility to sexual and reproductive health services among marginalized youths in selected districts of Tanzania, majority of the respondents interviewed were Christians (Ngilangwa et al., 2016). Some studies have not shown an association between religion and use of family planning while others have (Aderemi et al., 2014). In another study on modern contraceptive use among women with disability in Gondar City, Amhara region, Northwest Ethiopia; it was concluded that majority of the respondents came from the Orthodox religion and religion did not influence use of contraceptives (Beyene et al., 2019).

Women with disability sometimes are denied their reproductive health rights and thus denied access to use of family planning services. They are perceived to be asexual and thus not raise their own children or they don't attract suitors. This explains why most people with disability never marry due to associated challenges (Ganle *et al*., 2016). Stigma and discrimination to persons living with disability denies them the right to have children, this is because most of them are not in a relationship as they are seen as outcasts from society. According to a study done in Awabel District in North-West Ethiopia, it was concluded that majority of women with disability were single (Ayehu *et al*., 2016). This affects their reproductive health including use of family planning. In another study done in Ghana among women with disability, marital status did not influence use of family planning (Apanga and Adam, 2015).

However, according to a study done by Ayiga & Kigazi (2016) on access to and uptake of contraceptives by women with disabilities, they attributed marital status as a significant predictor of using contraceptives as those who were married were more likely to use family planning services. In Ethiopia, it was concluded that women who were

married almost four times more likely to use family planning than their unmarried counterparts due to the frequency of sexual intercourse (Mesfin *et al*., 2019).

The form or degree of disability suffered by an individual may also play a bigger role in determining the rate of using family planning. According to a study done in Ethiopia on knowledge and attitude towards sexual and reproductive services among young people with disability, it was revealed that majority of the respondents had impaired mobility (Kassa et al., 2016). In another study done in Ethiopia, it was reported that majority of the respondents were physically disabled (Yesgat et al., 2020). A systematic review of the studies from Kenya, Nepal and Uganda on intersecting sexual and reproductive health and humanitarian settings revealed that majority of the respondents had physical impairment (Tenabe et al., 2015).

A study done in South Africa on sexual and reproductive health, majority of the respondents interviewed had children (Waldman & Stevens, 2015). This is similar to a study done in urban Kenya which reported that majority of the respondents had children (Tumlinson *et al.,* 2015).Therefore People who have children are more likely to use contraceptives for proper spacing of pregnancies and control the number of children they would want to have. According to studies done on access to sexual and reproductive health services among people with disabilities, there have been a reported link between number of children and use of sexual and reproductive services such as family planning (Dossa *et al.,* 2014). A systematic review done on factors influencing use of family planning in women living in crisis affected areas of Sub-Saharan Africa, people with children were more likely to use family planning services (Ackerson & Zielinski, 2017).

The age of the mother also may influence use of family planning. Those who are at the reproductive age categories are more likely to use family planning to prevent unwanted pregnancies as they are sexually active. According to a study done on effects of disability on pregnancy experiences among women with impaired mobility, it was shown that majority of women under use of family planning were aged between 31-39 years (Lezzoni et al., 2015). Another study on the use of family planning and the factors that are associated to it among women within the reproductive age and who are living with disability in Arba Minch Town in Southern Ethiopia, it was noted that majority of the respondents had a mean age of 23 years (Mesfin et al., 2019).

High unemployment rates especially among people with disability means they depend on their close relatives and families. According to a study done in Ethiopia among reproductive age women with disability, it was reported that majority of the respondents interviewed were employed (Yesgat et al., 2020). Occupation has been associated with use of family planning in terms of having resources to access family planning as seen in a number of studies. For example, in a study done among women with disability and use of family planning services in Ethiopia, it was concluded that employed women were 2.2 times more likely to use family planning compared to unemployed ones (Nuriye et al., 2020).

2.4 Attitude and perceptions towards family planning

Attitude and perceptions towards contraceptive usage remains a major barrier to contraceptive use not only among PLWD but also among the general population (Mprah *et al*., 2017). Use of family planning has faced a number of challenges especially on its

side effects. According to a systematic review on myths and beliefs about contraceptive methods, it was indicated that one of the leading reason for underutilization of family planning is beliefs associated with leading to infertility in women (Eram, 2017). According to Sedlander *et al* (2018), women believe using modern contraceptives at a younger age or before childbirth can make them infertile.

In Ghana, people perceived contraceptives were meant for married couples only and not to all sexually active women (Ghana Health Service, 2014). A study done in Kenya showed that myths and assumptions led to exclusion of PLWD from participating in SRH outreach activities as they were perceived to be sexually inactive (Kamundia, 2014). This is a major barrier towards seeking of family planning services among the disabled (Nirali *et al.,* 2015). In Ethiopia and Ghana, myths and misconceptions surrounding family planning affected its uptake especially among women of reproductive age living with disability (Endriyas *et al.,* 2018; Akasreku *et al.,* 2018).

In Uganda, older women with disability utilized FP services better than younger persons with disability due to stigma attached to women with disabilities especially when they become pregnant at an early age (John *et al.,* 2011). According to study done in Zimbabwe on childbearing experiences and aspirations of women living with disability, acts of discrimination were reported both within and outside reproductive health centers whenever they see for contraceptives (Peta, 2017). In another systematic review from United States of America, it was concluded that women living with disability were discriminated against and subjected to coerced and forced sterilization (Patel, 2017). In another study done in Uganda on determinants of contraceptive non-utilization among

women of reproductive age, it was revealed that women belonging to religions other than Hindu had a higher contraceptive non-use (Kakwezi, 2019).

A study done in Southern Ethiopia, it was noted that majority of women of reproductive age displayed positive attitude towards family planning (Yesgat *et al.,* 2020). In another study done in Ghana among women with disabilities, it was reported that majority of the respondents had negative perceptions towards family planning services thus underutilization (Ganle *et al.,* 2016). Studies done in Ilorin Metropolis, Kwara state Nigeria, noted that women of reproductive age had a negative attitude towards using family planning services (Adegboyega, 2019). In Ethiopia, positive attitude influenced use of family planning 2.3 times compared to a having a negative attitude (Mesfin *et al.,* 2019). In Bangladesh, it was reported that positive attitude increased chances of using family planning services among women of reproductive age (Islam & Hasan, 2016).

2.5 Accessibility to family planning services

Disabled individuals encounter a range of barriers affecting service accessibility including distance to facility (Matovu *et al.,* 2014). According to study done in Malawi on barriers to accessing healthcare services among persons with disabilities, the distance to the nearest health facility was estimated to be longer (Munthali *et al.,* 2019). This affects access to health services including family planning to the disabled who may not access the facilities. According to another study done in Ghana it was concluded that travelling longer distances reduces the chances of using family planning services especially among physically challenged persons (Ganle *et al.,* 2016).

Structural barriers like inaccessible building and transport hinder access to health facilities by PLWD hence reduced family planning utilization (Velichkokski *et al*., 2014). Unfriendly structures in the healthcare facilities means people living with disability may encounter challenges while accessing healthcare services. Unadjustable equipment at the health facilities such as stares are hard to maneuver especially without some assistance thus affecting family planning service utilization (Mavuso & Maharaj, 2015). Women with disability while accessing reproductive health care around the world report inappropriate equipment and inaccessible areas within the facility that affect subsequent visits (Nguyen, 2019).

Bad encounters with medics negatively affect health service usage (Shafii *et al.,* 2014; Tanabe *et al.,* 2015). Inaccessibility of contraceptive use was attributed to insensitive staff to deaf people in Ghana (Mprah *et al.,* 2017). The service providers were reported to be ignorant of specific barriers affecting the health of disabled women, such as abuse (Lee *et al*., 2015). In USA, healthcare workers discriminated persons with disabilities against accessing sexual and reproductive health services and while pregnant women with physical disabilities suffered abuses from the health providers who stigmatized them (WHO, 2014). They were less likely to be asked about contraceptive use during visitation to a general doctor (Chi *et al*., 2015).

Some studies have noted that service provider attitude towards women living with disability influence uptake of health services including contraceptives (Andi *et al.,* 2014). When people living with disability are treated with unfriendly welcome from care providers, they are not likely to subsequently seek such services in the future. According to a qualitative study in Philippines with service providers done on sexual and

reproductive health services for women living with disability, unfriendly staff reduced chances of people with disability to seek for services (Lee *et al.,* 2015). Accessing sexual and reproductive health services in Sub-Saharan Africa has been affected by the unfriendly nature of some of the healthcare facilities and service providers thus a barrier to utilization of services (Ganle *et al.,* 2020).

Modes of communication in most health facilities have been reported to not being of friendly formats which that could be accessed by those who were blind, deaf or had intellectual or cognitive impairments (Saulo *et al.,* 2012). Health information displayed on the boards of health facilities could not be read by those who were blind. In addition, health facilities had not invested in sign language interpreters and lack of provision of health information in Braille formats make communication between health providers and the deaf a challenge when sharing information (Matovu *et al*., 2014). A survey carried Germany revealed that equipments were inaccessible for those with disabilities, especially those unable to walk therefore many would not access reproductive health services including contraceptives (WHO, 2011).

Accessing contraceptives services require indirect and direct costs (Palmer *et al.,* 2019). This is further constrained by lack of means of transport, hospital charges, consultation services, drugs and other medical supplies especially among people with disability (Mumah *et al.,* 2014). In Ghana, even though contraceptives were freely offered to clients in most of the hospitals, there were low contraceptive use of only 19% against the national contraceptive usage of 23.3% (Apanga & Adam, 2015). According to WHO, most of the people who live with disabilities are unable to afford health care (Seid, 2014). In South Africa, costs of seeking family planning including fee for transport were high

and thus unaffordable by people living with disability (Mavuso & Maharaj, 2015). This is because most of them do not have a stable source of income due to their disability. In Cameroon and India, the financial cost of accessing services, economic decision making at households and opportunity costs associated with taking off work affected affects utilization of family planning services among PLWD (Zuurmond et al., 2019).

2.6 Summary and existing gaps in literature

Review of literature reveals that a number of studies have been carried out focusing on utilization of sexual and reproductive services, quality of services and barriers influencing utilization of FP. However, few studies have been conducted to specifically address utilization of FP services among women living with disabilities. The level of uptake of FP services is barred by a number of factors which need to be addressed holistically by relevant stakeholders in an inclusive manner. Despite family planning services in government hospitals in Kenya being available and absolutely free, each hospital has its unique way of operating and delivery of service equates to resource availability. There is scanty information on utilization of family planning services among women living with disability especially in rural areas thus the call for this study.

CHAPTER THREE: MATERIALS AND METHODS

3.1 Study design

This research adopted a community based cross-sectional descriptive study design to collect data on utilization of family planning among women living with disability in Kajiado County as proposed by Kothari, 2008. It was preferred because it ensured complete description of the situation making sure that there was minimal bias in data collection.

3.2 Study variables

The study had four independent variables and one dependent variable.

