

**FACTORS AFFECTING THE UTILIZATION OF FAMILY PLANNING
SERVICES AMONG WOMEN OF REPRODUCTIVE AGE IN ELDAS SUB-
COUNTY, WAJIR COUNTY**

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**A THESIS SUBMITTED IN PARTIAL FULFILMENT FOR THE
REQUIREMENTS OF A MASTER OF PUBLIC HEALTH DEGREE OF KENYA
METHODIST UNIVERSITY**

SEPTEMBER 2024

DECLARATION

Declaration by the Candidate:

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DEDICATION

Special dedication goes to my dear Parents, husband and son. Thank you for your unwavering love, support and inspiration.

ACKNOWLEDGEMENT

I thank the almighty God for granting me knowledge and understanding, favour, sufficient grace, provision, protection and resilience during this academic journey. Sincere gratitude goes to the Kenya Methodist University for the knowledge I have acquired during the period of training. I also appreciate the selfless support from my supervisors; Dr. Consolata M'mayi and Dr. Eunice Nyavanga for their guidance through from the concept to the final document of this thesis writing.

I would like to express my gratitude to the KeMU library staff for their invaluable assistance in facilitating the thesis writing process. Their guidance on utilizing and accessing library materials has greatly eased my academic endeavors.

Special thanks to my family, parents, husband and my son for their moral support, patience and understanding, even when I've been away from home to learn, write, present and go to the research field. God bless you all.

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ABSTRACT

Wajir County in Kenya has seen a rapid increase in its population over recent decades, leading to resource shortages. Factors contributing to this include high birth rates, early marriages, unmet needs for family planning, and low levels of education. Despite efforts by the Kenyan government and other stakeholders to improve access to family planning services through policies and interventions, the county still faces challenges such as high rates of large families, irregular birth spacing, unintended pregnancies, unsafe deliveries, abortions, and maternal mortality. The objectives of this study were to establish the factors influencing the use of family planning (FP) services in Wajir County among women of childbearing age (15–49 years), with a special emphasis on the sub-county of Eldas. In particular, the research aimed to investigate the prevalence of use of FP services among women of childbearing age (15–49 years) in Eldas sub-county in Wajir County, to evaluate the social-cultural factors influencing the use of FP services amongst women of childbearing age (15–49 years) in Eldas sub-county in Wajir County, and to study the socio-economic factors affecting the use of FP services amongst women of childbearing age (ages 15–49) in the Wajir County sub-county of Eldas. The research used a cross-sectional study method. There were around 20,002 women aged between 18 and 49 years in Eldas Sub-county in Wajir County. A total of 388 households were sampled using a stratified random sampling method. Research instruments, validated for content by experts, were pre-tested in Wajir West sub-county. Ethical approval was obtained from Kenya Methodist University and the National Commission for Science, Technology, and Innovation, with informed consent secured from all participants. The results from this study show that less than half of the women interviewed—4%—were using a method of FP, while 95.3% were not. The findings further indicated that socio-economic factors, social-cultural factors and health system factors were the statistically significant contributors to FP utilization. It was concluded that socio-economic factors, social-cultural factors and health system factors affected family planning services in Eldas sub-county, Wajir County among women of childbearing age (15–49 years). The study recommended that programmers should ride on the low demand for FP in the area and create awareness and advocacy for long-acting FP methods. The findings indicated that most respondents relied on short-acting contraceptive methods, which are costly and less reliable over time. To address this, enhancing access to primary education across the population and implementing adult learning programs in rural areas to boost literacy levels is crucial. Moreover, involving men and engaging religious leaders in family planning initiatives at all community levels is essential. Additionally, implementing a communication campaign emphasizing spousal communication can effectively encourage discussions about family planning among couples.

LIST OF ACRONYMS AND ABBREVIATIONS

ABM	:	Andersen's Behavioral Model
AIDS	:	Acquired Immunodeficiency Syndrome
CUC	:	Current use of contraception
FP	:	Family planning
HIV	:	Human Immunodeficiency Virus
KDHS	:	Kenya Demographic and Health Survey
KNBS	:	Kenya National Bureau of Statistics
MDGs	:	Millenium Development Goals
MNH	:	Maternal and Newborn Health
MoH	:	Ministry of Health
NCPD	:	National Council for Population and Development
NDHS	:	Nigerian Demographic and Health Survey
NGO	:	Non-Governmental Organization
ONRHS	:	Oman National Reproductive Health Survey
SDGs	:	Sustainable Development Goals
STIs	:	Sexually Transmitted Infections
USAID	:	The United States Agency for International Development

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter presented the background of the study, the statement of the problem, the objectives of the study, the research questions, justification, significance of the study, limitations of the study, delimitations of the study, assumptions of the study and lastly the operational definition of key terms.

1.1 Background of the Study

Family planning refers to use of modern contraceptives or natural techniques for either limiting or spacing pregnancies. FP is one of the most cost-effective ways to prevent maternal, infant, and child mortality as it reduces the number of unintended pregnancies, the number of abortions, and the proportion of births at high risk. FP services refers to any medical or social activities and educational or informational services in Family planning that facilitate individuals so as to make decisions on the number and spacing of children and to freely choose the means by which they want to achieve this (Agesa, 2016). Therefore, one can conclude that the low uptake of family planning services could be one of the reasons for Kenya's high maternal, infant, and child mortality rates. From the economic viewpoint, family planning helps reduce parenthood's financial and emotional burden. Families with fewer and healthier children can devote more resources to providing their children with adequate food, clothing, housing, and educational opportunities. The high proportion of malnourished and out-of-school children in Kenya, as asserted by, can again be attributed to the low uptake of family planning services (Amo-Adjei et al., 2017).

Family planning is essential for women's empowerment and health, with uptake varying significantly across countries. In the United States, approximately 76% of women aged 15-49 have used contraceptives at some point, with birth control pills (15%) and female sterilization (17%) being the most common methods. Despite broad access, disparities exist, particularly among low-income women and women of color (Smith et al., 2022; Johnson & Lee, 2021).

Canada benefits from a robust public healthcare system that supports family planning. Around 63% of women in the reproductive age bracket report using contraception, primarily oral contraceptives (20%) and condoms (17%). Government policies ensure coverage of contraceptive methods, although rural areas still face challenges related to access and stigma (Brown et al., 2023). In China, family planning has evolved significantly since the shift from the one-child policy. The contraceptive prevalence rate among married women is approximately 83%, with IUDs (45%) and sterilization (30%) being the most commonly used methods. The government promotes family planning education, but challenges such as an aging population and gender imbalances remain (Zhao et al., 2022; Liu & Wang, 2021).

Germany reports that about 73% of women aged 15-49 use contraceptives, with hormonal methods (40%) and barrier methods (17%) prevalent. The national healthcare system integrates family planning services, supported by strong sexual education programs, although immigrant populations may face access issues (Müller et al., 2023). In Spain, around 76% of women in the same age group utilize contraceptive methods, primarily the pill (30%) and condoms (20%) (García & Fernández, 2022).

In Africa, family planning is critical for enhancing women's health and autonomy, but uptake varies significantly among countries like Nigeria, South Africa, and Egypt. In Nigeria, the contraceptive prevalence rate is about 16% among women of reproductive age, with barriers including cultural resistance, lack of awareness, and limited access to services. The most commonly used methods are traditional practices, with modern methods like pills and injectables underutilized (Adebowale et al., 2023). South Africa exhibits a higher contraceptive uptake, with approximately 58% of women aged 15-49 using some form of contraception. The government provides free contraceptive services, and methods such as injectables (30%) and condoms (27%) are widely used (Khan & Singh, 2022). In Egypt, family planning is relatively well-established, with a contraceptive prevalence rate of about 60%. The most common methods include the pill (40%) and IUDs (35%). The Egyptian government has implemented successful family planning programs, but cultural norms and misconceptions about contraceptive use still hinder uptake among some populations (El-Masri et al., 2023).

In Kenya, family planning is vital for enhancing maternal and child health, with a contraceptive prevalence rate of approximately 58%. The most commonly used methods include injectables (24%), pills (17%), and condoms (11%). Access to and knowledge about family planning are critical predictors of service utilization (Bakibinga et al., 2016). Family planning services are available at all levels of healthcare, making them accessible to the population. However, studies indicate that adequate knowledge is predominantly found among urban residents and women with at least a secondary education (Mwangi et al., 2023).

This suggests that the vast majority of rural dwellers, who constitute 80% of the population, lack adequate knowledge, leading to lower utilization rates. Other factors influencing family planning uptake include education level, wealth index, and geographical region. Despite progress, cultural barriers and misinformation persist, particularly in rural areas (Kamau et al., 2022). To improve reproductive health outcomes, it is essential to enhance education and awareness initiatives, ensuring that all segments of the population can access and utilize family planning services effectively.

According to Agadjanian (2019), contraceptive prevalence ranges from 54% in Kirinyaga County to < 10% in Wajir County. Male partner consent has also been shown to predict utilization of family planning services (Chakraborty et al., 2016). Findings of a study by Diamond-Smith et al. (2020) showed that the use of family planning was high among the respondents whose husbands gave consent to the use of family planning. Low utilization of family planning services in Kenya implies the poor state of predictive factors (access, knowledge, and partner consent) coupled with barriers to utilizing these services. According to Ouedraogo et al. (2020), barriers to using modern methods of family planning services in Kenya include concern for safety to health, Husband's opposition, desire for more children, religious prohibition, lack of money, and fear of side effects.

Given the many benefits of family planning, it is pertinent that Kenya develops and implements interventions to improve the utilization of family planning services, especially now that the country is faced with poor maternal, newborn, and economic indices. Though there have been several interventions and programs by both the

government and development partners aimed at improving the utilization of family planning services, such interventions and programs seem to yield just little results as utilization has remained consistently low. Interventions and programs aimed at improving the utilization of family planning services can only be effective and yield desired results if the utilization of the services in terms of preferences, trends, patterns, and utilization associated factors such as accessibility and availability of the services to the populace is examined (Owuor, 2020).

The utilization of FP services still receives cultural, religious and specific individual's critics among the Somali communities. These have since lead to uncontrolled birth and poor maternal and child health. Having deeper understanding of the factors affecting the utilization of FP services use is critical to the efforts of programs to increasing the contraceptive prevalence amongst the Kenyan Somali women of reproductive age. Most of the studies done looked superficially on religion factor as major reason why Kenyan Somali women and Somali women elsewhere do not practice contraception. The deep probe on what exactly is a major contributing factor within the Islamic religious belief, contributes to low utilization of FP services has not been done. Therefore, this study looks deeper within and without the Islamic belief and practice on FP utilization.

1.2 Statement of the Problem

The unmet need for family planning (FP) in Kenya remained alarmingly high, recorded at 18% as of 2022, down from 26% in 2014 (Owuor, 2020). However, this decline masked a troubling reality in marginalized areas such as Wajir, Samburu, and Turkana, where the unmet need for FP persisted at 23% (Wambugu et al., 2022). The

consequences of this unmet need were profound; in Kenya, approximately 43% of pregnancies were unwanted, leading to a significant number of abortions and unplanned births (Bakibinga et al., 2016). In Wajir County, women of reproductive age (15-49 years) faced substantial barriers to accessing FP services, exacerbating the region's challenges.

Wajir County experienced a rapid population increase over recent decades, resulting in severe resource shortages driven by high birth rates, early marriages, and low education levels (Mohamed et al., (2020). According to the 2022 Kenya National Bureau of Statistics (KNBS) report, contraceptive prevalence in Wajir stood at a mere 26%, considerably lower than the national average. Despite concerted efforts by the Kenyan government and various stakeholders to improve access to FP services, the region continued to suffer from high rates of large families, irregular birth spacing, unwanted pregnancies, unsafe abortions, and maternal mortality. If these issues remained unaddressed, the socio-economic stability of Wajir County would have been jeopardized, leading to continued cycles of poverty, health crises, and increased maternal and child mortality rates. Therefore, it became critical to understand the factors contributing to the low uptake and utilization of FP services, with a particular focus on Eldas sub-county in Wajir County.

1.3 Objectives of the Study

1.3.1 General Objective

This study aimed at investigating the factors affecting the utilization of family planning services among women of reproductive age (18 – 49 years) in the Eldas sub-county.

1.3.2 Specific Objectives

The specific objectives were –

- i. To determine the prevalence of use of family planning services among women of reproductive age (15 – 49 years) in Eldas sub- County.
- ii. To explore the socio-economic factors affecting the utilization of family planning services among women of reproductive age (15-49 years) in the Eldas sub-county.
- iii. To establish the social-cultural factors affecting the utilization of family planning services among women of reproductive age (15-49 years) in the Eldas sub-county.
- iv. To determine the health system factors affecting the utilization of family planning services among women of reproductive age (15-49 years) in the Eldas sub-county.

1.4 Research Questions

- i. What are the prevalence of the use of family planning services among women of reproductive age (15 – 49 years) in Eldas sub- County?
- ii. What are the socioeconomic factors affecting the utilization of family planning services among women of reproductive age (15-49 years) in the Eldas sub-county?
- iii. What are the social-cultural factors affecting the utilization of family planning services among women of reproductive age (15-49 years) in the Eldas sub-county?
- iv. What are the health system factors affecting the utilization of family planning services among women of reproductive age (15-49 years) in the Eldas sub-county?

1.5 Justification

The utilization of family planning (FP) services in Kenya, particularly in Wajir County, remained low despite significant efforts by the government and development partners. With a prevalence rate of only 26% among married women or those in unions, this statistic indicated that 74% of women of reproductive age in this demographic did not access FP services, placing them at risk for unintended pregnancies, unsafe abortions, and unplanned births. Family planning was recognized globally as one of the most cost-effective strategies to reduce maternal, infant, and child mortality by preventing unintended pregnancies and high-risk births.

This study aligned with the World Health Organization (WHO) recommendations for increasing access to FP services to enhance reproductive health outcomes. It also supported Kenya's Vision 2030, which aimed to improve health indicators and ensure universal access to reproductive health services. Furthermore, this research contributed to the United Nations Sustainable Development Goals (SDGs), specifically Goal 3, which sought to ensure healthy lives and promote well-being for all at all ages, and Goal 5, which focused on achieving gender equality and empowering all women and girls.

By identifying the factors affecting the utilization of FP services among women of reproductive age (18–49 years) in Wajir County, with a specific focus on Eldas sub-county, the findings of this study were expected to highlight the barriers these women faced in accessing FP services. Such insights provided a valuable foundation for developing targeted interventions that enhanced access to FP, ultimately contributing to reduced population growth and addressing reproductive health challenges

associated with unwanted pregnancies. In doing so, this study aimed to support local and national health strategies that prioritized women's health and reproductive rights in line with both regional and global health objectives.

1.6 Significance of the Study

Practically, the study assists in documenting the level of utilization of family planning services in the Eldas Sub-County. If adopted by policymakers, the study findings may help in the formulation of future public health policies aimed at improving the provision, uptake, and utilization of modern family planning services. These improvements will enhance the provision of reproductive health services, especially to women in Eldas Sub-County. The findings of this study have academic implications for the future consumption and provision of family planning services in the Eldas sub-county in Wajir County. Academically, the study contributes to the body of knowledge about the level of utilization of family planning methods in the Eldas sub-county. It also forms a basis for others to develop their studies based on the gaps identified.