3.2.1 Independent variables

The independent variables of this study included:

i. Socio-demographic factors associated with utilization of family planning services among women living with disability which included age, marital status, income, level of education among others.

ii. The awareness on family planning services was measured using five statements which included definition of family planning, family planning methods, family planning preventing pregnancy, side effects of family planning and healthy timing and spacing of pregnancy. A correct response was awarded one (1) mark while a wrong response was awarded zero (0) mark. Furthermore, those who scored 0-2 marks were categorized as having low awareness while those who scored 3-5 marks were categorized as having high awareness.

iii. The influence of nature of attitude towards utilization of family planning services which captured perceived religious prohibition, fear of side effects, fertility related, myths and misconception. This was measured using a four-point Likert scale. Based on the scores, respondents were classified as either having a negative or positive attitude.

iv. Accessibility to family planning services among disabled women which included distance, costs, availability, and disability friendly structures. These were measured by use of check lists.

3.2.2 Dependent variable and its measurement

The dependent variable was utilization of family planning services among women living with disability. The utilization levels were captured through the establishing of the methods of family planning practised, reasons for use and non-use among respondents. The expected outcome was use and non-use of contraceptives.

3.3 Study location

The study was carried out in Kajiado County which consist of five Sub-counties namely; Kajiado East, Kajiado West, Kajiado North, Kajiado South and Kajiado Central sub-counties. The County has an approximate population of 687,312 and covers an area of 21,292.7 km² (KNBS, 2019).

3.4 Study population

The study population comprised of women aged (18-49 years) living with disability who were and residing in Kajiado County. This age range is what was considered as reproductive age. There were about 17,464 people living with disability. There were 1652

registered women of reproductive living with disability in Kajiado County (Kajiado County Government, 2017). There were also about 10-15 registered groups of People Living with Disability (PLWD) in each sub-county with each group consisting of 10-15 registered members. It constituted of women hailing from diverse cultural backgrounds.

3.4.1 Inclusion criteria

The study involved women of reproductive age living with any form of disability in Kajiado County. Those aged between 18-49 years willing to give consent to participate in the study were included. The respondents must have lived in the county for at least 6 months prior to the study.

3.4.2 Exclusion criteria

The study excluded very sick respondents and those who were unable to participate during the period of the study.

3.5 Sampling procedures and techniques

Kajiado County was purposively chosen since it is one of the counties with low contraceptive usage of 54.5% with the national coverage standing at 58.0%. Three sub-counties were randomly selected out of the five sub-counties. Kajiado Central, Kajiado West and Kajiado North were randomly selected. This was done by writing their names in a piece of paper and then folded and then 3 picked from the 5. The total number of registered women living with disability in Kajiado county were 1652 (Kajiado County Government, 2017). The women were registered in groups of between 8-15 Women living with disability. The disability registered groups in Kajiado Central, Kajiado North and Kajiado West had 15, 11 and 13 groups respectively consisting of 1012 registered

women of reproductive age living with disability. Therefore, all 39 groups were selected with a total of 316 women living with disability recruited for study. The subjects were chosen systematically with a predetermined interval of 3 obtained through dividing the total number of registered women living with disability by the sample size. The respondents selected were proportional to the number of registered women living with disability chosen sub-county (Robert, 2010).

Focused Group Discussion (FGD) sessions were conducted to get additional information. A total of three FGDs were held, one from each sub-county. About 10 FGD respondents were purposively selected for each session. In addition, about 4 Key Informants purposively selected were interviewed. The KII included healthcare provider, County reproductive health officer, social development officer, and religious leaders.

Table 3.1: Proportion of respondents selected from each sub-county

Sub-county	**No. of registered groups**	**NO. of registered WLWD**	**No. of respondents**	**Percentage (%)**
Kajiado Central	15	437	136	43.0
Kajiado North	11	278	87	27.5
Kajiado West	13	297	93	29.5
Total	**39**	**1012**	**316**	**100.0**

3.6 Sample size determination

Sample size was determined using Taro and Yamane formula (1967).

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

Where: n = desired sample size

N = the population size (1012)

e =the acceptable sampling error (0.05)

Therefore, $n = \frac{1012}{1+1012(0.05)^2} = 287.$

10% of participants were included to account for non-responses to make a total of 316 who were proportionately selected.

3.7 Research instruments

The open and closed ended questionnaires were used for quantitative data collection. All variables were covered including; socio-demographics, accessibility factors, health workers' attitude and awareness level on family planning. The interviews were conducted in Kiswahili and English depending on respondents' level of understanding. Focused group discussion (FGD) guides were used during FGD sessions with 8-12 respondents who met the inclusion criteria. Key Informant Interview (KII) guides were used to collect additional qualitative data from religious leaders, healthcare providers and local administration officers.

3.8 Pre-Testing of research instruments

The research instruments were pretested at Kajiado East sub-county with 32 respondents representing 10% of the respondents. This ensured the research tools were reliable and

valid. This led to improved level of understanding and making corrections deemed necessary.

3.8.1 Validity of instruments

The concept of validity has been explained in various ways by different people. However, it generally refers to the degree to which methods of collecting data measure what they are designed and meant to measure with exactness. This ensured accurate interpretation and generalization of study results on other populations (Oso and Onen, 2009). Expert judgement was sought by the researcher from the university supervisors. The research tools were well structured and ensured all relevant aspects of the study variables were addressed. The study adopted sampling methods that resulted to randomization to ensure representative sample. Random sampling techniques and uniformity of sampled population ensured internal validity. To ensure external validity, a large sample was randomly selected.

3.8.2 Reliability of instruments

Reliability is the ability of particular items to consistently measure the same difference (Gwamaka, 2012). This decreases the random sampling bias. Reliability of research instruments was ensured by selecting research assistants appropriately. Following the selection was a training to make them familiar with the study, particularly, the objectives of the study before going for data collection. The research instruments were pre-tested in the field prior to the conduct of the actual study to ensure they were clearly understood by the research respondents and necessary corrections were made (Sekaran, 2013).

3.9 Data collection techniques

The study collected data of quantitative and quantitative nature. The quantitative data was solicited by use of a semi-structured questionnaire. Trained research assistants administered the questionnaires to the participants and guided them to fill in their responses. They were monitored, guided and supervised by the researcher. All collected questionnaires were kept in locked cabinets throughout the study period and accessed by the researcher only to ensure confidentiality and avoid data loss.

Qualitative data was obtained from focused group discussions held with respondents in four FGD sessions. The sessions were moderated by the researcher with the research assistants recording their views by taking notes. This encouraged free discussion among participants thus captured information which could not have been achieved in a one on one interview. The researcher also conducted 8 key informant interviews with religious leaders, local administrators and healthcare providers to supplement information obtained from respondents. Their views, opinions and suggestions were taken into account.

3.10 Data presentation and analysis

Quantitative data were entered and stored in Microsoft Excel program. Data cleaning and editing was done where extreme, missing and inconsistent values were identified and corrected. Verification and Coding of the data was done to before data was analysed and presented. Data was then exported to Statistical Package for Social Sciences (SPSS) software version 20.0 for analysis. Descriptive analysis was done using percentages, frequency tables, charts and graphs.

Inferential statistics were computed using Chi-square Test and presented in cross tabulations. This was done at 95% confidence interval whereby p-values of ≤ 0.05 was considered statistically significant. Qualitative data from the focused group discussions and key informant interviews was analysed through examination of patterns and trends of responses to generate themes. Key results were presented as direct quotes or narrations and triangulated to validate and enrich the quantitative findings.

3.11 Ethical considerations

The researcher obtained approval from Kenyatta University Graduate School. The study sought ethical clearance from Kenyatta University Ethics Review Committee. A research permit from the National Council for Science, Technology and Innovation (NACOSTI) was also sought. Research authorization from Kajiado County Commissioner, County Director of Education and County Director of Health Services were obtained. The study sought informed consent from research participants before they were interviewed.

CHAPTER FOUR: RESULTS

4.1 Introduction

This chapter presents the interpretation and explanation of study findings. This covers the socio-demographic factors, awareness of family planning services, attitude towards family planning services and accessibility factors towards family planning services among women living with disability in Kajiado County, Kenya in relation to their utilization .To achieve this, 316 questionnaires were administered to selected women living with disability among selected disability groups in the county. Duly filled questionnaires were taken into account and considered for analysis. After data checking and cleaning, 291 questionnaires were deemed fit for analysis representing a response rate of 92.09%. The returned rate superseded the minimum sample of 287 respondents making it adequate for this study.

4.2 Utilization of family planning methods

The study sought to determine the proportion of the women living with disability utilizing family planning services in Kajiado County. The results showed that majority 198 (68%) of the respondents had not utilized family planning services while the rest 93 (32%) had utilized the services. The results were as shown in the Figure 4.1

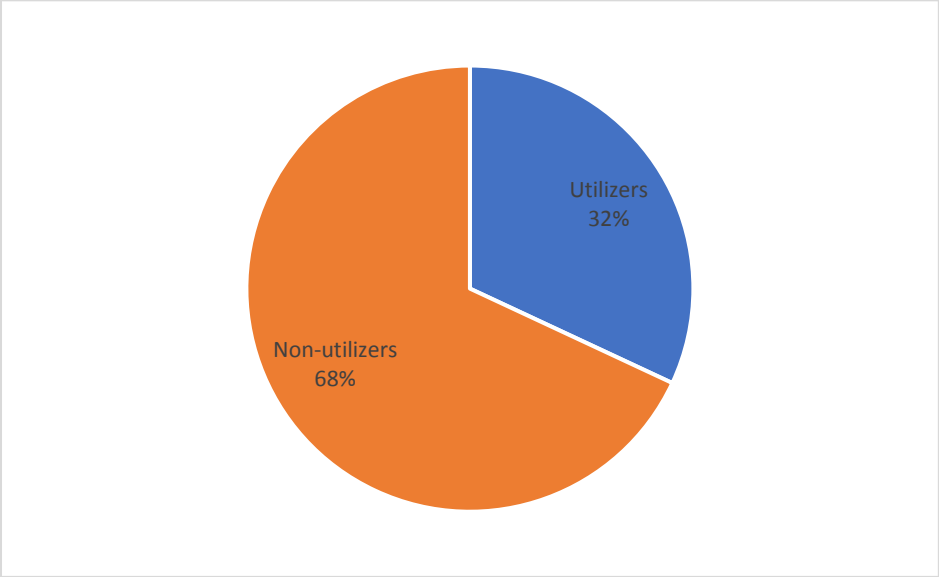

Fig 4.1 Utilization of family planning among respondents

4.2.1 Family planning methods ever used

The study further sought to determine the type of family planning service used by the respondents. Results showed that slightly below a third 29 (31.2%) had used Implant followed closely by 28 (30.1%) who had used injections. The results were as presented in the Table 4.

Table 4.1: Family planning method used among respondents (N=93)

Independent Variable	Respondent response	Frequency (N)	Percentage (%)
Family planning method currently used	Condoms	15	16.1
	Injections	28	30.1
	IUD	7	7.5
	Pills (Orals)	14	15.1
	Implant	29	31.2

4.2.2 Reasons for not using family planning

Results showed that 56 (28.3%) of the respondents did not use family planning because of fear of complications on usage followed by 35 (17.7%) who reported that desire for more children and religious prohibition were the reasons for non-use. The results were as presented in Table 4.2

Table 4.2: Reasons for not using a family planning method among respondents (N=198)

Respondent response	Frequency (N)	Percentage (%)
Desire for more children	35	17.7
Refusal by husband	28	14.1
Religious prohibition	35	17.7
Fear of complications	56	28.3
Cost	14	7.1
Lack of information/knowledge	30	15.2

4.2.3 Frequency of engaging in sexual intercourse with partner

Concerning the frequency of engaging in sexual intercourse, results revealed that most 186 (63.9%) of the respondents reported that they sometimes engaged followed by 70 (24.1%) who always engaged in sexual intercourse. The results were as shown in the Figure 4.2

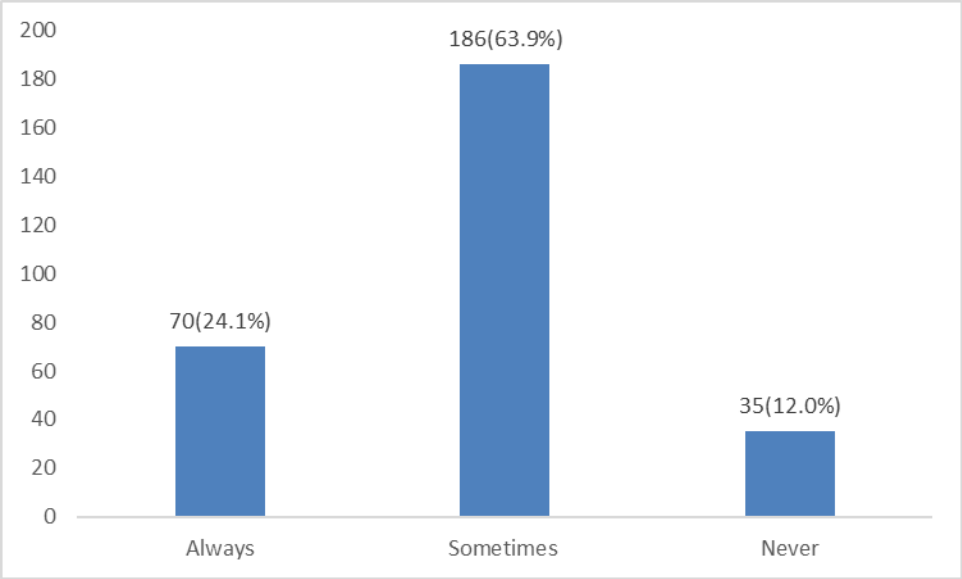

Fig 4.2 Frequency of engaging in sexual intercourse

4.2.4 Risk of getting unwanted pregnancy

Majority 192 (66.0%) of the respondents reported that they did not fear the risk of getting unwanted pregnancy followed by 70 (24.0%) who reported to have feared the risk of unwanted pregnancy. The results were as shown in Figure 4.3

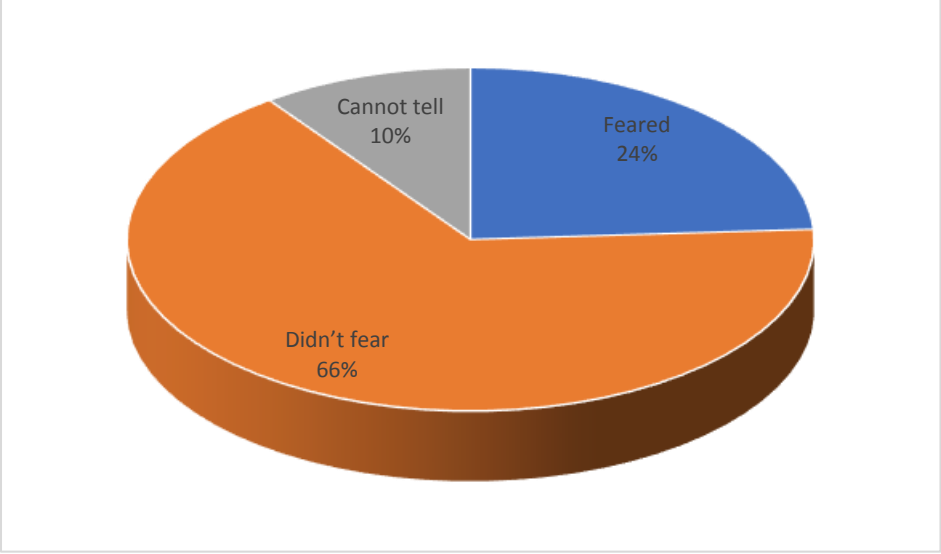

Fig 4.3 Risk of getting unwanted pregnancy

4.2.5 Negotiation with partner on using family planning

Regarding negotiation with partner on using family planning, results showed that less than half 129 (44.3%) of the respondents reported they never negotiated followed by 106 (36.4%) of those who sometimes negotiated with their partners on use of family planning. The results were as shown in Figure 4.4

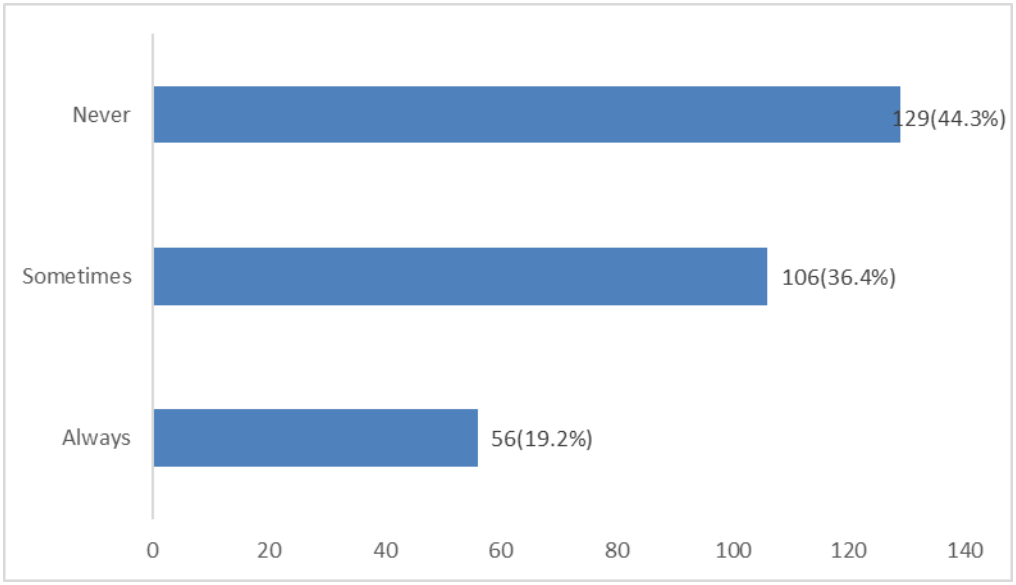

Fig 4.4 Negotiation on using family planning with partner

4.3 Socio-demographic characteristics

Results regarding age of the respondents revealed that slightly more than a third 99 (34.0%) of them were aged between 28-37 years followed by 92 (31.6%) who were aged between 18-27 years. Regarding the highest level of education attained by the respondents, results showed that 92 (31.6%) of the respondents attained secondary level of education followed by 84 (28.9%) who had primary level of education. More than half 163 (56.0%) of the respondents were single followed by 93 (32.0%) who reported to be

married. More than half 170 (58.4%) of the respondents had children while the rest 121 (41.6%) did not have children.

Majority 263 (90.4%) of the respondents were Christians while the rest 28 (9.6%) were Muslims. Results showed that slightly less than half 143 (49.1%) of the respondents were not employed followed by 120 (41.2%) who were self-employed. Most 235 (80.8%) of the respondents had a monthly family income of less than Kshs 10,000 followed by 35 (12.0%) who reported that their monthly income ranged between Kshs 10,000-20,000. Regarding the degree of disability, slightly more than half 154 (52.9%) of the respondents had a physical impairment followed by 94 (32.3%) who were deaf/impaired hearing. The results were as presented in Table 4.3.

The study sought to determine the influence of socio-demographic factors on utilization of family planning services among the respondents. Qualitative results established that poverty and lack of opportunities influenced the utilization of family planning services among women living with disabilities.

Table 4.3: Distribution of socio-demographic characteristics among respondents (n=291)

Variable	Respondent response	Frequency (N)	Percentage (%)
Age in years	18-27	92	31.6
	28-37	99	34.0
	38-47	49	16.8
	≥ 48	51	17.5
Highest level of education	No formal education	65	22.3
	Primary	84	28.9
	Secondary	92	31.6
	Post-secondary	50	17.2
Marital status	Married	93	32.0
	Single	163	56.0
	Divorced	14	4.8
	Widowed	21	7.2
Have children	Yes	121	41.6
	No	170	58.4
Religion	Christian	263	90.4
	Muslim	28	9.6
Occupation	Employed	28	9.6
	Self-employed	120	41.2
	Not employed	143	49.1
Level of family income in	< 10,000	235	80.8
KShs	10,000-20,000	35	12.0
	≥ 20,001	21	7.2
Degree of disability	Deaf/impaired hearing	94	32.3
	Physical impairment	154	52.9
	Intellectual disability	43	14.8

One of the Focused Group Discussants explained:

"…I am not employed I only depend on well-wishers and passersby through begging. Where could I get money to enable me board a vehicle to the hospital to get the family planning services? I wish I could get the family planning services to enable me plan my pregnancies but it's unfortunate I cannot access them because of my disability limiting me to employment opportunities. If the services are brought here, I will agree to use them because it's for my own benefit..."

4.4 Awareness on family planning services

The study sought to establish awareness on family planning among respondents. The respondents were given five questions which included definition of family planning, family planning methods, family planning preventing pregnancy, side effects of family planning and healthy timing and spacing of pregnancy. A correct response was awarded one (1) mark while a wrong response was awarded zero (0) mark. Furthermore, those who scored 0-2 marks were categorized as having low awareness while those who scored 3-5 marks were categorized as having high awareness. The results showed that majority 167(57%) of the respondents had low awareness regarding family planning methods while the rest 124 (43%) had high awareness. The results were as shown in Figure 4.5:

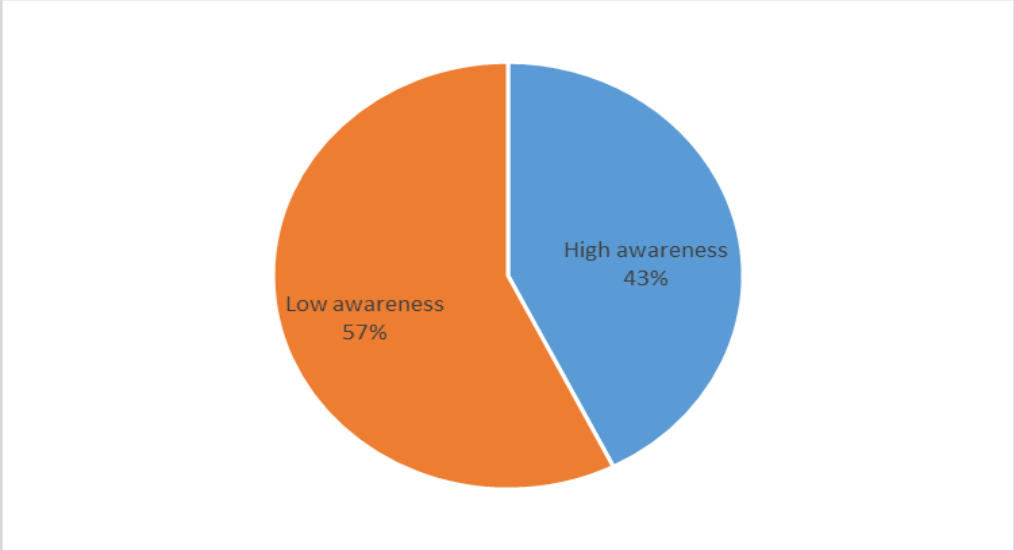

Fig 4.5: Awareness on family planning among respondents

One of the respondents said;

"…I know family planning as a way of trying to prevent unplanned pregnancies and also helps me to control the number of children I want. Currently am using that injection for 3 months but am planning to change to a long-term method to avoid going to seek for the service every 3 months because sometimes it becomes expensive in term of transport and also leaving my small shop unattended. I would advise my friends who are not using any family planning to consider that because it is very important for us so that we can get the children we can care for with our disability status…"

4.5 Attitude towards family planning

Regarding attitude, the respondents were given six (6) statements on a Likert scale of scores between 1-4 where "1" means strongly disagree and "4" means strongly agree. The results revealed that more than half 164 (56.3%) of the respondents of which 136 (46.7%) agreed and 28 (9.6%) strongly agreed that some myths and misconceptions might hinder use of family planning. Majority 190 (65.2%) of the respondents of which 134 (46.0%) strongly agreed and 56 (19.2%) agreed that some family planning methods might lead to infertility. Slightly more than half 156 (53.6%) of the respondents of which 99 (34.0%) strongly agreed and 57 (19.6%) agreed that they would feel discriminated in society if they sought for family planning services.