1.7 Limitations of the Study

The use of FP services utilization still receives cultural, religious and specific individual's critics among the Somali communities, therefore generalizing the findings beyond Wajir County should be done cautiously.

1.8 Delimitations of the Study

Even though many factors affected the utilization of FP services among women of reproductive age (15-49), the research concentrated solely on the social-cultural factors, socio-economic factors and health systems factors. Also, the outcomes were

interpreted in the light of FP utilization among women in Eldas sub-county where major contributing factors within the Islamic religious belief, contributes to low FP services utilization had not been done.

1.9 Assumptions of the Study

The basic assumption of this study was that the researcher targeted female respondents from the selected households and assumed that they were willing to participate in the study. The researcher also assumed that the respondents would give sincere feedback and that there would be at least one woman aged between 15 and 49 in the sampled households. The final assumption was that the targeted respondents would be available to answer questions that would guide this study.

1.10 Operational Definition of Key Terms

Family planning	In this study, family planning refers to the practice that empowers women of reproductive age to make informed choices regarding the number of children they wish to have, as well as the timing and spacing of these children. This choice is essential for enhancing women's health and well-being in Wajir County (Demie, 2018).
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Family planning services	This term refers to any medical or social activities and educational or informational services in Family planning that facilitate individuals so as to make
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decisions on the number and spacing of children and to freely choose the means by which they want to achieve this.

Reproductive age

For the purposes of this study, reproductive age is defined as the age range of 15 to 49 years for women. This demographic is critical for examining family planning utilization in Wajir County, as it encompasses those most likely to need and seek FP services (Tanabe et al., 2017).

Women of reproductive age

In this study, this term specifically refers to women aged 15-49 years who wish to delay having children, have no intention of having additional children, or are currently utilizing modern contraceptive methods. Understanding this group is vital for assessing family planning needs and utilization rates in the region.

Utilization

In the context of this study, utilization refers to the actual engagement and consumption of family planning services by women of reproductive age. This includes both the uptake of contraceptive methods and the participation in family planning counseling and education, which are critical for identifying barriers to access in Wajir County (Demie, 2018).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the literature reviewed from other sources focusing on the prevalence of the use of family planning services among women of reproductive age (15 – 49 years), social-cultural factors, socio-economic factors, and health systems factors and their effects on the utilization of family planning services among women of reproductive age (15-49 years). Further, this chapter presents the theoretical and conceptual framework.

2.2 Prevalence of Family Planning Uptake

2.2.1 Global Perspective of Family Planning Services Utilization

Globally, the use of modern contraception has risen slightly, from 54% in 1990 to 57.4% in 2014 (World Health Organization, [WHO] 2015). An estimated 225 million women in developing countries would like to delay or stop childbirth but they are not using any method of contraception. Preventing high-risk pregnancies through increasing the availability of family planning services could also save at least 25% of the women's lives and those of their children currently lost during pregnancy and at childbirth . Averagely a woman in the world now bears 2.69 (i.e. between 2 and 3) children in her reproductive lifetime. In appreciation of the family planning importance, the WHO adopted a framework 2005-2014 for accelerated action to reposition family planning on national agenda and in the reproductive health services. The outline underscores on increased efforts to promote the recognition of the fundamental role of family planning in achieving health and development objectives at all levels. Family planning is crucial in achieving three of the United Nations'

Millennium Development Goals namely, reduction in child mortality, improving maternal health, and combating HIV/AIDS, malaria and other diseases.

2.2.2 Family Planning Services Utilization in Sub-Saharan Africa

Fertility has declined in most developing countries but remains high in most of sub-Saharan Africa, to an average of 5.2 children per woman in her lifetime. The contraceptive prevalence rate in sub-Saharan Africa is estimated at 21.8%, of this only 17 % married women of reproductive age use a modern contraceptive. CPRs for modern methods ranged from 1.2 percent in Somalia to 60.3 percent in South Africa. (World Bank, 2010) A recent review of demographic health survey for countries in sub-Saharan Africa showed the relationship between the low contraceptive prevalence rates with high unmet need has both led to increased unintended pregnancies and increased maternal, infant and child morbidity and mortality.

2.2.3 Family Planning Services Utilization in Kenyan Perspective

Over the last 40 years, Kenya has made good progress in increasing the utilization of contraception among married women. Religion, partner approval, friendly service providers are among the factors found to influence use of contraceptives in the slums, (Sedgh, 2018). In 2017, the prevalence the main reason why women used the contraception was either to prevent unwanted pregnancy or STI's while the reason for no use was because of less sexual activities to unmarried women, (Sedgh, 2016). of contraceptive use among married women in Kenya was 7% and this progressively increased over the years to 58% in 2014 . There was also an overall decline from the 8.1 births per woman in 1977 to 6.7 in 1998, 4.7 in 1989 and 4.6 in 1998 according to World Fertility survey (WFS, 1977) with a sharp decrease measured between the 1977

to 1978 Kenya Fertility Survey (KFS) and the 1993 KDHS. The decline slowed in the 1990s, but the decrease in TFR from 4.6 in the 2008-2009 KDHS to the current TFR of 3.9 may indicate that Kenya's fertility is returning to the decline observed from the mid 1970s through to the 1990s. This is estimated to possibly reach 2.4 children by 2050 (World Bank 2015). This drop is mostly attributed to increased practice of modern contraceptive methods over time, and improved educational status of women. The contraceptive prevalence rate (of all methods) rose sharply since the early 1980s; rising by almost half from 17% in 1984 to 33% in 1993. It then progressively rose gradually to 39% of married women in 1998, 46 % in 2009 and 58% in 2014. Demographic shift began to manifest in 1989, when population growth rate declined to 3.4 % and further to 2.5 % in 1999, but estimated at a higher level of 2.9% in 2009. Owing to the past growth rates, Kenya's population is still youthful with nearly half being aged 18 years or below. This is a clear demonstration of demographic momentum- a phenomenon consequent to continued population increase despite reducing fertility rates, which is brought about by waves of large populations of young person's entering reproductive age in successive years.

Family planning services, in Kenya, is offered by the ministry of medical services and public health, non-Governmental organizations NGO's and private sectors. Public facilities provide contraceptives to more than half (57 %) of modern method users. The government hospitals supplying 25%, government health centers 20% while dispensaries supply 15%. Moreover, 36% are supplied through private medical sources, and 6% are supplied through other sources. The Kenya Service Provision Assessment of 2010 reports that 85% of Kenyan health facilities offer some type of temporary modern methods of FP at minimum, with little difference in the availability

of services by type of facility (KSPAS,2010). According to Walakira et al. (2019), the most frequently reported method among women of reproductive age in union are Injectable (52.6 percent), implants (19.6 percent), and pills (13.1 percent). Kenya is acknowledged to have dedicated resources“ to reproductive health through the ministry of health (MOH) which spearheads the policies, guidelines and strategic plans to ensure that men and women reproductive health needs are sufficiently met, UNHCR baseline study.

2.2.4 Family Planning Services Utilization among Women in Wajir County

Studies demonstrate that Somali communities have negative attitudes and believe towards the use of contraceptives to space the birth of their children. More often, the family planning is perceived to be prohibited by the Islam and large families is favored (UNHCR baseline study, August, 2018). While many Islam scholars have explained in details with reference to Quran about the family planning, many Somalis men and women still misconstrued the Quran and misinterpret it to a larger extend. Depending on whose scholar’s ideology on family planning is promoted, it shapes the thinking and attitudes of family planning on many Muslims, more specifically the Somali community.

Agadjanian (2019) explains that the condom and other form of the Family planning may be practiced under certain condition. These conditions states a woman should not use birth control pills, unless the following conditions are met: Firstly, if she is ill and cannot cope with a pregnancy every year, or she is physically unfit, or there are some other reasons that getting pregnant every year may harm her. Secondly, her husband should grant her permission, because the husband has the right to have children. There

must also be consultation with the doctor, to find out whether these pills are harmful or not. If these two conditions are met, there is nothing wrong with taking these pills, but that should not be on a permanent basis, because that means preventing having children. The Quran also through the Hadith describes that there is nothing wrong in practicing „azl (coitus interruptus), to prevent pregnancy. The hadith attempts to justify why withdrawal method of birth control was allowed. The Hadith asserts that the main reason was so as to allow woman to continue doing her work (Barden-O’Fallon, 2017).

According to some scholars’ school of thought, there are methods which are religiously accepted which include condoms, IUD, tubal tie, coil etc. which may be practiced as Contraceptives. "Let there be no change in Allah's creation." (Qur'an 30:30) this Quran recitation clearly forbids any contraceptive methods that are known to be non-reversible and that which involved tubal ligations and vasectomy or any other procedure that may be viewed to alter the creation of women and by this it means mutilation (Baschieri et al., 2019). To examine, this reason from a cultural perspective, the Kenyan Somalis have culturally practice circumcision on girls which involves genital mutilation. Which in their view is meant to be an intervention to sexual activities before marriage, practice so strongly discouraged? This contradicts the assertion on the FP methods such as tubal ligation and creates a sufficient basis to investigate the factors which actually has significant contribution to low FP services utilization amongst the women in Eldas sub-county who are of Somali origin.

2.3 Socio-Economic Factors

Social and economic determinants that influence the use of FP-related services. Both factors have been found to affect the usage of contraception by women in society.

These considerations also include several things: Level of education, and attitudes of husbands, and acceptance of contraceptive utilization.

2.3.1 Level of Education and Utilization of FP Services

Starbird et al. (2016) conducted a longitudinal study in Oman that highlighted the relationship between women's empowerment and unmet contraceptive needs among ever-married women. They identified educational attainment and economic status as key factors affecting contraceptive usage, revealing that while nearly 25% of women experienced unmet contraceptive needs, this percentage decreased significantly with higher education and stable employment. Their findings suggested that although empowered women were more likely to utilize contraceptives, education emerged as a more reliable predictor of contraceptive fulfillment, indicating that traditional social factors still wield substantial influence.

Expanding on this theme, Chen et al. (2020) examined the impact of education on reproductive health across 30 Sub-Saharan African countries. Their research established a causal relationship between higher education levels and improved reproductive outcomes, finding that increased educational attainment correlated with greater contraceptive use and lower fertility rates. This aligns closely with the findings from Oman, reinforcing the idea that education plays a critical role in shaping reproductive health decisions.

Agadjanian's (2019) study in Kenya further confirmed the strong association between women's education and the utilization of modern family planning methods. It showed that education not only enhanced access to healthcare but also contributed to reducing child mortality rates and influencing family planning choices. However, it also revealed a persistent preference for larger families among less-educated women,

highlighting the significant impact of socio-cultural factors on reproductive choices. Despite the consistent findings across these studies regarding the importance of education, a notable gap remained in understanding how socio-cultural barriers interacted with educational attainment to affect family planning service utilization. While education is a vital factor, the persistence of traditional norms—especially in marginalized communities—suggested that education alone may not suffice to change reproductive behaviors.

2.3.2 Relationship Factors

In examining the role of communication in reproductive health, Oyediran (2018) investigated how husband-to-wife dialogue influences fertility preferences and family planning (FP) among married couples in Ogbomoso and Iseyin, Nigeria. The study revealed that early relationship communication significantly impacts decisions regarding family planning and preferred family size. These conversations allow couples to express concerns related to reproductive health, such as unplanned pregnancies, health consequences of chosen contraceptive methods, and the risks of sexually transmitted infections. Ultimately, open dialogue can transform perceptions into actionable decisions, leading to increased contraceptive use.

In contrast, Al-Balushi et al. (2015) focused on Oman, analyzing factors affecting the utilization of family planning services among ever-married women aged 15-49 using data from the 2008 Oman National Reproductive Health Survey. Their findings highlighted numerous barriers that prevent effective communication about sexual and reproductive matters. They noted that sociocultural factors often create a complex environment in which discussing these topics is considered taboo. Both men and

women frequently hesitate to engage in conversations about sex and family planning, particularly in the early stages of a relationship, due to fears of disapproval or misunderstandings. For instance, if a woman broaches the subject of abortion, her husband might misinterpret this as an indication of her promiscuity or infidelity, further stifling open communication.

Together, these studies underscore the importance of communication in shaping reproductive health decisions, yet they reveal significant cultural barriers that hinder these discussions. Oyediran's (2018) findings suggest that positive communication can empower couples to make informed choices about family planning, while Al-Balushi et al. (2015) highlight how deeply ingrained sociocultural norms can obstruct such dialogues. This juxtaposition pointed to a critical gap in understanding how cultural perceptions and communication dynamics enhance reproductive health outcomes.

2.4 Social-Cultural Factors

In general, the use of family planning services by women in society is influenced by socio-cultural factors. Such variables are listed by numerous authors, including the following; preference for male children, polygamy, and religion.

2.4.1 Polygamy and Family Planning Services

Recent studies have examined the complexities of family planning utilization in various contexts, but significant gaps remain, particularly regarding specific regional factors. For instance, Baschieri et al. (2019) investigated the dynamics between polygamous and monogamous marriages in Malawi, revealing that women in polygamous unions were less likely to utilize contraception due to partners' preferences for larger families and educational disparities. However, this study did not explore how cultural attitudes in different regions, such as Wajir County, specifically influence these dynamics.

Agadjanian (2019) provided a broader analysis of polygyny across countries, highlighting variations in reproductive behaviors linked to cultural norms. While this study categorized polygynous structures and their associated reproductive trends, it did not focus on the individual experiences of women within these systems, particularly in marginalized areas like Eldas. This lack of localized understanding underscores a gap in identifying how unique cultural and socio-economic factors in Wajir County specifically hinder or facilitate family planning utilization. Moreover, while Baschieri (2019) noted that over 20% of women in East and West Africa are in polygamous marriages, the study did not investigate the implications of this finding for family planning services in rural Kenyan contexts. In Eldas Sub-County, where polygamy persists, there is a critical need to understand how these marital structures influence women's access to and utilization of family planning services.

Existing research primarily focused on urban settings or broader regional trends, leaving rural areas, particularly those with high polygamous prevalence,

underexplored. Therefore, this study aimed to fill these gaps by investigating the specific factors affecting the utilization of family planning services among women of reproductive age in Eldas Sub-County, highlighting cultural influences that have been insufficiently addressed in previous literature.

2.4.2 Religion and Utilization of Family Planning Service

The study by Burdette et al. (2014) investigates the influence of religious beliefs on perceived infertility and contraceptive use among unmarried young adults in the United States. The findings reveal that, despite many religious denominations discouraging contraception, Catholics demonstrate a higher likelihood of utilizing specific contraceptive methods compared to members of other faiths. This research underscores the role of social circles in shaping attitudes toward sexuality and contraception, highlighting a tendency among individuals to conceal their sexual behaviors due to guilt and societal expectations.

In Nigeria, Obasohan (2015) explores the relationship between religion, ethnicity, and contraceptive use among women of childbearing age, utilizing data from the 2013 National Demographic and Health Survey. This study finds that contraceptive utilization rates differ significantly across religious and ethnic lines, with women from the Yoruba ethnic group and Christians reporting higher rates of contraceptive use than Muslims and those from the Hausa-Fulani-Kanuri-Sokoto (HFKS) tribes. The findings emphasize the significant influence of both ethnicity and religion in shaping access to and attitudes toward family planning services.