Regarding religious beliefs, most 177 (60.9%) of the respondents of which 109 (37.5%) disagreed and 68 (23.4%) strongly disagreed with the statement that religious beliefs did not encourage practice of family planning. More than half 163 (56.0%) of the respondents of which 101 (34.7%) strongly disagreed and 62 (21.3%) disagreed that Family planning reduced the urge to engage in sexual intercourse. Results further revealed that 168 (57.8%) of the respondents of which 121 (41.6%) agreed and 47 (16.2%) strongly agreed with the statement that family planning was a safe method of preventing pregnancy among sexually active partners. The results were as presented in Table 4.4:

Table 4.4: Responses on attitude towards family planning among respondents (n=291)

Independent Variable	Response				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Some myths and misconceptions may hinder use of family planning	43(14.8%)	84(28.9%)	0	136(46.7%)	28(9.6%)
Some family planning methods may lead to infertility	51(17.5%)	50(17.2%)	0	56(19.2%)	134(46%)
I would feel discriminated if I sought family planning services	91(31.3%)	44(15.1%)	0	57(19.6%)	99(34.0%)
Religious beliefs do not encourage practicing family planning	68(23.4%)	109(37.5%)	0	58(19.9%)	56(19.2%)
Family planning reduces the urge to engage in sexual intercourse	101(34.7%)	62(21.3%)	0	51(17.5%)	77(26.5%)
Family planning is a safe method of preventing pregnancy	57(19.6%)	66(22.7%)	0	121(41.6%)	47(16.2%)

This section consists of results on attitude towards utilization of family planning services among respondents. The six (6) statements concerning attitude had a minimum score of 6 and maximum score of 24. The scores were further divided into two categories. Negative attitude ranged from 6-14 and positive attitude ranged from 15-24. The results revealed that majority 178 (61%) of the respondents had negative attitude while the rest 113 (39%) had positive attitude towards utilization of family planning services. The results were as shown in Figure 4.6:

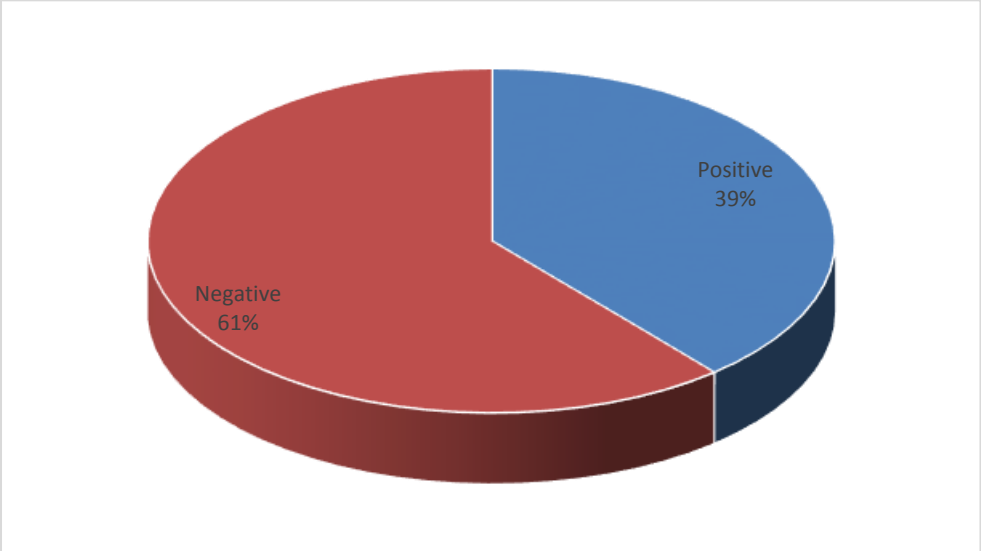

Fig 4.6: Nature of attitude towards family planning among respondents

Results from qualitative data showed indeed the women had a negative attitude towards family planning services as one of the women in the FGD session said;

"…I have heard a lot of things being said on the use of family planning. My friend told me that the husband kept complaining that about her lowered sexual urge. Sometimes you can still get pregnant even when using injections as was the case with my neighbor. In our church the pastor also advised us against family planning. So, I cannot use any family planning method. I don't see any need to do so…"

4.6 Family planning accessibility factors

The study analyzed how accessibility factors influence family planning. Results showed that majority 176 (60.5%) of the respondents reported that there was no presence of a health facility within their locality with the rest 115 (39.5%) reporting presence of a facility. Regarding the distance to the nearest health facility, 119 (40.9%) of the respondents reported that the distance was between 2-3km followed by 100 (34.4%) who reported the distance to be over 4km. On whether the family planning services were

available at the facility, slightly more than half 155 (53.3%) of the respondents reported that they were available while 108 (37.1%) could not tell.

More than a third 106 (36.4%) of the respondents reported they could use more than Kshs 300 to seek for family planning services if they wanted to, followed by 78 (26.8%) who could use between Kshs 100-200. Concerning the attitude of health care workers, majority 190 (65.3%) revealed that it was fair followed by 57 (19.6%) who felt that the attitude was good when they last visited the health facility. More than half 163 (56.0%) of the respondents felt that the healthcare workers were friendly to them followed by 85 (29.2%) who felt health they were not friendly enough. Results also revealed that 122 (41.9%) of the respondents reported that the equipment at the equipment of the facility were not disability friendly followed by 105 (36.1%) who reported that they were friendly to them. The results were as presented in the Table 4.5:

Table 4.5: Family planning accessibility factors among respondents (n=291)

Variable	Respondent response	Frequency (N)	Percentage (%)
Presence of a health facility in the locality	Yes	115	39.5
	No	176	60.5
Distance to the nearest facility	Less than 1KM	72	24.7
	2-3 KM	119	40.9
	Over 4 KM	100	34.4
Availability of family planning services	Yes	155	53.3
	No	28	9.6
	Cannot tell	108	37.1
Cost of seeking family planning services (Kshs)	Free	21	7.2
	<100	50	17.2
	100-200	78	26.8
	201-300	36	12.4
	> 300	106	36.4
Attitude of healthcare workers	Good	57	19.6
	Fair	190	65.3
	Poor	44	15.1
Healthcare workers were friendly	Yes	163	56.0
	No	85	29.2
	Cannot tell	43	14.8
Equipment of the facility are disability friendly	Yes	105	36.1
	No	122	41.9
	Cannot tell	64	22.0

Results from qualitative data revealed that the respondents who felt that the distance was far opted to not seeking for family planning services as reported by one of the women in an FGD session held who said,

"…the nearest facility is like 8kms from here if am not wrong and you can see the vehicles are very few from here. I can't use my wheelchair from here to the hospital to seek for the contraceptives. The very few vehicles are very expensive for me especially being unemployed. However, I am not engaged so I rarely engage in sexual intercourse. But I would like to go for the services soon as it is good to prevent pregnancy. I don't want to become pregnant when am not married it will be a big challenge for me and my grandmother who takes care of…"

Another member of the focused group discussants said:

"...sometimes the nurses don't like taking our issues serious especially the young nurses. There is a day was late for my antenatal clinic the nurse I met on duty shouted at me without even waiting for my explanation. I don't think I will ever go to that facility again because I felt discriminated maybe because of my disability. However, the facility where I delivered my baby the elderly nurse, I met was very friendly to me and she helped me a lot even carrying my newborn to the vehicle and also teaching me how to breast feed and care for my baby…."

4.7 Influence of independent variables on dependent variable

4.7.1 Influence of socio-demographic factors on utilization of family planning services

The study sought to determine the influence of socio-demographic factors on utilization of family planning services among the respondents. The results are as shown in Table 4.6. Results revealed that slightly less than half 46 (49.5%) of the respondents who were aged between 28-37 years had utilized family planning services. There was a significant statistical association between age of the respondents and utilization of family planning services (p=0.014). Regarding the highest level of education, 43 (46.2%) of the respondents who had secondary level of education utilized family planning services. There was an association between the highest level of education of the respondents and utilization of family planning services (p=0.001).

Majority 126 (63.6%) of the respondents who were single did not utilize family planning services. There was no significant statistical association between the marital status of the respondents and utilization of family planning services (p=0.125). Most 135 (68.1%) of the respondents who did not have children had not utilized family planning services. There was a significant statistical association between having children and utilization of family planning services (p=0.002).

Table 4.6: Association of socio-demographic factors and utilization of family planning services among respondents (n=291)

Independent Variable	Response	Dependent variable (Utilization of family planning services)		Statistical significance
		Yes (N=93)	No (N=198)	
Age in years	18-27	23 (24.7%)	69(34.8%)	χ^2=10.574
	28-37	46 (49.5%)	53(26.8%)	df=3
	38-47	18 (19.4%)	31(15.7%)	p=0.014
	≥ 48	6 (6.4%)	45(22.7%)	
Highest level of education	No formal education	12 (12.9%)	53(26.8%)	χ^2=43.502
	Primary	16 (17.2%)	68(34.3%)	df=3
	Secondary	43 (46.2%)	49(24.7%)	p=0.001
	Post-secondary	22 (23.7%)	28(14.1%)	
Marital status	Married	44 (47.3%)	49(24.7%)	χ^2=5.742
	Single	37 (39.8%)	126(63.6%)	df=3
	Divorced	5 (5.4%)	9(4.5%)	p=0.125
	Widowed	7 (7.5%)	14(7.1%)	
Have children	Yes	58 (62.4%)	63(31.9%)	χ^2=10.558
	No	35 (37.6%)	135(68.1%)	df=1
				p=0.002
Religion	Christian	86 (92.5%)	177(89.4%)	χ^2=0.690
	Muslim	7 (7.5%)	21(10.6%)	df=1
				p=0.406
Occupation	Employed	14 (15.1%)	14(7.1%)	χ^2=8.046
	Self-employed	43 (46.2%)	77(38.9%)	df=2
	Not employed	36 (38.7%)	107(54.0%)	p=0.018
Level of family income in KShs	<10,000	55 (59.1%)	180(90.9%)	χ^2=42.890
	10,000-20,000	29 (31.2%)	6(3.0%)	df=2
	≥20,001	9 (9.7%)	12(6.1%)	p=0.001
Degree of disability	Deaf/impaired hearing	35 (37.6%)	59(29.8%)	χ^2=5.963
				df=2
	Physical impairment	39 (41.9%)	115(58.1%)	p=0.051
	Intellectual disability	19 (20.4%)	24(12.1%)	

Majority 126 (63.6%) of the respondents who were single did not utilize family planning services. There was no significant statistical association between the marital status of the respondents and utilization of family planning services (p=0.125). Most 135 (68.1%) of

the respondents who did not have children had not utilized family planning services. There was a significant statistical association between having children and utilization of family planning services (p=0.002). Concerning the respondents' religion, results showed that most 86 (92.5%) of the respondents who were Christians had utilized family planning services. There was no statistical association between the respondents' religion and utilization of family planning services (p=0.406).

Concerning the respondents' religion, results showed that most 86 (92.5%) of the respondents who were Christians had utilized family planning services. There was no statistical association between the respondents' religion and utilization of family planning services (p=0.406).

More than half 107 (54.0%) of the respondents who were not employed did not utilize any family planning services. There was a significant statistical association between the occupational status of the respondents and utilization of family planning services (p=0.018). The results further revealed that majority 115 (58.1%) of the respondents who suffered from physical impairment did not use family planning services. However, there was no association (p=0.051) between type of disability and use of family planning services among respondents. Majority 180 (90.9%) of the respondents whose monthly income was less than Kshs 10,000 did not utilize family planning services. There was a statistically significant association between family monthly income and utilization of family planning services among the respondents (p=0.001).

4.7.2 Influence of awareness on utilization of family planning

The study sought to determine the influence of awareness on utilization of family planning services among the respondents. The results are as shown in Table 4.7. The results revealed that 138 (69.7%) of the respondents who had low awareness had not utilized family planning services. There was a significant statistical association between level of awareness and utilization of family planning services (p*=0.011).

Most 121(61.1%) of the respondents who sometimes engaged in sexual intercourse had not utilized family planning services. There was an association between frequency of engaging in sexual intercourse and utilization of family planning services among the respondents (p*=0.001). Concerning risk of getting unwanted pregnancy, results revealed that most 153 (77.3%) of the respondents who did not report to be at risk of getting unwanted pregnancy had not utilized family planning service.

Table 4.7: Association between awareness and utilization of family planning services among respondents

Independent Variable	Respondent response	Dependent variable (Utilization of family planning services)		Statistical significance
		Yes(N=93)	No(N=198)	
Level of awareness on family planning	High awareness	64 (68.8%)	60 (30.3%)	χ^2=21.471 df=1
	Low awareness	29 (31.2%)	138 (69.7%)	p=0.011
Frequency of engaging in sexual intercourse	Always	28 (30.1%)	42 (21.2%)	χ^2=19.284
	Sometimes	65 (69.9%)	121 (61.1%)	df=2
	Never	0 (0.0%)	35 (17.7%)	p*=0.001
Risk of getting unwanted pregnancy	Yes	47 (50.5%)	23 (11.6%)	χ^2=23.790
	No	39 (41.9%)	153 (77.3%)	df=2
	Cannot tell	7 (7.5%)	22 (11.1%)	p=0.012
Negotiation with partner on using family planning	Always	44 (47.3%)	12 (6.1%)	χ^2=90.677
	Sometimes	41 (44.1%)	65 (32.8%)	df=2
	Never	8 (8.6%)	121 (61.1%)	p=0.032

There was a significant association between risk of getting unwanted pregnancy and utilization of family planning services (p=0.012). On negotiation with partner on using family planning, majority 121 (61.1%) of the respondents who never negotiated with their partners had not utilized family planning services. There was a significant statistical association between negotiation with partner on using family planning and utilization of family planning service (p=0.032).

4.7.3 Influence of nature of attitude on family planning

The study sought to find out the influence of respondents' attitude towards family planning and utilization of family planning services. The results showed that majority 146 (73.7%) of the respondents who had negative attitude towards family planning had not utilized family planning services. There was a significant statistical association between attitude of the respondents towards family planning and utilization of family planning services (p=0.001) as shown in Table 4.8. Therefore, the null hypothesis was accepted.

Table 4.8: Association between nature of attitude and utilization of family planning among respondents (n=291)

Independent variable	Respondent response	Dependent variable (Utilization of family planning)		Statistical significance
		Yes (N=93)	No (N=198)	
Nature of attitude	Positive	61 (65.6%)	52 (26.3%)	χ^2=32.534
	Negative	32 (34.4%)	146 (73.7%)	df=1
				p=0.001

4.7.4 Influence of family planning accessibility factors on utilization of family planning

The study sought to determine the influence of accessibility factors and utilization of family planning services among the respondents. The results are as presented in the Table 4.9.

Results showed that majority 125 (63.1%) of the respondents who reported absence of a health facility within their locality had not utilized family planning services. There was no statistical association between presence of a health facility and utilization of family planning services (p=0.949). Slightly less than half 44 (47.3%) of the respondents whose distance to the nearest facility was less or equal to 1km had utilized family planning services. There was a significant statistical association between distance to the nearest facility and utilization of family planning services (p=0.024).

Majority 61 (65.6%) of the respondents who reported that family planning services were available had utilized the family planning services. There was a statistical association between availability of family planning services and utilization of family planning services (p=0.004). regarding the cost of seeking services, results showed that slightly below half 98 (49.5%) of the respondents who thought that it could cost them more than Kshs 300 to seek for family planning services had not utilized family planning services. There was an association between cost of seeking family planning services and utilization of family planning services (p=0.001).

Table 4.9: Association between accessibility factors and utilization of family planning services among respondents (n=291)

Independent Variable	Respondent response	Dependent variable (Utilization of family planning)		Statistical significance
		Yes(N=93)	No (N=198)	
Presence of a health facility in the locality	Yes	42 (45.2%)	73 (36.9%)	χ^2=7.204
	No	51 (54.8%)	125 (63.1%)	df=1
				p=0.949
Distance to the nearest facility	≤ 1KM	44 (47.3%)	28 (14.1%)	χ^2=7.461
	2-3 KM	32 (34.4%)	87 (43.9%)	df=2
	≥ 4 KM	17 (18.3%)	83 (41.9%)	p=0.024
Availability of family planning services	Yes	61 (65.6%)	94 (47.5%)	χ^2=11.077
	No	9 (9.7%)	19 (9.6%)	df=2
	Cannot tell	23 (24.7%)	85 (42.9%)	p=0.004
Cost of seeking family planning services (Kshs)	Free	9 (9.7%)	12 (6.1%)	χ^2=85.450
	≤ 100	27 (29.0%)	23 (11.6%)	df=4
	101-200	35 (37.6%)	43 (21.7%)	p=0.001
	201-300	14 (15.1%)	22 (11.1%)	
	> 300	8 (8.6%)	98 (49.5%)	
Attitude of healthcare workers	Good	25 (26.9%)	32 (16.2%)	χ^2=12.799
	Fair	57 (61.3%)	133 (67.2%)	df=2
	Poor	11 (11.8%)	33 (16.7%)	p=0.002
Healthcare workers were friendly	Yes	53 (57.0%)	110 (55.6%)	χ^2=20.760
	No	23 (24.7%)	62 (31.3%)	df=2
	Cannot tell	17 (18.3%)	26 (13.1%)	p=0.011
Equipment of the facility are disability friendly	Yes	45 (48.4%)	60 (30.3%)	χ^2=22.481
	No	27 (29.0%)	95 (48.0%)	df=2
	Cannot tell	21 (22.6%)	43 (21.7%)	p=0.071

Most 133 (67.2%) of the respondents who felt the attitude of health workers was fair had not utilized family planning services. There was a significant statistical association between attitude of healthcare workers and utilization of family planning services (p=0.002). More than half 53 (57.0%) of the respondents who revealed that health care workers were friendly to them had utilized family planning services. There was a statistical association between healthcare workers being friendly and utilization of family planning services (p=0.011).

Regarding the equipment of the facility being disability friendly, slightly less than half 45 (48.4%) of the respondents who reported that they were disability friends had utilized family planning services. However, there was no significant statistical association between equipment being disability friendly and utilization of family planning services (p=0.071).

CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussions

5.1.1 Socio-demographic factors

The study sought to find out the socio-demographic factors associated with utilization of family planning services among women with disabilities in Kajiado County, Kenya. The results revealed that slightly more than a third of the respondents were aged between 28-37 years. This may be due to the fact that majority of the Kenyan population are aged between 24-35 years as per the results of the National Census 2019 (KNBS, 2019). Similar results were also reported by a study done on effects of disability on pregnancy experiences among women with impaired mobility which revealed that majority of respondents were aged between 31-39 years (Lezzoni et al., 2015). This results were contrary to a study done on utilization of family planning and associated factors among reproductive age women with disability in Arba Minch Town in Southern Ethiopia which revealed that majority of the respondents had a mean age of 23 years hence younger than the current study (Mesfin *et al*., 2019). The results were also inconsistent with a study done in Ethiopia on sexuality and reproductive health of disabled young people where it was reported that majority of the respondents were aged 20 years (Kassa *et al*., 2016).

There was a significant statistical association between age of the respondents and utilization of family planning services. This is because use of family planning decreased with increase in age. This means that those who were younger were more sexually active than their older counterparts. The results were inconsistent with a study done on factors influencing uptake of family planning services in Talensi District in Ghana which showed

that education does not influence uptake of family planning services (Apanga & Adam, 2015). The results concur with another study done on family planning practices among married women of reproductive age group in a rural area in Thrissur District, Kerala in India which reported that there was an association between current use of family planning and age of the mother (Mathew *et al*., 2015).

Regarding the highest level of education attained by the respondents the results revealed that slightly less than a third of respondents had attained secondary level of education followed those who had attained primary level of education. This is because disability sometimes hinders attaining higher education levels especially amongst victims from poor backgrounds who may not support their educational dreams. The results were contrary to a qualitative study done in Ghana on challenges facing women with disability in accessing and using maternal healthcare services which revealed that majority of respondents had no formal education (Ganle *et al*., 2016).

In another study done in Nigeria on religion, ethnicity and contraceptive use among reproductive age women which revealed that majority of the respondents had lower than secondary level of education (Obasohan, 2015). There was an association between the highest level of education attained and utilization of family planning services. This is because education enables people to access information regarding family planning methods and their effects so as to make an informed decision. The results were in agreement with a study done in USA on use of reversible contraceptive methods among women with physical or sensory disabilities which revealed that women with college education were more likely to use family planning as compared to their counterparts (Wu *et al*., 2017).

The findings of this study showed that more than half of the respondents were single. This may be explained by the fact that people with disability face a lot of challenging and are discriminated in society. Majority of people who are not disabled neglect them since they may not want to get engaged to them since they require special needs which is sometimes seen as a burden hencetheir single status. The results concur with another study in Ghana among women with disabilities which showed that more than half of the respondents never married (Ganle et al., 2016). Similar results were reported by a study done in Awabel District in North-West Ethiopia where majority of women with disability were single (Ayehu *et al*., 2016).