Bairagi (2019) further examines Islamic doctrines regarding family planning, noting that interpretations of the Quran concerning contraception vary widely due to the absence of a central religious authority. This lack of consensus results in different attitudes within Muslim communities, where local cultural norms often dictate the understanding and application of religious teachings. Although family planning services may be available, cultural and religious attitudes frequently limit their effective utilization.

Additionally, Chen et al. (2020) conducted a broader analysis of the impact of education on reproductive health across 30 Sub-Saharan African countries. Their findings indicated a positive correlation between higher education levels and contraceptive use, suggesting that education can reduce barriers imposed by conservative religious beliefs. This study reinforces the notion that educational attainment plays a critical role in shaping reproductive health outcomes.

Synthesizing these studies reveals a consistent theme regarding the interplay of religion and culture in influencing contraceptive behaviors. Similar findings in research conducted by Agadjanian (2019) in Kenya illustrate that women's access to family planning services is often constrained by cultural norms and religious beliefs, underscoring the universal relevance of these dynamics. Furthermore, Al-Balushi et al. (2015) demonstrated that sociocultural barriers can hinder effective communication about reproductive health among couples, further complicating contraceptive use.

Despite these insights, gaps remained in the existing literature. While these studies effectively illuminated the roles of religion and ethnicity, they overlooked intersections with other socio-demographic variables, such as age and socioeconomic

status. Additionally, the perspectives of men regarding family planning were inadequately addressed, limiting the understanding of their influence on FP service utilization.

2.4.3 Gender Preference and Family Planning Service Utilization

Bairagi (2019) conducted a study in Matlab, Bangladesh, examining the effect of gender preferences on contraception utilization, abortions, and reproduction. Utilizing data from the Matlab Demographic Surveillance System and a modified Arnold Index, the study analyzed fluctuations in the occurrence of contraception and sex-selective abortions, revealing a divergence from the expected male-to-female ratio at conception. The findings indicated that between the early 1980s and the mid-1990s, there was an increase in both contraception use and abortions, alongside a decline in fertility rates. Notably, contraception method usage grew with parity; however, among women with multiple children, it either stabilized or declined when they had at most two sons. Without the influence of gender preference, contraception utilization could have risen by ten percent in 1983, eight percent in 1988, and six percent five years later.

Rai et al. (2014) investigated parental sex preferences for children and their effects on reproductive behavior in Sonapur village, involving married women with at least one child. Through house-to-house interviews, the study gathered data from 300 women, revealing that the participants had a mean age of 31.97 years and a mean marital age of 18.87 years. The analysis showed that those not wishing for additional children had a male-to-female child gender ratio of 1.41. Furthermore, the time between births varied significantly depending on the sex of the preceding child. The study found that

the presence of a sole female child in the household dramatically increased the preference for having more children. This research aligns with trends in less industrialized economies, particularly in countries like China, Bangladesh, Pakistan, and India, where a strong preference for male children persists.

In Tanzania, Mwageni et al. (2019) identified factors influencing contraceptive behavior among males in the Mbeya region. The study highlighted that gender preferences significantly shaped family planning decisions, with sons being favored over daughters. The research demonstrated that a male's existing number of daughters, family status, residency, and profession were all strongly associated with gender preferences, emphasizing the cultural context influencing reproductive choices.

Moreover, a qualitative study in Matemwe village, Zanzibar, illustrated the cultural barriers to modern contraceptive use, despite the availability of free and accessible contraceptives. Findings indicated that only 2% of women in Matemwe participated in the local family planning program. Factors such as strong Muslim beliefs, male dominance in polygamous relationships, and limited exposure to modern ideas hindered contraceptive uptake. The study suggested that addressing cultural barriers is essential to increasing contraceptive use in the community.

Synthesizing these studies reveals a consistent theme regarding the influence of gender preferences and cultural norms on reproductive behaviors. Bairagi's (2019) findings on the relationship between gender preferences and contraceptive use resonate with Rai et al.'s (2014) emphasis on parental sex preferences, while Mwageni et al.'s (2019) research highlights how these preferences manifest differently across cultural contexts. The qualitative insights from Zanzibar further reinforce the idea that cultural and

religious factors significantly impact contraceptive behavior, demonstrating the complexity of family planning dynamics in various regions.

Despite these insights, gaps remained in the literature. While these studies illuminated the roles of gender preferences and cultural influences, they failed to consider the intersectionality of other socio-demographic factors, such as education level and economic status. Additionally, there was a limited exploration of men's perspectives on family planning, which could provide a more comprehensive understanding of reproductive decision-making.

2.5 Health System Related Factors

Various studies have shown that health system related factors affect FP services utilization. This section discusses studies related to medical barriers, availability of FP services, geographic access and family planning providers' attitude.

2.5.1 Medical Barriers

Medical barriers refer to unnecessary policies or procedures imposed by health care providers that are not necessarily medically advised; these restrictions impede clients' access to family planning (FP). Calhoun et al. (2019) employed mixed methods to investigate provider-imposed barriers to family planning (FP) services in urban Uttar Pradesh, India. The study utilized quantitative data collected from over 250 service providers across six cities through facility audits, exit interviews, and provider surveys. The focus was primarily on the surveys, which revealed that providers frequently restrict access to various FP methods based on factors such as age, parity, partner consent, and marital status. Qualitative interviews with 21 service providers in four of

the cities further highlighted that these professionals often made judgments regarding clients' education and understanding of FP options, inadvertently creating additional barriers to access.

Anderson and Kitchin (2019) examined access to family planning clinics for disabled individuals, arguing that societal perceptions often depict disabled people as either asexual or overly sexualized. Their research included a survey of family planning clinics in Northern Ireland, revealing that physical access to these clinics was limited, and the provision of information and services was inadequate. This lack of accessibility suggested that disabled individuals were not anticipated as users of family planning services, thereby perpetuating a landscape of exclusion and reinforcing cultural ideologies regarding disability and sexuality.

Tumlinson et al. (2015) conducted a study in urban Kenya that analyzed provider-reported restrictions based on clients' age, parity, marital status, and consent requirements. Using data collected from 676 service providers at 273 healthcare facilities, the study found that over half of the providers (58%) imposed minimum age restrictions on certain methods, particularly injectable. Notably, 41% of providers would not offer services to nulliparous women, and more than one in four would refuse injectables to women without children. The study also indicated that private facilities were more likely to impose such barriers, and providers lacking in-service training on family planning exhibited higher rates of imposing restrictions.

Synthesis of these studies reveals a pervasive theme of provider-imposed barriers that limit access to family planning services across different contexts. Calhoun et al. highlight how provider biases affect the availability of methods in India, while

Tumlinson et al. (2019) provide similar insights in Kenya, demonstrating that age and parity are significant factors influencing service provision. Anderson and Kitchin's (2019) examination of disabled individuals further complements this narrative by illustrating how societal biases and physical accessibility issues intersect to create barriers to service use for marginalized groups.

Despite these insights, gaps remained in the literature. While these studies effectively highlighted the restrictions imposed by providers based on various socio-demographic factors, they often do not consider the broader systemic issues, such as health infrastructure and policy environments that contribute to these barriers. Additionally, the perspectives of clients, particularly those from marginalized communities, are underrepresented in the research, limiting the understanding of their experiences and needs regarding family planning services.

2.5.2 Availability of FP Services

Kanyangarara et al. (2019) conducted a comprehensive assessment of the availability of integrated family planning (FP) services within HIV care and support sites across sub-Saharan Africa. Utilizing a secondary analysis of facility-level data from the Service Availability and Readiness Assessments (SARA) and Service Provision Assessments (SPA) across ten countries between 2012 and 2015, the study employed six key indicators to evaluate the onsite availability of integrated FP services. The findings revealed that while most of the 3,161 health facilities offering HIV care also provided FP services, the availability of FP methods was often inconsistent, with only 10% to 61% of facilities offering integrated services. The analysis indicated that

government-operated, tertiary-level care facilities that provided additional services like antenatal care had higher odds of offering integrated FP services.

In Zimbabwe, Mwale (2020) focused on the barriers preventing effective contraceptive use among adolescent mothers. Through structured interviews with 43 adolescent mothers visiting postnatal clinics, the study identified significant gaps in sex education and knowledge about contraceptives. Many adolescents expressed fears of infertility related to contraceptive use and highlighted the inaccessibility of emergency contraceptives. The findings emphasized the need for improved education and access to various contraceptive options to empower adolescents to delay childbearing.

Bakibinga (2016) investigated the accessibility and utilization of FP services in Vietnam using data from the 1997 Vietnam Demographic and Health Survey. Their analysis of 5,310 then-married women of reproductive age showed that nearly 84% of women lived within one kilometer of at least one source of family planning services. The study concluded that increased availability of contraceptive methods significantly reduced nonuse of modern methods, suggesting that enhancing access could lead to higher utilization rates.

Barden-O'Fallon (2017) explored the availability of family planning services and the quality of counseling offered by faith-based organizations (FBOs) in a comparative analysis across Malawi, Kenya, and Haiti. The findings indicated that FBOs were less likely to offer comprehensive FP services compared to public and private facilities. Long-acting and permanent methods were particularly scarce in faith-based facilities. However, in Haiti, FBOs performed comparably or better than public facilities on certain counseling indicators, such as discussing client concerns and follow-up visits.

Feyisetan and Ainsworth (2016) examined the relationship between contraceptive use and the availability, quality, and pricing of family planning services in Nigeria. Their study linked individual women to nearby health facilities, revealing that limited educational opportunities for women, particularly in rural areas, constrained contraceptive use. The availability of methods in pharmacies and health facilities was identified as a crucial factor for increasing uptake.

Mpunga et al. (2017) assessed the availability and quality of family planning services across health facilities in the Democratic Republic of the Congo (DRC). Their cross-sectional study found that only 33% of the surveyed facilities offered family planning services, with significant disparities between urban and rural areas. Public facilities were less likely to provide high-quality services compared to private ones, indicating a need for improvement in service delivery.

The synthesis of these studies highlighted the critical barriers to family planning access across diverse contexts in sub-Saharan Africa and beyond. Kanyangarara et al.'s (2019) findings regarding the integration of FP services into HIV care align with Ehlers' exploration of adolescent barriers, both emphasizing the need for education and accessibility. Bakibinga (2016) work further supports this by demonstrating that geographical proximity to services significantly influences usage, a theme echoed in the findings of Feyisetan and Ainsworth (2016) regarding the importance of availability.

Despite these insights, notable gaps persisted in the literature. Many studies, including those by Barden-O'Fallon (2017) and Mpunga et al. (2017), tend to focus predominantly on facility-level factors, often neglecting the client perspective and

experiences. Additionally, the intersection of socioeconomic factors with utilization remained under-explored, as did the long-term impact of educational interventions on contraceptive use.

2.5.3 Geographic Access

David et al. (2016) investigated the hypothesis that improved geographic access to family planning facilities correlates with lower rates of unintended and teenage pregnancies. Utilizing data from the State Pregnancy Risk Assessment Monitoring System (PRAMS) and natality files across four states, the study assessed geographic availability based on travel time to the nearest family planning facility, the presence of such facilities within ZIP code areas, and the availability of primary care physicians and obstetricians-gynecologists. The results indicated that a significant majority (83%) of the PRAMS cohort and 80% of teenagers lived within a 15-minute travel time to a facility, with negligible numbers residing more than 30 minutes away. However, the study found no statistically significant trend linking longer travel times to increased rates of unintended pregnancies. Similarly, neither the proximity of family planning facilities nor the supply of capable physicians demonstrated a significant association with unintended pregnancies. Conversely, adjusted models revealed that both crude and adjusted rates of teenage pregnancies were significantly lower when distances to family planning sites increased and when no facility was present within the ZIP area of residence.

Bersamin et al. (2018) explored the relationship between adolescent geographic access to family planning clinics and various sexual behaviors, including sexual initiation, number of partners, and condom use. This cross-sectional study, conducted in

California across ten counties, drew on data from a larger NICHD-funded study involving 921 adolescents and incorporated geospatial coordinates of publicly funded family planning clinics (FPCs). Despite employing regression models to analyze the relationship between clinic access—measured by distance and density—and adolescent sexual behaviors, the study found no significant main effects. However, a notable inverse relationship emerged for older youth, where a higher density of FPCs within a 1-mile radius correlated with lower rates of sexual initiation. Although not statistically significant, a negative trend also appeared between the density of FPCs and the number of sexual partners among older adolescents. Access to family planning clinics was not associated with condom use.

Synthesizing these studies reveals a complex relationship between geographic access to family planning services and reproductive outcomes. David et al.'s (2016) findings, which suggest that proximity to family planning facilities does not significantly affect unintended pregnancy rates, contrast with the nuanced results from Bersamin et al. (2018). While the latter indicates some association between clinic density and sexual initiation among older adolescents, both studies ultimately challenge the assumption that mere geographic access alone guarantees improved sexual health outcomes.

Despite the valuable insights provided, notable gaps persisted in the literature. For instance, both studies primarily focused on geographic access without accounting for other critical factors, such as individual-level socio-demographic variables, cultural attitudes toward contraception, and the availability of educational resources. Additionally, the impact of service quality at family planning clinics on users' behaviors remains underexplored.

2.5.4 Family Planning Providers' Attitude

Research has shown the highest awareness but low utilization of contraceptives making the situation a serious challenge. Most women in the reproductive age group know little or have incorrect information about family planning methods. Even when they know the name of some of the contraceptives, they do not know where to get them or how to use them. These women have a negative attitude toward family planning, whereas some have heard false and misleading information. Wani et al. (2019) explored the knowledge, attitudes, and practices surrounding family planning among female healthcare workers in the Kashmir Valley. Utilizing a self-administered questionnaire, the study targeted multipurpose health workers from District Anantnag and Baramulla during a training session at the Government Medical College, Srinagar. Findings revealed that all participants were familiar with family planning methods, with trainers identified as the primary source of information (78.8%). The study reported that approximately 90.4% of respondents correctly identified various family planning methods, and 80.1% held a favorable attitude towards family planning. Furthermore, around three-fourths of the participants actively practiced at least one method of family planning.

In contrast, Okonofua et al. (2015) focused on the attitudes and practices of private medical practitioners regarding abortion, post-abortion care, and post-abortion family planning in Nigeria. The study involved structured interviews with 323 private practitioners from various states, gathering insights into their knowledge and experiences related to abortion and post-abortion care. The results indicated that 24% of the doctors routinely performed abortions upon request, while a significant 82%

reported treating complications from unsafe abortions. Notably, over 45% utilized manual vacuum aspiration (MVA) for first-trimester abortions, but only 25% used dilatation and curettage (D&C). Moreover, many practitioners expressed a lack of expertise in managing second-trimester abortions, often resorting to nonstandard procedures. The study also highlighted issues such as inadequate counseling for women and poor post-abortion family planning practices, suggesting a pressing need for retraining programs and the integration of these topics into medical training curricula in Nigeria.

Synthesizing these studies reveals a critical contrast in the context of family planning knowledge and practice among healthcare providers. Wani et al. (2019) demonstrated a generally positive attitude and active engagement in family planning among female healthcare workers in Kashmir, likely bolstered by their training and access to information. Conversely, Okonofua et al. (2019) underscored significant gaps in knowledge and practice among private practitioners in Nigeria, particularly concerning abortion care and post-abortion family planning. This divergence suggests that training and institutional support can markedly influence healthcare providers' ability to deliver effective family planning services.