The results further revealed that there was no significant statistical association between the marital status of the respondents and utilization of family planning. This may be attributed to the fact that most of these women were single. Similar results were reported by a study done in Ghana among women with disability which showed that marital status does not influence use of family planning (Apanga and Adam, 2015). The results were inconsistent with a study done on access to and uptake of contraceptives by women with disabilities which revealed a significant statistical association between marital status and use of contraceptives as those who were married were more likely to use family planning (Ayiga & Kigozi, 2016). In another study done in Ethiopia, it was revealed that women who were married were almost four times more likely to use family planning than their unmarried counterparts due to the frequency of sexual intercourse (Mesfin et al., 2019).

Majority of the respondents did not have children. This may be as a result of the fact that most of them were not in a relationship as they may have been neglected and people try to distance themselves from them hence single and not sexually active. They are also

seen as outcasts hence other people who are not disabled may not take them as their sexual partners. The results were inconsistent with a study done in South Africa on sexual and reproductive health where majority of the respondents interviewed had children (Waldman & Stevens, 2015). The results were contrary with a study done in urban Kenya where majority of the respondents had children. This is because the study was done among the general population (Tumlinson *et al*., 2015).

There was a significant statistical association between having children and utilization of family planning services. This is because those who had children were more likely to use contraceptives for proper spacing of pregnancies and control the number of children they would want to have. The results were in agreement with studies done on access to sexual and reproductive health services among people with disabilities where an association was reported between the number of children and use of sexual and reproductive services such as family planning (Dossa *et al*., 2014). Similar results were also reported by systematic review done on factors influencing use of family planning in women living in crisis affected areas of Sub-Saharan Africa, which revealed that having children was a predictor for utilization of family planning services (Ackerson & Zielinski, 2017).

Concerning religion, the resulting revealed that majority of the respondents were Christians. This is because majority of people in the region where the study was done as per their demographic distribution are Christians. In a study done on accessibility to sexual and reproductive health services among marginalized youths in selected districts of Tanzania, similar results were reported where majority of the respondents were Christians (Ngilangwa *et al.,* 2016).

There was no statistical association between the respondents' religion and utilization of family planning services. This may be because majority of the respondents were Christians where issues of family planning are even thought in family sessions thus allowing use of such services irrespective of the bible teachings. In another study on modern contraceptive use among women with disability in Gondar City, Amhara region, Northwest Ethiopia revealed that majority of the respondents came from the Orthodox religion and religion did not influence use of contraceptives (Beyene *et al*., 2019). The results were not in agreement to a study done in Ethiopia where religion significantly influenced the uptake of sexual and reproductive health services (Aderemi *et al*., 2014). This may be as a result of religious and cultural barriers, especially in the Muslim denomination where use of contraceptives is highly prohibited.

The results revealed that slightly less than half of the respondents were not employed. This may be attributed to social exclusion from key society activities including employment due to their disability and given that the study was done in one of the rural counties in Kenya. The results were contrary to a study done in Ethiopia among reproductive age women with disability where it was reported that majority of the respondents interviewed were employed (Yesgat *et al*., 2020). The results were in agreement with a study done in Northwest Ethiopia on use of family planning services among women of reproductive age which revealed that majority of the respondents were housewives (Yalew *et al*., 2015).

There was a significant statistical association between the occupational status of the respondents and utilization of family planning services. This can be explained by the fact that those who were not employed were less likely to use contraceptives due to associated

costs and thus they may not afford. The results were similar to a study done in Ethiopia among women with disability and use of family planning services where it was shown that employed women were 2.2 times more likely to use family planning compared to unemployed ones (Nuriye *et al*., 2020).

Most of the respondents had a monthly family income of less than Kshs 10,000. The low rate of monthly family income could be explained by the fact that majority of the respondents were not employed. The results concur with a study done in Durban in South Africa on access to sexual and reproductive health services among people with disability which revealed that majority of the respondents were low income earners (Mavuso & Maharaj, 2015). In another study done in Bahir Dar City, Amhara region of Northwest Ethiopia on unmet need of family planning among women of reproductive age with disability which revealed that most of the respondents had a lower family monthly income (Tessema *et al*., 2015). There was a statistically significant association between family monthly income and utilization of family planning services among the respondents. This is because those with higher family income were more likely to get access to family planning services thus higher rates of utilization. The results were inconsistent to a study in Turkey on examining the attitude towards family planning of women with disability which revealed that there was no association between family monthly income and use of family planning services (Gurel & Yilmaz, 2018).

Concerning the respondents' disability, the study findings showed that slightly more than half of the respondents had a physical impairment. The results concur with a study done in Ethiopia on knowledge and attitude towards sexual and reproductive services among young people with disability which revealed that majority of the respondents had

impaired mobility (Kassa *et al*., 2016). The results were similar to another study done in Ethiopia where it was reported that majority of the respondents were physically disabled (Yesgat *et al*., 2020). According to a systematic review of the studies from Kenya, Nepal and Uganda on intersecting sexual and reproductive health and humanitarian settings it was revealed that majority of the respondents had physical impairment (Tenabe *et al*., 2015). However, there was no association between type of disability and use of family planning services among respondents. This may be because, irrespective of the type of disability suffered, if one is sexually active then they would use family planning as a method of spacing and controlling the number of children as well as prevent unwanted pregnancies and sexually transmitted infections.

5.1.2 Awareness on family planning services

The study sought to establish awareness of family planning methods among respondents. The results showed that majority of the respondents were not aware of family planning. This may be because, family planning is part of the sexual and reproductive health of women which is a sensitive issue always discussed across a variety of forums. The results were similar to a study done in Talensi District in Ghana on factors influencing family planning among women living with disability where it was revealed that majority of the respondents were not aware of family planning services (Apanga & Adam, 2015).

According to a systematic review of studies from Kenya, Nepal and Uganda on intersecting sexual and reproductive health and humanitarian settings, it was revealed that majority of the respondents had low awareness regarding family planning services (Tenabe *et al.*, 2015). There was a significant statistical association between ever heard

and utilization of family planning services. This is because awareness increases chances of using family planning services among women. The results were similar to a study done in Saudi Arabia where it was shown that people who are aware of the existence of family planning services are more likely to use family planning services (Elgharabway *et al*., 2015).

Regarding the proportion of women living with disability using family planning in Kajiado County, the results revealed that 32.0% of respondents had utilized family planning. This may be explained by the fact majority of the respondents were single thus sexually inactive hence they did not use such services as they were not a risk of getting pregnant. The low utilization rates can also be as a result of discrimination where women living with disability may shy off seeking family planning services. The results were contrary to a study done on utilization of family planning all reproductive age women with disabilities in Southern Ethiopia, it was revealed that 33.7% of respondents utilized family planning (Mesfin *et al*., 2019).

According to a study done in Talensi District in Ghana on factors influencing family planning among women living with disability, the results report was not in support of the current study as only 18 % of respondents had utilized family planning (Apanga & Adam, 2015). The results were inconsistent to a study done on access to and uptake of contraceptives by women with disabilities which revealed that 26.1% of respondents interviewed used contraceptives (Ayiga & Kigozi, 2016). In another study on use of modern contraceptive among women living with disability where it was concluded that 59.3% of respondents had utilized family planning services (Gul & Koruk, 2015).

Concerning the type of family planning method used by respondents, the study findings revealed that slightly less than a third had used Implant. This could probably be among those who were married thus opted for long acting family planning methods such as Implant to prevent them from further getting more children or help them in spacing their children. The results were contrary to a study done in United States of America among women with cognitive disability where it was shown that female sterilization was the most common method of family planning used (Li et al., 2018). The results concur with another study done on contraceptive use among women with learning disability where it was concluded that implants were the most common method of family planning used by majority of respondents (Ledger et al., 2016). According to a study done on contraceptive use at last intercourse among reproductive age women with disability where it was revealed that women with disabilities were more likely to seek for permanent family planning methods than women without disabilities (Haynes et al., 2018).

The study further sought to find out the reasons that barred women with disability from using family planning services, the results showed that less than a third of respondents did not use family planning because of fear of complications which may arise up on usage. This could be because they feared that they may end up having more complications as obstructed labor and eclampsia as a result of their disability. The results were contrary to a study done in Durban in South Africa on access to sexual and reproductive health services among people with disability which reported that majority of the respondents reported that cost of accessing reproductive health services was the main hindrance (Mavuso & Maharaj, 2015). In another study done in Ethiopia on contraceptive utilization and associated factors which revealed that myths and misconceptions

surrounding family planning affected their uptake among women of reproductive age (Endriyas et al., 2017).

Majority of the respondents reported that they were not at risk of getting unwanted pregnancy. This could be attributed to the fact that majority of the respondents were single hence not sexually active. The results were contrary to a study done on use of reversible contraceptive methods among USA women with physical or sensory disability in which majority of the respondents of the respondents were at risk of unplanned pregnancy (Wu et al., 2017). There was a significant association between risk of getting unwanted pregnancy and utilization of family planning services. This is supported by the fact that most of respondents who reported that they were not at risk of getting unwanted pregnancy did not use family planning. The results concur with a study done on contraceptive use among women with intellectual and developmental disabilities where it was reported that those who thought that they were at risk of unplanned pregnancy utilized family planning services at their disposal (Brown et et al., 2018).

Regarding negotiation with partner on using family planning, the results showed that less than half of the respondents reported they never negotiated. This may be as a result of the fact that women are a weaker sex and are always not involved in safer sex due to the effects of male dominance in a true African society. The results were similar to a study done on intimate partner violence, reproductive coercion and unintended pregnancy in women with disabilities where it was concluded that there was no negotiation for use family planning among partners (Alhusen et al., 2019). In another cross-sectional study done in Sindh, Pakistan on assessing the knowledge and practice of contraceptive use it was reported that more than a third of the respondents were unable to negotiate for

condom use (Talpur et al., 2017). There was a significant statistical association between negotiation with partner and utilization of family planning services. This is because of the convincing power of negotiation where women are more likely to use family planning when they discuss their sexual life with their partners.

5.1.3 Nature of attitude towards family planning

The study sought to determine the nature of attitude of the respondents towards family planning services. The results revealed that more than half of the respondents agreed that some myths and misconceptions might hinder use of family planning. This may affect their chances of not utilizing family planning services as their cultural and religious beliefs may bar them. The results were similar to study done in Ethiopia on contraceptive utilization and associated factors which revealed that myths and misconceptions surrounding family planning affected their uptake among women of reproductive age (Endriyas et al., 2018). In another study done on pregnancy in disability and community perceptions and personal experiences in a rural setting in Ghana, it was revealed that myths and misconceptions led to underutilization of family planning services thus increasing the unmet need for such services among the disabled (Akasreku et al., 2018).

Majority of the respondents were of the view that some family planning methods may lead to infertility. This is due to the changes in hormonal balance especially when one is on long acting methods of family planning. It could be also as a result of the side effects of some of the family planning methods which may result to temporary infertility especially during the initial stages when one has ceased from using them. The results concur to with a systematic review on myths and beliefs about contraceptive methods

which indicated that one of the leading reason for underutilization of family planning is that it leads to infertility in women (Eram, 2017). Consistent results were also reached by a study done by Sedlander et al (2018), who concluded that women believed that using modern contraceptives at a younger age or before childbirth can make women infertile.