Despite these insights, notable gaps persist in the existing literature. For instance, while Wani et al. (2019) highlighted the positive engagement of female healthcare workers, there remains little understanding of the systemic barriers they face in implementing family planning practices within their communities. Similarly, Okonofua et al. (2015) primarily focused on private practitioners, leaving a gap in knowledge regarding the attitudes and practices of public healthcare providers. Additionally, both studies lacked

a comprehensive exploration of how cultural beliefs and socio-economic factors influence healthcare providers' attitudes towards family planning and abortion services.

2.6 Theoretical Framework

In research, the theoretical framework relates to the philosophical basis on which the research takes place, and forms the link between the theoretical aspects and practical components of the investigation undertaken. Reproductive health often uses theories such as social learning theory recently changed to social cognitive theory, and health belief models have been applied in explaining, predicting, and influencing behavior.

2.6.1 Social Cognitive Theory

Cognitive theory is a learning theory of psychology that explains human behavior patterns by understanding the cognitive aspects, emotional aspects, and aspects of behavior for understanding behavior change. Social cognitive theory is a subset of the cognitive theory which focuses on ways in which people learn to model the behavior of others. The social cognitive theory originated from social learning theory, the work of Albert Bandura in 1986. It was developed with an emphasis on the acquisition of social behaviors and continues to emphasize that learning occurs in a social context and much of what is learned is gained through observation.

It further states that people can influence their behavior in a purposeful, goal-oriented way (Bandura, 2019). The social cognitive theory also argues that people can also through their self-reflection and self-regulatory processes exert pressure over their outcomes and the environment more broadly unlike behaviorism which advocated a more rigorous form of environmental determinism. Therefore, social cognitive theory

can also be referred to as an interpersonal level theory, which sees human behavior as forming under a triad of behavioral, personal, and environmental determinants. This theory describes human behavior as a dynamic and ongoing process in which personal, environmental, and human behavior all interact. That is a person's ongoing functioning is a product of a continuous interaction between cognitive, behavioral, and contextual factors. For instance, learning is shaped by the factors within the learning environment, especially the reinforcements. At the same time learning can be affected by one's thoughts and self-beliefs and their interpretation of the learning context.

The social cognitive theory emphasizes the acquisition of social behaviors in addition to the cognitive thought processes that influence human behavior and processes. It seeks to explain how behavior standards and norms are learned through an interaction of the individual and his environment, through the observation of others/vicarious learning.

This idea (vicarious learning) asserts that individuals can witness observed behaviors of others and then reproduce the same actions. As a result, individuals refrain from making mistakes and can perform behaviors better if they see individuals complete them successfully. This theory refers to people as self-organizing, self-reflecting, and self-regulating. According to Social cognitive theory, three main factors affect the likelihood that a person will change a health behavior: self-efficacy, goals, and outcome expectancies (Bandura, 2019). This theory will be used in this research to explain how people acquire and maintain certain behavioral patterns, while also providing the basis for intervention strategies such as using FP services which are essential in creating awareness about reproductive health. It will also be used to explain

that, behavior change depends on sociocultural factors, socio-economic factors, demographic factors as well as health system-related factors.

This theory was used in this research to explain how people acquire and maintain certain behavioral patterns, which are essential in creating awareness about FP services. It will also be used to explain that, behavior change depends on factors such as sociocultural factors, socio-economic factors, and demographic factors as well as health system-related factors.

In executing the study, a quantitative data collection method was employed, grounded in social cognitive theory (SCT). This framework emphasized the dynamic interplay of cognitive, emotional, and behavioral aspects in understanding human behavior and behavior change. This aligns with SCT's focus on vicarious learning, where individuals model behaviors based on observations of peers. Quantitative surveys complemented these qualitative insights by measuring constructs like culture, which SCT identifies as crucial factors influencing health behavior change. By integrating these approaches, the research captured a comprehensive understanding of how personal, environmental, and sociocultural factors interacted to shape FP behaviors. This holistic perspective was essential for developing effective interventions that promotes awareness and utilization of FP services, ultimately leading to positive behavior change within the community.

2.6.2 Health Belief Model (HBM)

The Health Belief Model was developed in the 1950s by social psychologists Hochbaum, Rosenstock, and Kegels at the U.S Public Health Service in an attempt to

understand ‘the widespread failure of people to accept disease preventive or screening tests for the early detection of asymptomatic disease.’ It was later applied to patients’ responses to symptoms and compliance with prescribed medical regimens. The Health Belief Model attempts to explain and predict the health behaviors of individuals through the examination of perceptions and attitudes, someone may have towards diseases and negative outcomes of certain actions. This model is used in health promotion to design intervention and prevention programs. As the name implies, this theory deals with people’s beliefs. It further suggests that a person’s belief in a personal threat of an illness or disease together with a person’s belief in the effectiveness of the recommended health behavior will predict the likelihood the person will adopt the behavior.

The Health Belief Model has been broadly used in predicting health-related behaviors, and preventive health behaviors and also predicts health-promoting behavior thus, improving health behaviors. This model has four major concepts that are necessary for behavior change as discussed below.

Perceived susceptibility refers to a risk a person has of getting a particular health outcome. The greater the risk of getting a certain medical condition, the more a person will engage in behaviors to decrease the risk. Within the context of the Health Belief Model, perceived susceptibility examines a person’s opinion about how likely the behaviors they practice will likely lead to a negative health outcome. Example: a woman who does not use contraceptives. Lack of family planning has its consequences but if an individual does not see the need for family planning then she has no reason of changing her behavior by using contraceptives. One of the goals of the Health Belief

Model is to change perceptions of susceptibility to move toward behavior change. Therefore, interpersonal communication can be used to understand how perceptions are formed to dismiss any beliefs and also supply information that encourages healthy action. Perceptions of susceptibility can be modified through communication by educating a person about the risk factors and dispelling cultural misperceptions about a condition.

Perceived severity refers to how serious a situation or disease a person is susceptible to and its potential consequences. It assumes that people will take action to prevent or control ill-health behaviors if they regard themselves as susceptible to the condition. The Health Belief Model seeks to increase awareness of how serious the outcomes of behaviors can be to increase the quality of one's life. Interpersonal communication is essential in engaging with people who already their behaviors have put them at risk thus inciting positive healthy behavior.

Perceived benefits-refers to the positive consequences of adopting a behavior to reduce their susceptibility. An individual adopts a behavior that she thinks will decrease the chance of getting a bad health behavior that she is susceptible to. This can be achieved by talking about the benefits of FP services by using successful users as models to demonstrate the benefits of making a healthy choice.

Perceived barriers- barriers refer to obstacles that hinder an individual from adopting a new behavior. It also refers to the consequences of continuing with the old behavior. They can be concrete and psychological. The perceived barriers determine the adoption of a new behavior thus affecting a person's ability to take action. They include; affordability, accessibility of services, culture, side effects of contraceptives,

and lack of knowledge among others. Supportive programming and consistent communication help in overcoming a person's perceived barriers. Incentive programs can help individuals overcome concrete barriers like finances thus a very effective method through which information is passed to the targeted people. The HBM model suggests that, for change in behavior to take place, the benefits must be weighed against the barriers to determine that taking an action will be worthwhile.

The HBM posits that people will take action to undergo a health prevention behavior when they are ready; they see it as beneficial, and the difficulty is not greater than what is to be gained. An individual's belief in personal threat together with her belief in the effectiveness of the proposed behavior will predict the likelihood of the behavior. Therefore, the Health Belief Model has been used in this study to explain that for an individual to engage in healthy behavior, they must evaluate their perceptions of severity and susceptibility, benefits, and barriers. This model is useful in this study as it can be used to improve health by enabling individuals to make informed choices about their health-related behavior. This can be through health professionals who educate them thus enabling them to make informed choices regarding their health behavior.

In executing the study, the Health Belief Model (HBM) guided data collection and analysis by focusing on individuals' perceptions and attitudes toward health behaviors, particularly in the context of family planning (FP) services. Developed in the 1950s to understand why people often failed to engage in preventive health behaviors, the model posited that beliefs about personal susceptibility to health issues, perceived severity of those issues, perceived benefits of taking action, and perceived barriers to action

influenced health behaviors.

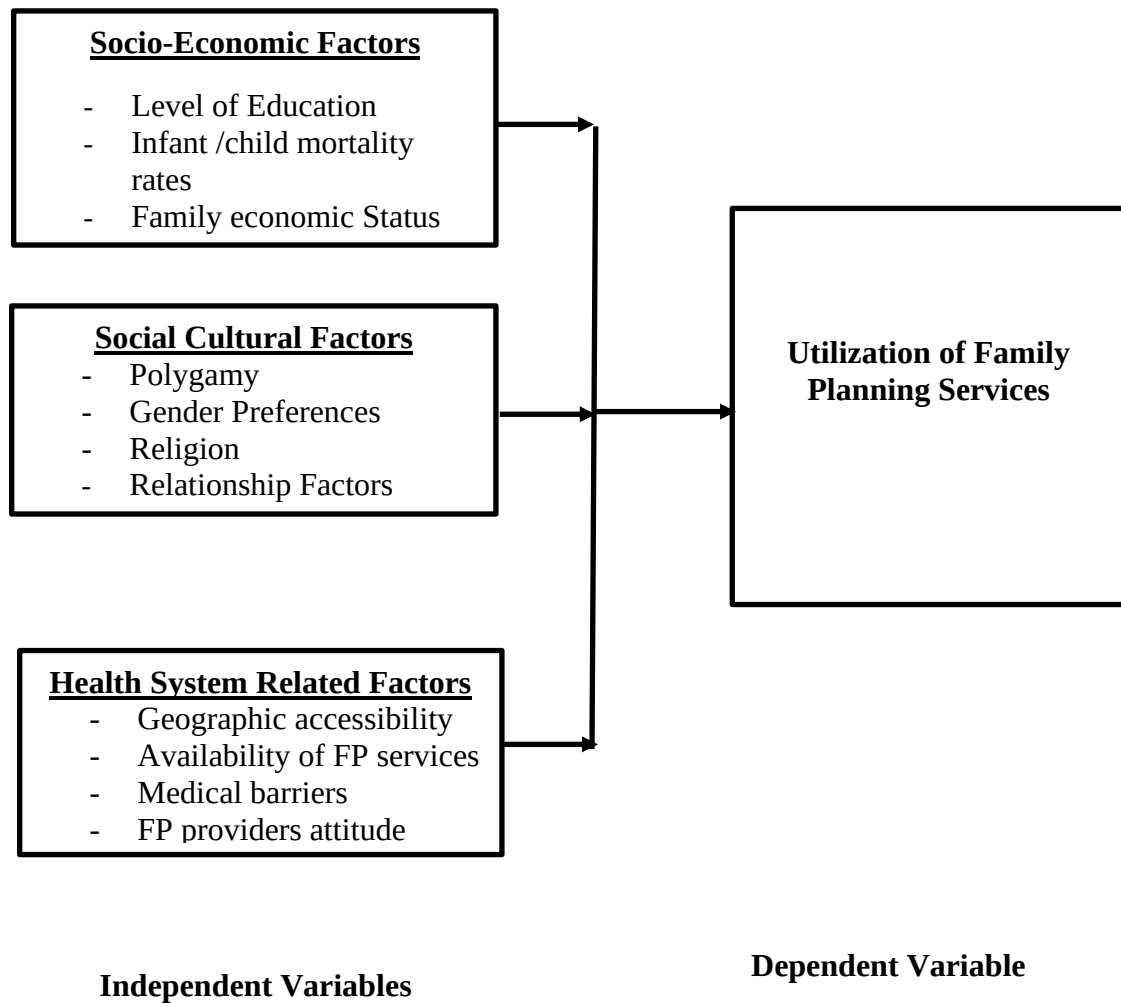
Quantitative surveys were employed to measure constructs such as perceived benefits and barriers to adopting FP behaviors. This included assessing how individuals weighed the advantages of using FP against any obstacles they perceived, such as cultural beliefs, accessibility, and financial constraints. By combining these qualitative and quantitative approaches, the study aimed to capture a comprehensive view of how perceptions shaped health behaviors, ultimately informing targeted interventions that could promote informed decision-making about reproductive health. Through this process, the HBM facilitated a deeper understanding of the factors influencing individuals' engagement with FP services, paving the way for more effective health promotion strategies.

2.7 Conceptual Framework

The conceptual framework, shown in Figure 2.1, illustrates the association between the factors and the outcome variable.

Figure 2. 1

Conceptual Framework



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlined the research methodology that was used in the study. It covered the study design, study population, sample size, sampling procedure, data collection methods, research procedures, data management, and analysis.

3.2 Study Design

A research design involves arranging the conditions for data collection and analysis in a way that balances significance for the research purpose with economic efficiency. It serves as the conceptual framework through which the study is conducted, functioning as a blueprint for data collection, processing, measurement, and analysis. The current study employed a cross-sectional design, which was deemed appropriate as it provided a snapshot of the current situation, allowing for data collection at a single point in time. This method facilitated the gathering of quantitative data from a larger sample, enabling the identification of trends and patterns related to family planning service utilization.

Additionally, the descriptive aspect of the research focused on summarizing the data to provide insights into the characteristics and behaviors of the population studied. This approach allowed for a deeper understanding of the factors influencing women's access to and utilization of family planning services, aligning with the study's objectives. Thus, while similar studies, such as Agesa (2016), have employed various methodologies, this research explicitly demonstrated a clear and focused design in its execution.

3.3 Study Area

This study was conducted in Eldas Sub-County in Wajir County, Kenya (see the map of Eldas Sub-County in Wajir County in Appendix V). The sub-county spans approximately 4,444 square kilometers and has a total population of 112,509, with 59,233 females and the remainder males, distributed across 13,961 households (Kenya National Bureau of Statistics [KNBS], 2020).

Eldas Sub-County is characterized by arid and semi-arid terrain, with a landscape that includes vast plains and sparse vegetation. The environment poses challenges for agriculture and access to water, contributing to the socio-economic dynamics of the area. The administrative structure of the sub-county is organized into various wards, with each ward having local governance systems that facilitate community engagement and resource management.

According to the Kenya Demographic and Health Survey (KDHS) of 2019, a woman of childbearing age in Eldas Sub-County can expect to have 8 children in her lifetime. The total fertility rate in Eldas Sub-County and other parts of Wajir County is 7.8, which is significantly higher than the national rate of 3.9. This indicates a high birth rate in the region. Additionally, the adolescent birth rate is concerning, with more than one in every ten girls aged 15-19 giving birth annually (KNBS, 2020).

Eldas Sub-County experiences an estimated annual population growth rate of 3.22% and it is marked by high levels of child morbidity and mortality. These demographic trends underscore the need for comprehensive health services, particularly in maternal

and child health, to address the challenges faced by the population in this unique geographic and socio-economic context.

3.4 Target Population

The target population for the current study comprised all 18,414 women of childbearing age in Eldas Sub-County, Wajir County, according to the Kenya Population and Housing Census report of 2019. According to the (WHO), women of childbearing age are defined as those ranging from 15 to 49 years. Family planning (FP) services are typically made available to this group free of charge through the Kenya Essential Package for Health (KEPH). The total number of households in Eldas Sub-County was recorded at 13,961.

The study population, on the other hand, included a subset of this target population, specifically focusing on women of childbearing age who were actively engaged in seeking family planning services or were willing to participate in the study. This selection aimed to ensure that the data collected reflected the experiences and perceptions of women who are directly affected by and have access to family planning resources in the region. By narrowing down the study population, the research sought to provide more detailed insights into the factors influencing the utilization of family planning services among these women.

3.4.1 Inclusion Criteria

- Participants must express willingness to participate in the study voluntarily, without coercion or undue influence.
- Must be women of childbearing age between 15 to 49 years

- Women who have resided for at least 24 months in the Eldas sub-county.

3.4.2 Exclusion Criteria

Women were excluded if:

- Individuals who are unable to provide informed consent due to cognitive impairments, mental illness, or other reasons would be excluded.
- Non-resident for at least twenty-four months in Eldas sub-county
- Individuals who express unwillingness to participate in the study voluntarily would be excluded, as participation must be voluntary.

3.5 Sample Size

Households totaling 388 were chosen using the Role (2013) formula.

$$n = \frac{N}{1 + Ne^2}$$

Where

n = sample size

N = population size

E = margin of error ($e \leq 0.05$)

Therefore, the sample size for households was:

$$n = \frac{13961}{1 + 13961 \times 0.05^2} = 388 \text{ Households}$$

Therefore, the final sample size comprised 388 households. Households with women above 49 years, and households with women who were non-resident for at least twenty-four months in Wajir County were excluded and did not form the study sample.

3.5.1 Sampling Procedure

Four distinct sampling approaches were utilized in this study to ensure a comprehensive and representative selection of participants. Initially, Wajir County was purposively chosen due to its notably low prevalence rate of family planning (FP) service utilization, which stood less than 10%. This selection was based on the need to explore the underlying factors contributing to this low rate. Within Wajir County, Eldas Sub-County was then purposively selected for its diverse population, which includes both rural and urban areas, providing a broader context for the research.

To organize the sampling process, the study treated each of the four wards within Eldas Sub-County as clusters. A probability proportional to size (PPS) approach was employed to sample these clusters, ensuring that the selection of wards was representative of their population sizes. Research assistants were recruited to identify households containing women of childbearing age (15-49 years). Once identified, these households were enumerated and selected using simple random sampling methods. This approach facilitated equal representation among participants, allowing for findings that could be generalized to the larger population (refer to Table 3.1 for details). In instances where a household had multiple adolescent mothers, only one was selected through simple random sampling, with options marked as YES or NO to determine participation. This ensured that the inclusion process remained fair and unbiased. Additionally, purposive sampling was utilized to specifically target individuals aged 15-19 years for interviews. This decision was based on the assumption that this age group may have enhanced knowledge and perspectives regarding family planning compared to younger cohorts.

Snowball sampling was employed to further enrich the data collection process. This method involved initially identifying a small number of participants who met the study criteria, and then encouraging them to refer other eligible individuals. This approach was particularly useful for reaching women who might not have been easily accessible through conventional sampling methods, allowing for the inclusion of diverse voices and experiences related to family planning.

In summary, the combination of cluster, purposive, simple random, and snowball sampling methods was strategically employed to ensure a well-rounded representation of the study population, with each approach justified by its role in capturing the complexity of family planning utilization in Eldas Sub-County.

Table 3. 1

Sampling Frame

Clusters (Ward)	Target population (No. of Households)	Sample Population (ward level)	Sample population
Eldas	2890	$2890/13961 \times 388$	80
Della	4579	$4579/13961 \times 388$	127
Elnur	4399	$4399/13961 \times 388$	122
Lakoley south/Basir	2093	$2093/13961 \times 388$	58
Total	13961		388

3.6 Instrumentation

The researcher developed a structured questionnaire to collect primary data from women of childbearing age in Eldas sub-county, Wajir County. The development process began with a thorough review of existing literature and relevant studies, ensuring that the questions aligned with the specific objectives of the research. This literature review helped in formulating questions that accurately captured the socio-

economic, socio-cultural, and health system factors influencing family planning service utilization.

To validate the questionnaire, expert reviews were conducted, where professionals in public health and social sciences evaluated the content for clarity, relevance, and comprehensiveness. Feedback from these experts led to necessary revisions, ensuring that the questions effectively addressed the research objectives. Additionally, a pilot test was conducted with a small group of respondents to identify any issues in understanding or interpreting the questions. Based on this pilot testing, further adjustments were made to enhance the questionnaire's reliability and validity.

The final questionnaire was organized into five sections. Section A captured demographic characteristics, while Section B focused on the prevalence of family planning service use. Section C explored socio-economic factors related to household conditions. Section D addressed socio-cultural factors influencing family planning utilization, and Section E examined aspects of the health system impacting access to family planning services. This rigorous development and validation process not only aligned the questionnaire with the study's objectives but also enhanced the credibility and reliability of the data collected. By ensuring that the instrument was both comprehensive and focused, the study aimed to produce meaningful insights into the factors affecting family planning in the region.

3.7 Pre-Testing of Research Questionnaire

The research instrument was tested for validity and reliability in Wajir West sub-county this is because of the similar characteristics the sub-county shares with Eldas

Sub-County in terms of study population demographic characteristics and cultural background, 38 respondents were used for the pilot study.

3.7.1 Validity

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 & Onen, 2015). This study used content validity. Content validity was ensured by having the questionnaire subjected to examination during the proposal stage of the study. It was examined by two university supervisors and an expert in FP in Wajir County to evaluate the statements therein for relevance and whether they were meaningful and clear.

3.7.2 Reliability

To ensure the reliability of the data collected, a pilot study was conducted involving a total of 38 respondents. This pilot group allowed for the testing of the data collection instruments and procedures prior to the main study. The data obtained from the pilot group were not included in the actual data analysis but were crucial for identifying any issues with the questionnaire and ensuring clarity and comprehension (Creswell, 2014). The pilot study enabled the researchers to assess the effectiveness of the questions in eliciting the desired information. Feedback from the pilot participants highlighted areas where questions could be rephrased for better understanding, thus enhancing the reliability of the final instruments. By addressing any identified

difficulties in question comprehension, the researchers aimed to improve the overall reliability of the data collection process for the main study (Mertens, 2014).

3.8 Methods of Data Collection

Two weeks prior to the actual study, the researcher visited Eldas Sub-County on different days to familiarize herself with the community and establish a rapport with potential respondents. During these visits, she randomly selected the required number of households to ensure a representative sample. This preliminary phase allowed the researcher to effectively plan the logistics for data collection, including scheduling appointments with household for the actual study days.

The appointments were essential for maximizing participation rates, as it ensured that respondents were prepared for the study and understood its significance. During the booking process, the researcher explained the purpose of the study and addressed any questions or concerns from the respondents. On the study day, participants were informed of their rights under ethical considerations, and written consent was obtained from each respondent. For those under 18, parental or guardian consent was sought to adhere to ethical standards.

Women of reproductive age in the selected households were interviewed face-to-face by the researcher, aided by ten trained research assistants. The interviews were conducted in the local dialect, which facilitated better communication and understanding. The structured questionnaire guided the interviews, ensuring consistency in data collection.

The involvement of local, literate volunteers as research assistants was crucial for several reasons. First, their familiarity with the community helped to build trust and encourage participation among respondents. Additionally, their ability to communicate in the local language enhanced the quality of the data collected, as it reduced the potential for misinterpretation. The administrative outreach played a role in community entry by providing legitimacy to the research process and facilitating access to households, ensuring that the study adhered to local protocols and customs.

In summary, the dual approach of the researcher personally visiting the community and enlisting local assistants served to enhance the effectiveness of the sampling methods used and ensured a respectful and ethical data collection process.

3.9 Methods of Data Analysis

The collected data was coded, entered into the computer, cleaned and analyzed using the Statistical Package for the Social Sciences (SPSS) software, version 23. The analysis was done at three levels; univariate, bivariate and multivariate analysis. Descriptive statistics were calculated to generate summarized statistics for continuous variables whereas frequency tables were used to summarize categorical variables. Bivariate analysis was done to establish association between independent and dependent variables. Chi square tests of association and Odds ratio were calculated. Multivariate analysis was used to establish the relationship between the dependent variable and independent variables.

3.10 Ethical Considerations

The study placed a strong emphasis on ethical considerations throughout the research process. Authorization was obtained from Kenya Methodist University (KeMU), with ethical approval granted by the Ethics Review Committee. Additionally, a research permit was secured from the National Commission for Science, Technology, and Innovation (NACOSTI), and further permits were sought from the Wajir County Government.

Informed consent was a critical component of the study's ethical framework. Prior to their involvement, all participants were provided with clear information about the purpose of the study, the procedures involved, and their rights. Participants were made aware that their participation was entirely voluntary and that they could withdraw at any time without any negative consequences. For participants under the age of 18, parental or guardian consent was obtained, ensuring adherence to ethical guidelines related to minors.

Data privacy was also prioritized. Participants were assured that their identities would remain confidential and that all responses would be anonymized in any reports or publications arising from the study. Measures were put in place to safeguard the data, including secure storage and limited access to the information collected. The researcher also communicated to participants that they would not receive compensation for their involvement, reinforcing the voluntary nature of participation. Throughout the survey process, additional measures were implemented to protect participants' rights and well-being, ensuring a respectful and ethical research environment.

Upon completion of the study, the researcher disseminated the findings to relevant stakeholders and published the results for scholarly reference. This commitment to transparency and accountability further underscores the ethical integrity of the research process, allowing for informed discussions within the academic and health policy communities.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the findings from the data that was collected from women of reproductive age in Eldas Sub-county. Both cross-sectional and descriptive research designs were adopted. Participants were interviewed through a semi-structured questionnaire. Data presented in this chapter represents the prevalence of the use of family planning services, social-cultural factors, socioeconomic factors and health system factors as they were described by the research participants. The study also presents the logistics regression analysis results.

4.2 Response Rate

The study involved participation from 365 respondents, with a total of 388 questionnaires administered. As demonstrated in Table 4.1, 365 of the 388 questionnaires administered were completed. The response rate was 94.1 percent overall. A return rate of 50% is regarded as average, 60-70 percent is considered acceptable, and anything beyond 70% is deemed good, (Adji & Fernandes, 2017). As a result, this return rate was deemed to be an accepted representation of the participants concerning data provision for analysis and drawing inferences.

Table 4. 1

<i>Rate of Return</i>		
	Number	Percent (%)
Completed	365	94.1
Unreturned	23	5.9

Total	388	100.00
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4.3 Prevalence of Use of Family Planning Services

This section sought to determine the prevalence of the use of family planning services in the Eldas sub-county in Wajir County this is because an analysis of the contribution of family planning to the Millenium Development Goals (MDGs) by Alie et al. (2022) showed that satisfying unmet family planning needs in Kenya could avert 14,040 maternal deaths and 434,306 child deaths by the (MDG) target date of 2022.

Table 4. 2

Prevalence of Use of Family Planning Services

	Frequency	Percent
Yes	17	4.7
No	348	95.3
Total	365	100.0

The results in Table 4.2 indicated that the majority 95.3% (n = 348) of the respondents were not using family planning at the time of this study while a few 4.7% (n = 17) indicated they were using the family planning method. Given the low education level among these respondents, knowledge of family planning was expected to be low, thereby contributing to low use of family planning services. The results clearly reveal that majority of the women have only acquired basic education, which as revealed in the literature, could have a negative implication on the use of family planning services. The finding is support of Alie et al. (2022) findings that showed that there was low use of FP services among Muslim women of Somali origin.

4.3.1 Demographic Factors and Prevalence of Use of Family Planning Services

Demographic characteristics such as a woman's level of education, marital status, and age, have been highlighted as important predictors of FP services utilization (Amo-

Adjei et al., 2017). This section presents findings based on demographic factors and prevalence of use of FP services in Eldas Sub-county in Wajir County, Kenya.

4.3.1.1 Education and Prevalence of Use of Family Planning Services

An educated woman is expected to be exposed and well informed about the benefits of family planning services. The exposed woman is thus expected to make a positive decision regarding use of the services. The level of education of the respondents is reported in Table 4.3.

Table 4. 3

Respondents' Education and Utilization of Family Planning Services

Educational Background		Utilizing FP services			Chi-square (χ^2)
		Yes	No	Total	
None	Count	7	138	145	$\chi^2 = 2.12^a$; df = 6; P-value = 0.006
	% out of 145	4.8%	95.2%	100.0%	
KCPE	Count	7	169	176	
	% out of 176	4.0%	96.0%	100.0%	
KCSE	Count	2	16	18	
	% out of 18	11.1%	88.9%	100.0%	
Madrasa	Count	1	20	21	
	% out of 21	4.8%	95.2%	100.0%	
Certificate	Count	0	2	2	
	% out of 2	0.0%	100.0%	100.0%	
Diploma	Count	0	2	2	
	% out of 2	0.0%	100.0%	100.0%	
Total	Count	17	348	365	
	% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.3 shows that out of the 145 respondents without education, only 7(4.8%) utilized FP services, 138(95.2%) did not utilize FP services. Out of the 176 respondents who reported to have primary school education, 7(4.0%) utilized FP services, 169(96.0%) did not utilize FP services. Out of the 18 respondents who indicated to have secondary school education, 2(11.1%) utilized FP services,

16(88.9%) did not utilize FP services. Out of the 21 respondents who indicated Madrasa, 1(4.8%) utilized FP services, 20(95.2%) did not utilize FP services. All the 2 respondents who indicated they had certificates as their highest level of education did not utilize FP services. All the 2 respondents who indicated they had diplomas as their highest level of education did not utilize FP services.

There was a significant difference in the distribution of study participants concerning education level ($\chi^2 = 2.12^a$; df = 6; p-value = 0.006). These results align with more recent studies, such as Kundu et al. (2022) who found high use of family planning (FP) services among educated women in Nairobi compared to those in Nyanza and Coast provinces. Additionally, research by Okech (2020) indicated similar trends regarding the determinants of demand for family planning in urban areas of Kenya.

In Bangladesh, a study by Kundu et al. (2022) established a high prevalence of FP use among educated women, supporting the notion that education significantly impacts contraceptive use. Other studies that confirmed the relationship between education and the prevalence of FP services include more recent findings by Samanta et al. (2023) in Melanesian countries and Elliott (2014) in Morocco. Overall, education has a positive effect on the use of contraception, with higher education levels being associated with greater use of FP services.

4.3.1.2 Marital Status and Prevalence of Use of Family Planning Services

Married couples are expected to use family planning services more than single ones. This is because married couples are at a high risk of getting pregnant. In table 4.4, a summary of the marital status of the women is provided. The marital status of the

respondents is reported in Table 4.4.