The results of this study revealed that slightly more than half of the respondents reported that they would feel discriminated in society if they sought family planning services. This may be because of the social neglect where people living with disability are seen to be sexually inactive and therefore going for family planning could expose them that they also engage in sexual intercourse. The results were in agreement with a study done in Zimbabwe on childbearing experiences and aspirations of women living with disability where it was noted that they are discriminated against both within and outside reproductive health centers whenever they see for contraceptives (Peta, 2017). In another systematic review from United States of America, the results showed that women living with disability were discriminated against and subjected to coerced and forced sterilization (Patel, 2017).

On whether religious beliefs were a predictor of utilization of family planning, the results showed that majority of the respondents believed that their religious beliefs encourages practice of family planning. This is unlike in other religions such as the Roman Catholic and Islam that do not encourage family planning as they teach their believers that they should give birth as much as they can without controlling childbirth using modern contraceptives. It is also as a result of the fact that majority of the respondents were Christians and most probably Protestants who are not against family planning. In another study on modern contraceptive use among women with disability in Gondar City,

Amhara region, Northwest Ethiopia, where similar results were also reported with religion not affecting use of contraceptives (Beyene et al., 2019). In another study done in Uganda on determinants of contraceptive non-utilization among women of reproductive age, it was revealed that women belonging to religions other than Hindu had a higher contraceptive non-use (Kakwezi, 2019).

The findings of this study showed that more than half of the respondents disagreed that family planning reduced the urge to engage in sexual intercourse. This may be because majority of the respondents were not on family planning and hence may not have experienced the side effects of using family planning. The results were contrary to a study done by Boozalis et al (2016) whose study concluded that some hormonal contraceptives reduce their libido thus lowering their urge to engage in sexual intercourse. In another study done in India on sexual and reproductive health concerns among persons with disability in which the results support the current study as majority of the respondents revealed that contraceptive use does not affect their sexual life patterns (Sharma & Sivakami, 2019).

The results further revealed that most of the respondents were of the view that family planning was not a safe method of preventing pregnancy among sexually active partners. This could be as a result of the fact that majority of the respondents were not using family planning hence did not report on their experiences once on the said family planning. But yet family planning are effective in preventing unwanted pregnancies as shown by a study in Tanzania on family planning for refugees in camps where it was noted that family planning services are safe in preventing unwanted cases of unintended pregnancies thus persons living with disability should access the sexual and reproductive

health services just like others (Millington, 2019). Also another study done on contraceptive use among high school girls with disability where majority of the respondents were using contraceptives to prevent unwanted pregnancy (Horner-Johnson & Tejera, 2019).

Regarding the level of attitude towards family planning among women living with disability in Kajiado County, the results showed that majority of the respondents had negative attitude towards using family planning services. This may be explained by the fact that majority of the respondents were single and at the same time were not using family planning services hence the negative attitude amongst majority of them. The results were contrary to a study done in Southern Ethiopia where it was noted that majority of women of reproductive age displayed positive attitude towards family planning (Yesgat et al., 2020). Similar results were also reported by a study done in Ghana among women with disabilities which showed that majority of the respondents had negative perceptions towards family planning services (Ganle et al., 2016). In another study on attitude of married women towards contraceptive use in Ilorin Metropolis, Kwara state Nigeria, where majority of the respondents had a negative towards using family planning services (Adegboyega, 2019).

The study further revealed a significant influence of respondents' attitude and utilization of family planning services among respondents. This is because majority of the respondents who had negative attitude towards family planning had not utilized family planning services. The results were similar to a study done in Minch Town in Ethiopia on utilization of family planning and associated factors among women with disability where it was noted that those who had positive attitude were 2.3 times more likely to use family

planning as compared to their counterparts (Mesfin et al., 2019). In another study done in Bangladesh on attitude of women towards contraceptive use, it was reported that positive attitude towards family planning increases chance of utilization among women of reproductive age (Islam & Hasan, 2016).

5.1.4 Family planning accessibility factors

The study also sought to find out the influence of family planning factors on its utilization. The results showed that majority of the respondents reported that there was no presence of a health facility within their locality. This may be because in Kenya, especially in rural areas, health facilities are located at far distances hence lack of a health facility within the locality of majority of the respondents. The results concur with a study done in the city Lubumbashi Democratic Republic of Congo on availability and quality of family planning services where it was reported that health facilities were not easily available (Charles et al., 2019). Contrary results were also reported by a study in Rural Akwa Ibom State in Nigeria where it was revealed that health facilities were easily available within respondents' locality (Etukudo, 2017).

The results further showed that majority of the respondents who reported absence of a health facility within their locality had not utilized family planning services. This may be attributed to the fact that availability of health services means they are easily accessible by those in need of them. However, there was no statistical association between presence of a health facility and utilization of family planning services. This may be because other factors that played a significant role in affecting utilization of family planning such as costs and physical access to the facility also awareness of the respondents on family

planning. The results were inconsistent with a study done in Sub-Saharan Africa which reported that availability of family planning services influences their utilization rates among women of reproductive age across different regions (Kanyangarara *et al*., 2019). Availability of publicly supported contraceptive services increases their utilization rates (Frost et al., 2019).

Regarding the distance to the nearest health facility, slightly less than a half of the respondents reported that the distance was between 2-3km. This may be due to the fact that the study was done in a rural setting where health facilities are distantly located from one another. The results were similar to a study done in Malawi on barriers to accessing healthcare services among persons with disabilities where the distance to the nearest health facility was estimated to be longer (Munthali *et al.*, 2019). There was a significant statistical association between distance to the nearest facility and utilization of family planning services. This is supported by the fact that most of the women whose distance to the nearest facility was less or equal to 1km had utilized family planning services. According to a study done in Ghana on utilization of family planning among women with disabilities, the results concluded that travelling longer distances reduces the chances of using family planning services especially among physically challenged persons (Ganle et al., 2016).

More than a third of the respondents reported they could use more than kshs 300 to seek for family planning services if they wanted. The study being done in a rural setting where employment rates are low especially among women living with disability, using more than 300 Kenya shillings on family planning could be a challenge to them. The results agree with a study done in Durban in South Africa on access to sexual and reproductive

health services among people with disability which revealed the costs of seeking family planning including fee for transport were high and thus unaffordable among marginalized groups (Mavuso & Maharaj, 2015). In a study done in Cambodia on the standard of living among people living with disability it was reported that the direct cost of accessing healthcare services is high (Palmer et al., 2019).

There was an association between cost of seeking family planning services and utilization of family planning services. This is because high cost of family planning services means people could not afford such vital services resulting to underutilization of family planning services among women living with disability. The results were similar to another study done on barriers and facilitators of accessing health services in Cameroon and India among persons living with disability revealed that the financial cost of accessing services, economic decision making at households and opportunity costs associated with taking off work affects utilization of family planning services (Zuurmond *et al*., 2019).

Concerning the attitude of health care workers, the results revealed that majority the attitude of healthcare workers was fairly rated. Good attitude by health workers especially to people who require special needs means they would not shy away from using healthcare services such as family planning. But when people living with disability are treated with unfriendly welcome from care providers, they are more likely to subsequently seek such services in the future. There was a statistical association between healthcare workers' friendliness and utilization of family planning services.

This is supported by the fact that more than a half of the respondents who reported that the health care workers were friendly to them had utilized family planning services. The

results were similar to a qualitative study in Philippines with service providers done on sexual and reproductive health services for women living with disability which showed that unfriendly staff reduces chances of people with disability to seek for services (Lee *et al.,* 2015). In another study done on barriers facing persons with disability in accessing sexual and reproductive health services in Sub-Saharan Africa where unfriendly nature of some healthcare facilities and service providers influenced utilization of healthcare services (Ganle *et al.,* 2020).

The results further revealed that less than a half of the respondents reported that the equipment at the facility were not disability friendly. This is because unfriendly structures in the healthcare facilities mean people living with disability may encounter challenges while accessing healthcare services. Equipment at the health facilities not adjustable such as stares hence hard to maneuver without some assistance thus affecting family planning service utilization among people with disability (Mavuso & Maharaj, 2015). Unfriendly healthcare structures also affect general utilization of services by the disabled. The results further revealed that slightly less than half of the respondents who reported that the facility had disability friendly structures had utilized family planning services.

However, there was no significant statistical association between equipment being disability friendly and utilization of family planning services. This means that access to family planning services was not only grounded on the physical friendliness of the structures but on other factors such as cost and distance to healthcare facilities and staff . The results were contrary to a study done on challenges for women with disabilities accessing reproductive health care around the world which showed that inappropriate

equipment and inaccessible areas within the facility affects subsequent hospital visits (Nguyen, 2019).

5.2 Conclusions

The study concludes that majority of socio-demographic factors were influenced utilization of family planning services among women living with disability in Kajiado County. The following socio-demographic factors influenced utilization of family planning services; age, highest level of education, occupation and level of family income.

The findings of this study showed 57% of women with disability were not aware about family planning services. However, the rate of utilization of family planning services among women with disability in Kajiado County was at 36.2%. The current family planning method mostly used among respondents was Implant.

The study further concludes that the nature of attitude towards family planning among women with disability was negative. The nature of attitude influenced utilization of family planning services in Kajiado County. Myths and misconceptions together with religious beliefs were noted to affect use of family planning services among respondents.

Finally, the study concludes that most of the family planning accessibility factors influenced utilization of family planning services among women with disabilities. They include; distance to the nearest facility, availability of family planning, cost of seeking family planning services and healthcare workers friendliness.

5.3 Recommendations

5.3.1 Recommendations from the study

The study recommends that the County government of Kajiado dealing with persons living with disability together with the national government as well as other stakeholders in the ministry of health should enable women living with disability to start income generating activities so that they can be able access family planning services.

The study also recommends the county government of Kajiado together with other stakeholders in health should increase and scale up sensitization of family planning programs so as to emphasize the importance of using family planning services among women living with disability.

The study further recommends that the Ministry of Health together with other stakeholders in health should dispel the myths and misconceptions as well as the religious beliefs that are associated with underutilization of family planning services among women living with disability thus boost their attitude levels.

Finally, the study recommends that the ministry of health in the county government of Kajiado together with the national government should subsidize family planning services especially among people living with disability so that they can easily access them as much of the services were reported to be unaffordable by majority of respondents or make them free.

5.3.2 Recommendations for Further Research

A similar study should be conducted in a different county to assess the level of utilization of Family planning. A similar study should be conducted in the county to women without disability.

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APPENDICES

Appendix I: Consent form

Introduction

I am Perrista Makau, student from Kenyatta University pursuing a Master of Public Health (Reproductive Health option). I am undertaking a research entitled ***"utilization of family planning services among women living with disability in Kajiado County, Kenya."*** I wish to request for permission from you to participate in this study. I am humbly requesting you to cooperate with me and provide the required information.

Study purpose

The study aims at establishing the levels of utilization of family planning services among women living with disability in Kajiado County, Kenya. The study results will help in addressing the challenges faced in uptake of these services by the said vulnerable group, the results will also help, strengthen and support to enhance decision making thus improve the provision of these services.