Table 4. 4

Marital Status and Prevalence of Use of Family Planning Services

Marital Status		Utilizing family planning services		Total	Chi-square (χ^2)
		Yes	No		
Married	Count	14	280	294	$\chi^2 = 85.777$; df = 3; P = 0.000
	% out of 294	4.8%	95.2%	100.0%	
Divorced	Count	1	4	5	
	% out of 5	20.0%	80.0%	100.0%	
Widowed	Count	1	40	41	
	% out of 41	2.4%	97.6%	100.0%	
Single	Count	1	24	28	
	% out of 25	4%	96%	100.0%	
Total	Count	17	348	365	
	% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.4 shows that out of the 294 respondents who were married, only 14(4.8%) utilized FP services, 280(95.2%) did not utilize FP services. Out of the 5 respondents who were divorced, 1(20.0%) utilized FP services, 4(80.0%) did not utilize FP services. Out of the 41 respondents who were widowed, 1(2.4%) utilized FP services, 40(97.6%) did not utilize FP services. Lastly, out of the 25 respondents who indicated single, 1(4%) utilized FP services, 24(96%) did not utilize FP services.

There was a significant difference in the distribution of study participants concerning marital status ($\chi^2 = 85.777$; df = 3; p = 0.000). The finding is supported by Calhoun (2019) studies which found that the married and the divorced women were the most likely to be using a FP services. The finding however contradicts Brown et al (2023) study which found that FP services use for never married women was relatively high.

Therefore, it can be deduced that divorced women with children prefer to utilize FP services to help them have their desired number of children and control the spacing and timing of births.

4.3.1.3 Age and Prevalence of Use of Family Planning Services

Age of the respondent was expected to have influence on the use of family planning services. Table 4.5 presents the age of the women based on the responses provided by the respondents.

Table 4. 5
Age and Prevalence of use of Family Planning Services

			Utilizing family planning			Chi-square (χ^2)
			Yes	No	Total	
Age	15-17	Count	6	91	97	$\chi^2 =$ 7.792 ^a
		% out of 97	6.2%	93.8%	100.0%	
	18-25	Count	4	56	60	df = 4
		% out of 60	6.7%	93.3%	100.0%	
	26-35	Count	4	34	38	P-value = 0.045
		% out of 38	10.5%	89.5%	100.0%	
	36-45	Count	0	56	56	
		% out of 56	0.0%	100.0%	100.0%	
	46-49	Count	3	111	114	
		% out of 114	2.6%	97.4%	100.0%	
Total		Count	17	348	365	
		% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.5 shows that out of the 97 respondents aged between 15 and 17, only 6(6.2%) utilized FP services, 91(38.8%) did not utilize FP services. Out of the 60 respondents aged between 18 and 25, 4(6.7%) utilized FP services, 56(93.3%) did not utilize FP services. Out of the 38 respondents aged between 26 and 35, 4(10.5%) utilized FP services, 34(89.5%) did not utilize FP services. All the 56 (100%) respondents aged between 36 and 45 did not utilize FP services. Out of the 114

respondents aged between 46-49 respondents 3(2.6%) utilized FP services, 111(97.4%) did not utilize FP services.

This finding is supported by Kundu et al (2022) study which found the use of FP services to be lowest for women aged between 15 - 19 years as compared to those aged between 30- 39 years in Tanzania. In Zimbabwe, they found use of FP services to be lowest for those aged between 45- 49 years, as compared to women aged between 30- 39 years. The finding is further supported by Kamuyango et al (2022) study which found that the use of family planning services increased between the ages of 20 – 45 and declined thereafter. The current study therefore deduces that in Eldas sub-county in Wajir County majority of the young women were not utilizing FP services because they were planning to have more children in the future.

4.3.2 Demographic Characteristics and FP Method Used

Before examining the variables that affect the use of family planning services, the current status of family planning services usage among the respondents was considered. While 4.7 percent of the respondents were currently using family planning services, the remaining 95.3 percent were not. This section discussed the demographic characteristics against FP method used. The demographic characteristics discussed were age, marital status and education level.

4.3.2.1 Age and Prevalence of Use of Family Planning Method Used

Age of the respondent was expected to have influence on the use of family planning method used. Table 4.6 presents the age of the women based on the responses provided by the respondents.

Table 4. 6
Age and Method Used

	Pills	Implanol	IUD	Withdrawal method	Safe days	Prolonged breastfeeding	Sexual abstinence	Chi- square (χ^2)
15-17	1 (5.8%)	0 (0.0%)	0 (0.0%)	1 (5.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	$\chi^2 =$ 25.829 ^a
18-25	1 (5.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (5.8%)	0 (0.0%)	0 (0.0%)	df =24
26-35	1 (5.8%)	2 (11.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	p-value = 0.000
36-45	1 (5.8%)	2 (11.8%)	1 (5.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	
46-49	2 (11.8%)	0 (0.0%)	2 (11.8%)	1 (5.8%)	0 (0.0%)	1 (5.8%)	0 (0.0%)	

The results show that 11.8% who were aged between 26-35, and 46-49 respectively used pills, 5.8% who were between 15-17, 18-25 and 36-45 years also used Implanol. Only 5.8% of the participants who belonged to the 26-35 age categories used implanol method, another 5.8% of the participants aged between 46-49 used pills. Safe days were used by 5.8 percent of the participant in age group 18-25. Sex. There was no significant difference in the distribution of study participants concerning age ($\chi^2 = 25.829$; df = 24; p = 0.000). The findings are in support of Elliott (2014) study in Morocco that revealed that the probability of contraceptive use increased with female age at marriage and decreased with the woman's age. Samandari et al (2019) showed that teenagers and newlywed women, who had not yet given birth to any children, were using contraceptives the least.

However, the findings disagreed with Kundu et al. (2022) in their study in Bangladesh that found that although adolescents had almost universal knowledge about

contraceptive methods, only 15 percent were by then using a method of contraception. The corresponding figures for the adults and for the nation as a whole were 34.4 percent and 31.4 percent, respectively. Among the individual methods that were being used by the adolescents, pills appeared to be the most popular method, followed by the safe period.

In their study in Ghana, Smith and Johnson (2018) revealed lower usage of Implanon and IUD among women aged over 39 years. Specifically, women aged 45-49 had a lower average use of these contraceptive methods compared to those aged 30-39. Conversely, a different trend emerged in Tanzania, where Jones and Lee (2019) found that the use of Implanon and IUD was lowest among women aged 15-19, in contrast to those aged 30-39. In Zimbabwe, a study by Patel and Mwale (2020) also indicated that the use of modern contraceptives, including Implanon and IUD, was lowest among women aged 45-49 when compared to those aged 30-39. Additionally, Smith and Johnson (2018) found that newly married women were significantly less likely to use contraception compared to those in polygamous or monogamous unions.

This study deduces that women at different stages of their reproductive lives have varying preferences for contraceptive methods. Specifically, women at the beginning of their childbearing years tend to prefer less permanent methods, while older women with several surviving children may opt for long-term or permanent methods such as the IUD.

FP services to be lowest for women aged between 15 - 19 years as compared to those aged between 30- 39 years in Tanzania. In Zimbabwe, they found use of FP services to be lowest for those aged between 45- 49 years, as compared to women aged between

30-39 years. The finding is further supported by Kundu et al. (2022) studies which found that the use of family planning services increased between the ages of 20 – 45 and declined thereafter. The current study therefore deduces that in Eldas sub-county in Wajir County majority of the young women were not utilizing FP services because they were planning to have more children in the future.

4.3.2.2 Marital Status and Method Used

Marital status of the respondent was expected to have influence on the use of family planning method used. Table 4.7 presents the age of the women based on the responses provided by the respondents.

Table 4. 7

Marital status and FP method Used

	Pills	Implanrol	IUD	Withdrawal method	Safe days	Prolonged breastfeeding	Sexual abstinence	Chi- square (χ^2)
Married	4 (23.5%)	4 (23.5%)	2 (11.8%)	2 (11.8%)	1 (5.9%)	1 (5.9%)	0 (0.0%)	$\chi^2 =$ 25.829 ^a
Not married	2 (11.8%)	0 (0.0%)	1 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	df =24 p-value = 0.567

The results in Table 4.7 showed that out of the 17 respondents, 23.5.2% who were married used Implanol, 11.8% who were married used IUD. 23.5% of the respondents who were in marriage and 11.8% of those who were not married used pills. 11.8%, 5.9% and 5.9% who were married used withdrawal, safe days and prolonged breastfeeding respectively. There was no significant difference in the distribution of study participants concerning marital status ($\chi^2 = 25.829$; df = 24; p = 0.000). The

finding is supported by Kamuyango et al. (2022) studies which found that the married women were the most likely to be using a modern method such as Implanol and IUD. The finding however contradicts en D'Exelle (2022) study which found that modern contraceptive use for never married women was relatively high. The current study deduces that Implanol and IUD were popular among married women since they were considered to be convenient, safe, effective and/or could be used secretly.

4.4 Socio-Economic Factors

The first objective of the study was to examine socio-economic factors that affect the use of family planning services by women in Eldas sub-county. In this sub-section, data collected was analyzed using descriptive statistics to facilitate the realization of this objective.

4.4.1 Employment Status and Family Planning Services

Employment is important as it provides a source of livelihood as well as economic backing for making sound decision by women including use of family planning services. The responses of the respondents are provided in Table 4.8.

Table 4. 8

Socio-Economic Characteristics and the Utilization of FP services

Occupation		Utilizing family planning services		Total	Chi-square (χ^2)
		Yes	No		
Unemployed	Count	5	189	194	$\chi^2 = 31.479$; df = 3; p = 0.000
	% out of 194	2.6%	97.4%	100.0%	
Running a business	Count	0	80	80	
	% out of 80	0.0%	100.0%	100.0%	
Pastoralism	Count	2	38	40	
	% out of 40	5.0%	95.0%	100.0%	
Employed	Count	10	41	51	
	% out of 51	19.6%	80.4%	100.0%	
Total	Count	17	348	365	

% out of 365	4.7%	95.3%	100.0%
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The results in Table 4.8 shows that out of the 194 respondents who were unemployed, only 5(2.6%) utilized FP services, 189(97.4%) did not utilize FP services. All the respondents 80(100%) who were running their businesses did not utilize FP services, out of 40 respondents, 2(5.0%) utilized FP services, 38(95.0%) did not utilize FP services. Lastly, out of 51 respondents, 10(19.6%) utilized FP services, 41(80.4%) did not use FP services.

It was expected that; employment status of the respondents could have effect on use of family planning services. This is because an employed woman is expected to be empowered economically and therefore able to make the necessary decision with minimal consultation of the partner. The high rate of users among the employed could be attributed to various factors. First, employed people may access the services at work place or alternatively, working people may not be willing to take up the responsibilities of looking after children. Additionally, these people are most likely to be exposed to various sources of information regarding family planning services given the interaction they encounter at their work place.

In the end, they are likely to appreciate the importance of using family planning services, hence ending up using the services. As reported by en D'Exelle (2022), in societies where women were relatively independent due to economic factors such as employment and income, they had greater say in decision making. In this regard, therefore, women in employment are likely to make a positive decisions regarding use of family planning services. The finding is supported by Khundi et al (2024) study which found the use of FP services to be highest for employed women. The finding is

further supported by Kundu et al (2022) studies which found that educated women were informed regarding different FP methods and thus made the informed choices. Further, in support of the current study finding, Kundu et al. (2022) study in Indonesia found that the proportion of women who were working had a higher acceptance rate of FP services use, Samanta and Munda (2023) in another study found that women's work gives women autonomy which led to limited space for birth and contraceptive use.

The current study therefore deduces that in Eldas sub-county in Wajir County more than half of the respondents (58.8%) who utilized FP services were employed, also more than half (53.2%) of those who did not utilize FP services were unemployed. An indication that the few employed women in the sub-county was not planning to have more children in the future.

4.4.2 Household Number of Live of Children and Utilization of FP

The number of children in a household has been established to play a key role in determining FP services utilization among women. The study cross-tabulated the age of the participants against the number of children they had. The results are shown in Table 4.9.

Table 4. 9

Number of Children and Utilization of FP

			Utilizing FP services		Total	Chi-square
			Yes	No		(χ^2)
Number of children	1-3	Count	8	145	153	$\chi^2 = 644;$ df = 3;
		% out of 153	5.2%	94.8%	100.0%	
	4-6	Count	4	68	72	
		% out of 72	5.6%	94.4%	100.0%	
	More	Count	5	134	139	

	than 6	% out of 139	3.6%	96.4%	100.0%	p-value
	6	Count	0	1	1	=
		% out of 1	0.0%	100.0%	100.0%	0.000
		Count	17	348	365	
Total		% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.9 shows that out of the 153 respondents who had between one and three children, 8(5.2%) utilized FP services, 145(94.8%) did not utilize FP services. Out of the 72 respondents who had between four and six children, 4(5.6%) utilized FP services, 68(94.4%) did not utilize FP services. Out of the 139 respondents who had more than six children, 5(3.6%) utilized FP services, 134(96.4%) did not utilize FP services. There was a significant difference in the distribution of study participants concerning the number of children ($\chi^2 = 644a$; df = 3; p-value = 0.000). The findings are in support of Elliott (2014) study in Morocco that revealed that majority of muslim women prefer more than four children. Samandari et al (2019) showed that teenagers and newlywed women, who had not yet given birth to any children, were using contraceptives the least. The finding however disagrees with Samandari et al (2019) that the number of children already born affected the use of family planning, with those who had few children or did not have children most likely to use family planning services in comparison to those with many children. The current study therefore deduces that women in Eldas sub-county are more likely to give birth to more than four children and therefore less likely to utilize FP services.

4.4.3 Household Characteristics and Utilization of FP Services

The study sought to analyze the household characteristics of the participants and determine whether they determined the utilization of FP services among women of reproductive age in Eldas Sub-county, in Wajir County, the measures included: finished floor and wall, electricity, piped water, flush toilet, and area of residence.

Table 4.10
Household Characteristics and Utilization of FP Services

Housing status: Finished floor and wall, piped water and flush toilet		Utilizing FP services		Total	Chi-square (χ^2)
		Yes	No		
Yes	Count	0	230	230	$\chi^2 =$ 30.378; df = 1; p = 0.000
	% out of 230	0.0%	100.0%	100.0%	
No	Count	17	118	135	p = 0.000
	% out of 135	12.60%	87.40%	100.00%	
Urban Residence					
Yes	Count	0	226	226	$\chi^2 =$ 28.991; df = 1; p = 0.000
	% out of 226	0.0%	100.0%	100.0%	
No	Count	17	122	139	p = 0.000
	% out of 139	12.20%	87.80%	100.00%	

The results in Table 4.10 shows that all the 230 respondents who lived in houses with finished floor and wall, piped water and flush toilet were not utilizing FP services, out of the 135 respondents who were not living houses with finished floor and wall, piped water and flush toilet 17(12.6%) were utilizing FP services, 118 (87.4%) were not utilizing FP services. Further, all the 226 (100.0%) were living in an urban area were not utilizing FP services, out of 139 respondents who were not residing in an urban setup, 17 (12.2%) were utilizing FP services, 122 (87.8%) were not utilizing FP services. There was a significant difference in the distribution of study participants concerning the housing status (p-value = 0.000).

While categorizing residential areas in terms of rural and urban, Kamuyango et al (2022) concluded that women living in urban areas were more likely to use family planning services than those in rural areas due to exposure to various sources of information. According to Kanyangarara et al. (2019), poverty is a factor that has led to high fertility. This in turn creates a heavy dependency load and ratios for families living in poor conditions as the money received is all spent on food, school fees,

funerals, housing, and clothing with nothing to invest or improve living conditions.

In terms of residential areas, Khundi et al., (2024) established that residential areas had an effect on the use of contraceptives. In Ghana, for instance, they found that those living in the Volta, Eastern and the Upper East regions of the country were more significantly using a modern method than those in the Western region, where the use of modern contraceptive was the least. In Tanzania, Khundi et al., (2024) found that women living in the Lake zone used modern contraceptives the least compared to those living in the Coastal, Northern Highlands and Southern regional zones. While categorizing residential areas in terms of rural and urban, Khundi et al., (2024) concluded that women living in urban areas were more likely to use family planning services than those in rural areas due to exposure to various sources of information.

The study concludes that most of the women utilizing FP services lived in houses that had finished floors, flush toilets, and piped water, finished walls, they were not connected to electricity, and neither did they reside in urban areas.

4.4.4 Household Head Characteristics

4.4.4.1 Household Head Education level and FP Services Utilization

An educated man is expected to be exposed and well informed about the benefits of family planning services. The exposed man is thus expected to make a positive decision regarding use of the services. The level of education of the respondents is reported in Table 4.11.

Table 4. 11***Household Head Education Level and FP services***

			Utilizing FP services		Total	Chi-square (χ^2)
			Yes	No		
Household head Education Level	Primary	Count	4	50	54	$\chi^2 = 28.991$; df = 3; p = 0.000
		% out of 54	7.4%	92.6%	100.0%	
	Secondary	Count	7	82	89	
		% out of 89	7.9%	92.1%	100.0%	
	Madrasa	Count	6	168	174	
		% out of 174	3.4%	96.6%	100.0%	
	Tertiary	Count	48	0	48	
		% out of 48	100.0%	0.0%	100.0%	
Total		Count	17	348	365	
		% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.11 shows that out of the 54 respondents whose household heads education level was primary education, 4(7.4%) utilized FP services, 50(92.6%) did not utilize FP services, out of the 89 respondents whose household heads education level was secondary education, 7(7.9%) utilized FP services, 82(92.1%) did not utilize FP services, out of the 174 respondents whose household heads education level was madrasa, 6(3.4%) utilized FP services, 168(96.6%) did not utilize FP services. Lastly, 48(100%) of the respondents whose household heads had tertiary level education utilized FP services. There was a significant difference in the distribution of study participants concerning household heads level of education ($\chi^2 = 28.991$; df = 3; p-value = 0.000).

The results of this study, supports Çalıkoğlu et al. (2018) study that found that the use of modern method of family planning tended to increase with educational level of a man. Moreover, Khundi et al. (2024) also established that modern contraceptive use

increased with the educational level of a woman in Tanzania. This finding also compares with Oyedokun (2017) who found the use of family planning services to be high for women who had more years of schooling in Nigeria. Like in the case of the woman's level of education, partner's education level had some influence on the use of family planning services. This is because an educated partner is expected to have some knowledge on the importance of family planning and therefore able to make an informed decision to use the services.

4.4.4.2 Household Head Employment Status and FP Services Utilization

Employment is important as it provides a source of livelihood as well as economic backing for making sound decision by household heads including use of family planning services. The level of education of the respondents is reported in Table 4.11.

Table 4. 12

Household head Employment Status and FP services

Household Head Employment		Utilizing FP services		Total	Chi-square (χ^2)
		Yes	No		
Unemployed	Count % out of 28	0 0.0%	28 100.0%	28 100.0%	$\chi^2 = 2.905$; df = 3; p-value = 0.000
Self employed	Count % out of 217	12 5.5%	205 94.5%	217 100.0%	
Employed in public/private sector	Count % out of 76	2 2.6%	74 97.4%	76 100.0%	
Pastoralism	Count % out of 44	3 6.8%	41 93.2%	44 100.0%	
Total	Count % out of 365	17 4.7%	348 95.3%	365 100.0%	

The results in Table 4.12 shows that all the 28 respondents whose household heads were unemployed did not utilize FP services, out of the 217 respondents whose

household heads were self-employed, 12(5.5%) utilized FP services, 205(94.5%) did not utilize FP services, out of the 76 respondents whose household heads were in employed in either public or the private sector, 74(97.4%) did not utilize FP services. Lastly, out 44 respondents, 3(6.8%) of the respondents whose household heads practiced pastoralism utilized FP services while 41(93.2%) did not utilize FP services. There was a significant difference in the distribution of study participants concerning household heads' employment status ($\chi^2 = 28.991a$; $df = 3$; $p\text{-value} = 0.000$).

The results of this study, supports Çalışkoğlu et al. (2018) study that found that the use of modern method of family planning tended to increase with educational level of a woman. Moreover, Khundi et al. (2024) also established that modern contraceptive use increased with the educational level of a woman in Tanzania. This finding also compares with Oyedokun (2017) who found the use of family planning services to be high for women who had more years of schooling in Nigeria. Like in the case of the woman's level of education, partner's education level had some influence on the use of family planning services. This is because an educated partner is expected to have some knowledge on the importance of family planning and therefore able to make an informed decision to use the services.

4.5 Social-Cultural Factors and Utilization of Family Planning Services

The second objective of the study was to examine socio-cultural factors that affect the use of family planning services by women in Eldas sub-county. Many researchers have identified several factors that affect women's use of modern contraceptives including or non-use of contraceptives. Many researchers have identified several factors that affect women's utilization of FP services (Kundu et al., 2022). Generally, certain cultural factors would affect the use of contraceptives by women in society.

The current study sought to establish how various socio-cultural factors pointed out by various scholars affected FP service utilization among women of reproductive age (15-49 years) in Eldas sub-county as would be discussed one by one including the following; polygamy, the ideal number of children, religion and son preference.

4.5.1 Religious Background of the Respondents and Utilization of FP Services

From the reviewed literature, religious background of a woman is likely to have an effect on the use of family planning services. Table 4.13 provides religious background of the respondent.

Table 4. 13

Social-Cultural Factors and Utilization of Family Planning Services

			Utilizing FP services		Total	Chi-square (χ^2)
			Yes	No		
Religion	Muslim	Count	10	327	337	$\chi^2 =$
		% out of 337	3.0%	97.0%	100.0%	
	Catholic	Count	2	5	7	df = 3;
		% out of 7	28.6%	71.4%	100.0%	
	Protestant	Count	0	5	5	=
		% out of 5	0.0%	100.0%	100.0%	
	Others	Count	5	11	16	
		% out of 16	31.2%	68.8%	100.0%	
Total		Count	17	348	365	
		% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.13 shows that out of the 327 respondents who were Muslims, 10(3.0%) utilized FP services, while 327(97.0%) did not utilize FP services, out of the 7 respondents who practiced catholic, 2(28.6%) utilized FP services, while 5(71.4%) did not utilize FP services, all the respondents 5(100.0%) who were protestants did not utilize FP services. There was a significant difference in the distribution of study participants concerning religion ($\chi^2 = 36.907$; df = 3; p-value = 0.000).

Studies have revealed that Muslim use family planning services the least. As revealed in the literature review this could be explained by the fact that Islamic faith discourages use of modern family planning services, preferring the use of natural methods such as observation of menstrual cycles and safe days of a woman.

A study by Wijaya (2023) in Indonesia showed that religion played a major role in method use and choice. Islam was strongly correlated with the probability of choosing an Injectable type of contraceptive compared to other modern methods. Wijaya (2023) has described the success of Indonesia's family planning program, with a rapid decline in the Total Fertility Rate (TFR). One important factor was religion and the success was attributed to the fact that Islamic leaders were consulted before program implementation. The relationship between religion and contraceptive use was observed in Kinshasa, the Democratic Republic of Congo by Shapiro and Oleko (2020).

Table 4.14

Religion supports of contraception use

Religion supports of contraception use		Utilizing FP services		Total	Chi-square (χ^2)
		Yes	No		
True	Count	0	26	26	$\chi^2 =$ 11.485
	% out of 26	0.0%	100.0%	100.0%	
False	Count	0	117	117	df = 2
	% out of 117	0.0%	100.0%	100.0%	
Don't Know	Count	17	205	222	p-value = 0.003
	% out of 222	7.70%	92.30%	100.00%	
Total	Count	17	348	365	
	% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.14 shows that 26(100%) of the respondents who indicated that their religion supported contraception use, did not utilize FP services, 117(100%) of the respondents who indicated that their religion did not support contraception use,

they did not utilize FP services. Lastly, out of the 222 respondents who indicated that they did not know that their religion supported contraception use, 17(7.7%) utilized FP services, 205(92.3%) did not utilize FP services. There was a significant difference in the distribution of study participants concerning religion support of the use of contraceptives ($\chi^2 = 11.485$; $df = 2$; $p\text{-value} = 0.003$).

While studying the compliance and use behaviour of injectable as well as oral contraceptive use in South Africa, Kriel et al. (2019) established that disapproval of contraception was a reason for non-use. In the study, Kriel, et al. (2019) argued that partners' views as well as personal views and the views of others on religious or cultural grounds, were important in determining use of family planning services. Like in the case of Amo-Adjei et al. (2017), it is clear that a woman's partner had a significant influence on the use of family planning services. Regarding religion, Khundi et al. (2024) study revealed that religion was associated with the use of modern methods. In particular, they noted that those from traditional religions used modern contraception the least, especially in Ghana and Tanzania. The study revealed that Christians in Zimbabwe were significantly using modern contraceptive methods than those from other religions.

4.5.2 Community and Individuals' View of an Ideal Number of Children

The study sought to determine the community and individual views of an ideal number of children and the utilization of FP.

Table 4. 15***Community's and Individual opinion on Ideal Number of Children***

Community's ideal number of children		Utilization FP services		Total	Chi-square (χ^2)
		Yes	No		
3- 5	Count	0	3	3	$\chi^2 =$ 37.999 ^a ; df = 2 p-value = 0.000
	% out of 3	0.0%	100.0%	100.0%	
6- 7	Count	10	33	43	
	% out of 43	23.3%	76.7%	100.0%	
More than 8	Count	7	312	319	
	% out of 319	2.2%	97.8%	100.0%	
Total	Count	17	348	365	
	% within utilizing FP services	100.0%	100.0%		
	% out of 365	4.7%	95.3%		

The results in Table 4.15 shows that 3(100%) of the respondents who indicated three to five children as the community's ideal number of children, did not utilize FP services. Out of the 43 respondents who indicated six to seven children, 10(23.3%) were utilizing FP services, 33 (76.7%) were not utilizing FP services. Out of the 319 respondents who indicated more than eight children, 7(2.2%) were utilizing FP services, 312 (97.8%) were not utilizing FP services. There was a significant difference in the distribution of study participants concerning community's ideal number of children ($\chi^2 = 37.999^a$; df = 2; p-value = 0.000).

Amo-Adjei et al. (2017) found that the number of children determined FP services utilization. In the study, Conlon et al. (2022). showed that the main factors affecting the use of the pill were age, number of living children, marital status, region and place of residence as well as fertility desires. The finding positively compares with

Jayaraman (2019), who found that women who desire to have more children used contraceptives the least as compared to those who had no desire. This finding is supported by Çalıkoğlu et al (2018) study which found that couples with three plus children had the highest proportion of contraceptive use.

4.5.3 Community Gender Preference

Customs emphasize the importance of childbearing in most African countries; Kenya included (Kanyangarara et al., 2019). The respondents were asked to indicate the extent they agreed with the community gender preference on a scale of 1 to 5 where 1 strongly disagreed and 5 strongly agreed.

Table 4.16

Community Gender Preference

Community preference of boys over girls		Utilizing FP services		Total	Chi-square (χ^2)
		Yes	No		
SD	Count	0	56	56	$\chi^2 =$
	% out of 56	0.0%	100.0%	100.0%	
D	Count	0	55	55	df = 4;
	% out of 55	0.0%	100.0%	100.0%	
N	Count	3	72	75	p-value =
	% out of 75	4.0%	96.0%	100.0%	
A	Count	2	59	61	0.008
	% out of 61	3.3%	96.7%	100.0%	
SA	Count	12	106	118	
	% out of 118	10.20%	89.80%	100.00%	
Total	Count	17	348	365	
	% out of 365	4.7%	95.3%	100.0%	

Key: SD = strongly disagree; D = Disagree; N = Neutral; A = Agree and SA = strongly agree

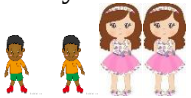
The results in Table 4.16 shows that 56(100%) of the respondents who strongly disagreed that the community preferred boys over girls were not utilizing FP services, also 55(100%) of the respondents who disagreed that the community preferred boys over girls were not utilizing FP services. Out of the 75 respondents who did not give any opinion, 3(4.0%) were utilizing FP services, 72(96.0%) were not utilizing FP

services. Out of the 61 respondents who agreed, 2(3.3%) were utilizing FP services, 59 (96.7%) were not utilizing FP services. Lastly, out of the 118 respondents who agreed, 12(10.2%) were utilizing FP services, 106(89.8%) were not utilizing FP services. There was a significant difference in the distribution of study participants concerning community's ideal number of children ($\chi^2 = 13.830$; $df = 4$; $p\text{-value} = 0.008$). The findings are in support of Mushy et al. (2020), Mpunga et al. (2017), Çalıkoğlu et al (2018), Amo-Adjei et al. (2017) who found that community gender preference determined FP service utilization.

4.5.4 Gender Balance and FP Services Utilization

The respondents were asked to give their opinion regarding the number of children a woman has and the likelihood that she will continue to have more children to achieve a gender balance.

Table 4. 17
Gender Balance and FP Services Utilization

		Using FP			Chi-square
		Yes	No	Total	(χ^2)
Family A	Count	0	24	24	$\chi^2 = 17.159$; $df = 4$; $p\text{-value} = 0.002$
	% out of 24	0.00%	100.00 %	100.00%	
Family B	Count	0	22	22	
	% out of 22	0.00%	100.00 %	100.00%	
Family C	Count	0	32	32	
	% out of 32	0.00%	100.00 %	100.00%	
Family D	Count	0	101	101	
	% out of 101	0.00%	100.00 %	100.00%	
Family E	Count	17	169	186	
	% out of 186	9.10%	90.90%	100.00%	

				
Total	Count	17	348	365
	% out of 365	4.7%	95.3%	100.0%

The results in Table 4.17 shows that 24(100%) of the respondents who felt family A was more ideal were not utilizing FP services, 22(100%) of the respondents who felt family B was more ideal were not utilizing FP services. Also, 32(100%) of the respondents who felt family C was more ideal were not utilizing FP services. Further, 101(100%) of the respondents who felt family D was more ideal were not utilizing FP services. Lastly, 17(9.1%) of the respondents who felt family E was more ideal were utilizing FP services, 169(90.9%) were not utilizing FP services. There was a significant association detected between the ideal family and FP services utilization ($\chi^2 = 17.159$; $df = 4$; $p = 0.002$). The study therefore concludes that the women in Eldas sub-county preferred having more boys than girls in their households.

In support of the finding, Kamal and Islam, (2020) in Bangladesh, found that there was a desire for the first child to be a boy in couples, and mothers who already had a son were 60 percent more likely to use contraceptives than those who did not. In support of the finding in Nepal (2020) found that son preference is closely tied to women's fertility aspirations. Brunson (2020) conducted ethnographic work with Hindu women in one semi-urban village and concluded that son preference remains strong in Nepali culture. The current study concludes that women have internalized the expectations of their society, community, and family, and still feel a strong pressure to produce sons. Çalıkoğlu et al. (2018) study which found that couples with three plus children had the highest proportion of contraceptive use. It was observed in the study that women with sons were most likely to practice contraception. These societies do not identify with

family planning and even though they vary greatly in culture, son preference is a common feature.