Study procedure

Participation in this research involves answering questions which you are asked in a research questionnaire concerning provision of free maternity services in this facility. You are required to tick/fill your responses in the spaces provided and return the questionnaires. At any given time, you are free to seek clarification on aspects related to the study.

Voluntary participation

You have the right to refuse participating in this research as it is purely voluntary and thus optional. You may as well decline to respond to some questions and withdraw from the interview at any particular time without any dire consequences.

Discomforts and risks

This interview schedule is detailed and you may be tired underway. You may realize that a number of questions provoke your cultural and religious beliefs hence you may choose not to answer. This exercise may extend your time you will spend in this facility after receiving your daily routine healthcare services.

Benefits and rewards

Your participation in the study will provide us with the necessary information ensuring provision of effective maternity services that can improve the health of women and their new-born babies seeking free maternity services in public hospitals in Nairobi County. The study will not provide any monetary rewards to participants.

Confidentiality

The interview will be held in private settings within the facility**.** The information you give will be treated with utmost privacy and confidentiality. Your identity will not be revealed and the information will be used for the purpose of this study only.

Contact information

In case of any queries concerning this study, you may opt to contact my research supervisors.

Prof Margaret Keraka

Email: keraka.margaret@ku.ac.keTel No: 0721817521

Dr. Jane Kieru

Email: kieru.jane@ku.ac.ke Tel..... 0723520045

Kenyatta University Ethics and Review Committee (KUERC)

The Kenyatta University Ethical Review Committee Secretariat on chairman.kuerc@ku.ac.ke, secretary.kuerc@ku.ac.ke, ercku2008@gmail.com.

Participant's statement

The information concerning my involvement in this study has been clarified to me. An opportunity has been accorded to me to seek further clarification and my concerns addressed adequately. Taking part in this research is optional and voluntary. To my understanding, this information shall be kept private and confidential. I can also choose to withdraw from participating in this study at any given time.

Sign…… Date……

Principal Investigator's statement

I, the undersigned, have explained to the participant in a language that he/she best understands the procedure to be followed in the research and the risks and benefits to be involved.

Name: Perrista Makau (Q139/CTY/PT/28282/2014)
Email address: perristamakau@gmail.com

Tel No:0712676620

Signature…… Date…….....

Appendix II: Questionnaire

Utilization of family planning services among women living with disability in Kajiado County, Kenya.

Participant number…… Date of the interview……

Instructions: I am going to read for you questions, I request for your answers.

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE STUDY POPULATION

1. Age in years

   [1]18-27 [2]28-37 [3] 38-47 [4] ≥48

2. What is your highest level of education?

   [1] No formal education [2] Primary

   [3] Secondary [4] Post-secondary

3. What is your marital status?

   [1] Married [2] Single

   [3] Divorced [4] Widowed

4. What is your religion?

   [1] Christian [2] Muslim [3] Others

5. What do you do for a living?

   [1] Employed [2] Self-employed [3] Not employed

6. Level of family income

   [1] ≤10,000 [2] 11,000-20,000 [3] 21,000-30,000

   [4] 31,000-40,000 [5] 41,000

SECTION B: AWARENESS AND UTILIZATION OF FAMILY PLANNING

7.

i. What is family planning?

……

……

ii. Name at least three family planning methods

……

……

iii. Do you think that family planning can prevent unwanted pregnancy?

……

……

iv. What are the side effects of family planning methods?

……

……

v. Do you think that family planning can help in health timing and spacing of pregnancy?

……

……

8. Level of awareness on family planning…….

9. a. Have you ever used family planning methods?

[1] Yes [2] No

b. If yes, which method have you ever used?

10. If No, what are the reasons for not using?

[1] Desire more children [2] Refusal of husband

[3] Religious prohibition [4] Fear of complications

[5] Cost [6] Risk of cancer

[7] Lack of knowledge [8] Fear of loss of libido

11. If No, how frequent do you engage in sexual intercourse with your partner?

[1] Always [2] Sometimes [3] Never

12. Do you think you are at risk of getting an unwanted pregnancy?

[1] Yes [2] No [3] Cannot tell

13. How often do you communicate with your partner on using a family planning method during making love?

[1] Always [2] Sometimes [3] Never

SECTION C: THE ATTITUDE TOWARDS FAMILY PLANNING

On a scale of 1-5, please tick one response which best describes your opinion where "1" means "Strongly disagree" "2" means "Disagree" "3" means "Neither agree nor disagree" "4" means "Agree" and "5" means "Strongly agree"

	Statement	**Level of agreement**			
		1	**2**	**4**	**5**
14.	There are myths and misconceptions that hinder use of family planning				
15	Some family planning methods may lead to infertility				
16	I feel discriminated and stigmatized in society if I sought for family planning services				
17	In our society, our religious beliefs do not encourage practicing family planning				
18	Family planning reduces the urge to engage in sexual intercourse				
19	Family planning is safe in preventing pregnancy among couples				

SECTION D: FAMILY PLANNING ACCESSIBILITY FACTORS

20. Is there a health facility in your area?

[1] Yes [2] No

21. How far is the facility from your home?

[1] Less than 1 KM [2] 2-3 Km [3] Over 4Km

22. Are family planning services readily available in the health facility?

[1] Yes [2] No [3] I cannot tell

23. How much were the cost of seeking the family planning services……..Shs

24. If you ever sough for family planning services, how can you rate the attitude of healthcare workers when they handled you?

[1] Good [2] Fair [3] Poor

25. Are healthcare workers friendly to you?

[1] Yes [2] No [3] I can't pay

26. The equipment of the facility are they disability friendly?

[1] Yes [2] No [3] I can't tell

Thank you for your participation

Appendix III: Focused group discussion guide

Dear FGD/KII participant,

You are hereby invited to participate in a focused group discussion session on utilization of family planning services among women living with disabilities in Kajiado County, Kenya. You have been chosen purposively due to the expected level of information and knowledge you are likely to give. You are requested to be honest, free and active in your participation. All information gathered will be held under strict confidentiality and will be used for purposes of this research only.

1. What is your opinion on the effectiveness of family planning services among women living with disability?
2. In your own opinion, what are the challenges of using family planning services among women living with disability?
3. Do you think there are factors that hinder utilization of family planning services among women living with disabilities?
4. What are the health system factors that predict utilization of family planning services among women living with disabilities in Kajiado County? Are there disability friendly equipment/structures in our facilities?
5. From experience, what are the key perceptions of healthcare providers on the provision o family planning services to women living with disabilities?
6. What suggestions would you recommend to the hospital to ensure improved service delivery with regards to family planning among women living with disabilities?

Thank you for your participation!

Appendix IV: Research authorization from Kenyatta University Graduate School

KENYATTA UNIVERSITY
GRADUATE SCHOOL

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

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 020-8704150

Our Ref: Q139/CTY/PT/28282/2014 **DATE:** 9th July, 2019

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

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MS. PERRISTA MAKAU – REG. NO. Q139/CTY/PT/28282/2014

I write to introduce Ms. Perrista Makau who is a Postgraduate Student of this University. She is registered for M.P.H. degree programme in the **Department of Population, Reproductive Health and Community Resource Management.**

Ms. Makau intends to conduct research for a M.P.H. thesis Proposal entitled, **"Utilization of Family Planning Services among Women Living with Disability in Kajiado County, Kenya."**

Any assistance given will be highly appreciated.

Yours faithfully,

PROF. ELISHIBA KIMANI
DEAN, GRADUATE SCHOOL

JC/ONN

Appendix V: Ethical clearance from KU Ethics and Review Committee

Kenyatta University
P.O Box 43844-00100
Nairobi-Kenya

REF: KU/ERC/APPROVAL/VOL1/4

Date: 17th September, 2019

Perrista Makau

P.o Box 43844-00100

Nairobi

Dear Ms. Makau

RE: UTILIZATION OF FAMILY PLANNING SERVICES AMONG WOMEN LIVING WITH DISABILITY IN KAJIADO COUNTY, KENYA

This is to inform you that ***KENYATTA UNIVERSITY ETHICS REVIEW COMMITTEE*** has reviewed and approved your above research proposal. Your application approval number is **PKU/1073/I1123.** The approval period is ***10th September, 2019-10thSeptember, 2020.***

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by ***KENYATTA UNIVERSITY ETHICS REVIEW COMMITTEE.***
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to ***KENYATTA UNIVERSITY ETHICS REVIEW COMMITTEE*** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to ***KENYATTA UNIVERSITY ETHICS REVIEW COMMITTEE*** within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to ***KENYATTA UNIVERSITY ETHICS REVIEW COMMITTEE.***

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely

KENYATTA UNIVERSITY
OFFICE OF THE CHAIRMAN
21 SEP 2019
ETHICS REVIEW COMMITTEE
P.O. BOX 43844 - 00100 NAIROBI

Prof. Judith Kimiywe

CHAIRPERSON- KENYATTA UNIVERSITY ETHICS REVIEW COMMITTEE.

Appendix VI: Research authorization from National Council for Science, Technology and Innovation

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **952497**

Date of Issue: **07/January/2020**

RESEARCH LICENSE

This is to Certify that Ms.. PERRISTA MAKAU of Kenyatta University, has been licensed to conduct research in Kajiado on the topic: UTILIZATION OF FAMILY PLANNING SERVICES AMONG WOMEN LIVING WITH DISABILITY IN KAJIADO COUNTY KENYA for the period ending : 07/January/2021.

License No: **NACOSTI/P/20/2020**

952497

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix VII: Research permit from National Council for Science, Technology and Innovation

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearence from relevant Government Agencies
5. The License does not give authority to tranfer research materials
6. NACOSTI may monitor and evaluate the licensed research project
7. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one of completion of the research
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science, Technology and Innovation
off Waiyaki Way, Upper Kabete,
P. O. Box 30623, 00100 Nairobi, KENYA
Land line: 020 4007000, 020 2241349, 020 3310571, 020 8001077
Mobile: 0713 788 787 / 0735 404 245
E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke
Website: www.nacosti.go.ke

Appendix VIII: Research authorization from Kajiado County

OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND CO-ORDINATION OF NATIONAL GOVERNMENT
COUNTY COMMISSIONER, KAJIADO

Telephone: 0203570295
Fax: 0202064416
Email: kajiadocc2012@gmail.com
When replying please quote

County Commissioner
Kajiado County
P.O. Box 1-01100
KAJIADO

Ref. KJD/CC/ADM/45 VOL. II1 (21) **15th January, 2020**

Ms. Perrista Makau,
Kenyatta University,
P.O BOX 43844 – 00100,
NAIROBI

RE: RESEARCH AUTHORIZATION – MS. PERRISTA MAKAU

Following the request made on your behalf by National Commission for Science, Technology and Innovation vide letter **Ref. No. NACOSTI/P/20/2020** dated 7th January 2020.

You are hereby granted authority to carry out research on ***"Utilization of Family Planning Services among Women Living with Disability in Kajiado County"***, for the period ending 7th January.2021.

It is expected that you adhere to research ethics in doing your study.

CHERONO RORIAN
FOR: COUNTY COMMISSIONER
KAJIADO COUNTY.

CC:

County Director of Education,
KAJIADO COUNTY

County Director of Health Services,
KAJIADO COUNTY

Deputy County Commissioners,
KAJIADO COUNTY

Appendix IX: Maps of the study area