The current study deduces that in Eldas Sub-county, a boy child is considered a woman's "seat" to mean that a woman remains a visitor in her husband's home until she has a son. This custom illuminates the lack of worth accorded to adult women. This happens because of the social obligations expected of men, like being an heir to the father for continuity purposes and the family's status and influence. A couple with only girls end up not utilizing FP services, give birth to too many children with the hope of luckily getting a boy leading to large and unplanned families.

4.5.5 Type of Marriages and the Utilization of FP Services

The study sought to analyze the type of marriage of the participants and determine whether they determined the utilization of FP services among women of reproductive age in Eldas Sub-county, in Wajir County. The responses are shown in Table 4.17.

Table 4. 18

Polygamous marriages and the utilization of FP services

In a polygamous marriage		Utilizing FP services			Chi-square (χ^2)
		Yes	No	Total	
Yes	Count	17	260	277	$\chi^2 = 5.665$; df=1;
	% out of 277	6.1%	93.9%	100.0%	
No	Count	0	88	88	p-value =
	% out of 88	0.0%	100.0%	100.0%	
Total	Count	17	348	365	0.017
	% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.18 shows that out of the 277 respondents in a polygamous marriage, a few 17(6.1%) utilized FP services while a majority 260(93.9%) did not

utilize FP services. Also, all the 88(100%) respondents who were not in a polygamous marriage, were not utilizing FP services. There was a significant association detected between the type of marriage and FP services utilization ($\chi^2 = 5.665$; $df = 1$; $p = 0.017$). The study concludes that majority of the women in Eldas sub-county want more children.

In support of the finding, Giessler et al. (2020) found that in West and East Africa, more than 20 percent of married women are in polygamous marriages. Even if the KDHS (2008 – 2009) statistics indicate that polygamy has decreased in Kenya. Feyisetan (2015), Oyediran and Isiugo-Abanihe (2018) found that among Somali community in Wajir County, polygamy was characterized by high fertility areas. This emerges because many wives may compete in giving birth resulting in a high population growth rate. The scenario is evident in the community. Wives symbolize wealth – both in terms of the man's ability to provide bride price for several women, and increased labor provided by women and children that enhance the family wealth while ensuring a continued lineage. As a result, more wives translate into increased social status. The reasons for this are inadequate exposure to contraceptives and early marriages. Nonetheless, FP services utilization is substantially lower among women in polygamous marriages than among those in monogamous ones in Eldas Sub-county.

4.5.6 Discussion About Birth Control with a Partner

Partner's involvement is a key factor that influences the use of family planning services. The responses are provided in Table 4.19.

Table 4.19***Discussion about birth control with a partner***

Discussion about birth control with partner		Utilization of FP services		Total	Chi-square (χ^2)
		Yes	No		
Yes	Count	17	286	303	$\chi^2 =$ 3.648;
	% out of 303	5.6%	94.4%	100.0%	
No	Count	0	62	62	df = 1;
	% within	0.0%	100.0%	100.0%	
Total	Count	17	348	365	p-value = 0.011
	% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.19 shows that out of the 303 respondents who had discussions with their partners about birth control, a few 17(5.6%) utilized FP services while a majority 286(94.3%) did not utilize FP services. Also, all the 62(100%) respondents who did not have discussions with their partners about birth control did not utilize FP services. There was no significant difference in the distribution of the study participants with regards to birth control discussion with partners and FP utilization ($\chi^2 = 3.648$; df = 1; p = 0.003).

The results compare with the study by Feyisetan (2015), Oyediran and Isiugo-Abanihe (2018) who found that inter-spousal communication dictates whether or not to use family planning, the method to use, when to start and the number of and timing of children as well as enabling husbands and wives to know each other's attitudes towards family planning and use of contraceptives. It also allows spouses to say their concerns about reproductive health matters like unintended pregnancies, side effects of a method, or STDs. Communication may therefore affect contraceptive use by transforming attitudes into the physical act of using contraceptives. The current study concludes that Inter-spousal communication can be regarded as a way toward

increasing men's participation in family planning and reproductive health services.

4.5.7 Partner's Attitude toward Birth Control

Partner's attitude is a key factor that influences the use of family planning services.

The responses are provided in Table 4.20.

Table 4. 20

Partner's Attitude toward Birth Control

		Utilizing FP services		Total	Chi-square (χ^2)
		Yes	No		
Does not believe in it at all	Count	0	157	157	$\chi^2 = 285.841$
	% out of 157	0.0%	100.0%	100.0%	
Does not believe in it	Count	0	104	104	;
	% out of 104	0.0%	100.0%	100.0%	
Moderately believes in it	Count	0	58	58	p-value = 0.000
	% out of 58	0.0%	100.0%	100.0%	
Fairly believes in it	Count	4	29	33	
	% out of 33	12.1%	87.9%	100.0%	
Completely believes in it	Count	13	0	13	
	% out of 13	100.0%	0.0%	100.0%	
Total	Count	17	348	365	
	% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.20 shows that 157(100%) of the respondents who were not utilizing FP services, indicated that their partners did not believe in birth control at all, 104(100%) of the respondents who were not utilizing FP services, indicated that their partners did not believe in birth control, 58(100%) of the respondents who were not utilizing FP services, indicated that their partners moderately believed in birth control. Out of the 33 respondents whose partners believed fairly in birth control, 4(12.1%) utilized FP services, 29(87.9%) were not utilizing FP services, 13(100%) of the respondents who were utilizing FP services, indicated that their partners completely believed in birth control. There was a significant difference in the distribution of the study participants with regards to partners' attitude towards birth control and FP utilization ($\chi^2 = 285.841$; $df = 4$; $p = 0.000$).

The results compare with the study by Brown (2023) that used data from the Demographic Health Survey of 1998 to examine the contraceptive use dynamics in Kenya. The study revealed that the partner's attitude of family planning was associated with a reduced probability of use and consequently higher probability of non-use with or without an unmet need for family planning. This finding supports Amo-Adjei et al. (2017) and Phillips et al. (2019), who separately found that a partner's attitude was important in the use of family planning services. Also in support of the finding, Calhoun et al. (2019) found the attitude of people toward contraception to influence adoption of family planning methods. Thus, they observed that the attitude of an individual was influenced by a number of factors such as education, age, income and the influence of other people around the individual. The current study deduces that male partner involvement in family planning decision-making also boosts the woman's confidence and relieves her of worries that may hinder her from accessing and utilizing FP services. The study concludes that partner's attitude plays a role in influencing the utilization of FP services in the Eldas sub-county.

4.5.8 Decision on FP services utilization

The respondents were asked to indicate the types of people influencing the decision on family planning and the utilization of FP.

Table 4.21***Types of People influencing Decisions on Family Planning***

		Utilizing FP services			Chi-square (χ^2)
		Yes	No	Total	
Spouse	Count	0	33	33	$\chi^2 = 9.440^a$;
	% out of 33	0.0%	100.0%	100.0%	
Friends	Count	0	42	42	df = 4;
	% out of 42	0.0%	100.0%	100.0%	
Aunties	Count	4	57	61	p-value =
	% within	6.6%	93.4%	100.0%	
Health providers	Count	4	127	131	0.017
	% out of 131	3.1%	96.9%	100.0%	
Mothers	Count	9	89	98	
	% out of 98	9.2%	90.8%	100.0%	
Total	Count	17	348	365	
	% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.20 show that 33 (100%) of the respondents who were influenced by their spouses in their decisions on family planning were not utilizing FP services, 42 (100%) of the respondents who were influenced by their friends in their decisions on family planning were not utilizing FP services. Out of the 61 respondents who were influenced by their aunties in their decisions on family planning, 4 (6.6%) were utilizing FP services, 57(93.4%) were not utilizing FP services. Out of the 131 respondents who were influenced by the health providers in their decisions on family planning, 4 (3.1%) were utilizing FP services, and 127 (96.9%) were not utilizing FP services. Out of the 98 respondents who were influenced by their mothers in their decisions on family planning, 9 (9.2%) were utilizing FP services, and 89 (90.8%) were not utilizing FP services. There was a significant difference in the distribution of the study participants with regards to the persons influencing decision making on FP and FP utilization ($\chi^2 = 9.440^a$; df = 4; p = 0.017).

In support of the study findings, Phillips et al. (2019) in Ghana, established that spousal communication, encouragement and support for family planning were the most important factors determining use of family planning services in the traditional African society. Burdette et al. (2014) conducted a survey to evaluate the pattern of sexual behavior and contraceptive use among female students attending tertiary institutions in Nigeria. The study revealed that all the respondents were aware of contraceptives. However, only a quarter of the respondents had ever used any contraceptive method. The most common sources of information about contraception among the respondents were friends/relatives, while the fear of side effects of modern contraceptives was the most common reason for non-use.

4.6 Health System Factors

The third objective of the study was to examine health system factors that affect the use of family planning services by women in Eldas sub-county. Health system factors entail accessibility, availability, and affordability of family planning services and are very important in facilitating the utilization of FP services. How accessible in terms of the distance of the health facilities providing family planning services is crucial in enhancing the use of FP methods among women (Diamond-Smith et al., 2020).

4.6.1 Accessibility and FP services Utilization

The participants were asked to indicate the time taken to reach the nearest FP service providers. The responses are provided in Table 4.22.

Table 4. 22***Mode of Transport (walking), Time and FP services Utilization***

		Utilization of FP services			Chi-square (χ^2)
		Yes	No	Total	
Less than 30 minutes	Count	0	179	179	$\chi^2 = 59.697$;
	% out of 179	0.0%	100.0%	100.0%	
30 minutes to 1 hour	Count	0	102	102	df = 2;
	% out of 102	0.0%	100.0%	100.0%	
More than 1 hour	Count	17	67	84	p-value = 0.000
	% out of 84	20.2%	79.8%	100.0%	
Total	Count	17	348	365	
	% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.22 show that 179 (100%) of the respondents who walked for less than 30 minutes to reach the nearest FP service providers were not utilizing FP services, 102 (100%) of the respondents who walked for 30 minutes to 1 hour to reach the nearest FP service providers were not utilizing FP services, out of the 84 respondents who walked for more than one hour to reach the nearest FP service providers, 17(20.2%) were utilizing FP services, 67(79.8%) were not utilizing FP services. There was a significant association detected between distance covered and FP utilization ($\chi^2 = 59.697$; df = 2; p = 0.000).

In support of the finding, Samanta and Munda, (2023) investigated the respondents' perceptions of the availability of family planning advice and supplies in Colombia, Costa Rica, Korea, Malaysia, and Nepal, their perceived travel time, means of transport and distance to the nearest or preferred outlet, and their reported use of family planning services. The study found that the perceived availability and accessibility of services increased use of family planning services. In support of the finding Owuor (2020). study by examining the effects of both objective and perceived availability in Korea,

Mexico and Bangladesh. Of the three countries studied, the association between community contraceptive availability and use was weakest in Bangladesh, and was particularly weak when restricted to rural areas. Kamal (2014) study showed that the rapid increase in Bangladesh's contraceptive prevalence rate was in part attributed to the introduction of grassroots-level family planning workers known as Family Welfare Assistants (FWAs).

4.6.2 Mode of Transport (walking), Time and FP services Utilization

The participants were asked to indicate the time taken to reach the nearest FP service providers. The responses are provided in Table 4.23.

Table 4.23

Mode of Transport (walking), Time and FP services Utilization

			Using FP			Chi-square (χ^2)
			Yes	No	Total	
Mode of transport	Bus	Count	0	11	11	$\chi^2 =$
		% out of 11	0.0%	100.0%	100.0%	4.767;
	Taxi	Count	0	66	66	
		% out of 66	0.0%	100.0%	100.0%	df=2;
	Walking	Count	17	271	288	p =
		% out of 288	5.9%	94.1%	100.0%	0.016
Total	Count	17	348	365		
	% out of 365	4.70%	95.30%	100.00%		

The results in Table 4.23 show that 11 (100%) of the respondents who took a bus to reach the nearest FP service providers were not utilizing FP services, also 66 (100%) of the respondents who took a taxi to reach the nearest FP service providers were not utilizing FP services. Out of the 288 respondents who walked to reach the nearest FP service providers, 17(5.9%) were utilizing FP services, 271(94.1%) were not utilizing

FP services. There was a significant association detected between of mode of transport and FP services utilization ($\chi^2 = 4.767$; $df = 2$; $p = 0.016$).

In support of the finding, in Uganda, Walakira et al (2019) found that distance to the facility, transport cost and waiting time at the facility affected FP service utilization. In Burkina Faso, Guiella *et al.* (2017) found that distance to the facility affected FP service utilization. The current study deduces that the negative impact of distance from the service provider could be attributed to the fact that when the provider is far away from the woman, there is bound to be some imbedded costs component in terms of transport and transaction costs as well as waiting and travelling time, which may discourage a person from seeking the services.

4.6.2.3 Cost of Transport, Time and FP services Utilization

The participants were asked to indicate the time taken to reach the nearest FP service providers. The responses are provided in Table 4.24.

Table 4. 24

Cost of Transport and FP services Utilization

		Utilization FP services			Chi-square (χ^2)
Costs incurred to and fro		Yes	No	Total	
Ksh. 20-50	Count	0	7	7	$\chi^2 = 4.689$; df = 3; p = 0.001
	% out of 7	0.0%	100.0%	100.0%	
Ksh. 50 to 100	Count	0	4	4	
	% out of 4	0.0%	100.0%	100.0%	
More than Ksh. 100	Count	0	65	65	
	% out of 65	0.0%	100.0%	100.0%	
Ksh 0	Count	17	272	289	
	% out of 289	5.9%	94.1%	100.0%	
Total	Count	17	348	365	
	% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.24 show that 7 (100.0%) of the respondents who paid between Ksh. 20 and 50 to reach to the nearest health provider were not utilizing FP services, 4 (100.0%) of the respondents who paid between Ksh. 50 and 100 to reach to the nearest health provider were not utilizing FP services, 65 (100.0%) of the respondents who paid between more than ksh. 100 to reach to the nearest health provider were not utilizing FP services. Out of 289 respondents who did not incur any transport cost, 17(5.9%) were utilizing FP services, 272 (94.1) were not utilizing FP services. There was a significant association detected between cost incurred to reach to the nearest health provider and FP utilization ($\chi^2 = 4.689$; $df = 3$; $p = 0.001$).

In support of the finding, in Uganda, (2019) found that distance to the facility, transport cost and waiting time at the facility affected FP service utilization. In Burkina Faso, Guiella *et al.* (2017) found that distance to the facility affected FP service utilization. This study results do in a way contradict the study by McNamara (2018), which found that travel effect was a weak complement to hospital services delivered at a particular location, since patients would visit facilities further away from their residential location, thus leaving the nearest options in order to derive the desired satisfaction. This inconsistency could be attributed to the fact that whereas health services are considered to be necessity, family planning services may not.

4.6.2.5 Distance to the preferred facility, cost incurred, and the utilization of FP

Proximity to family planning services provider and the cost incurred is assumed to influence the utilization of FP services. The distance and cost incurred and FP service utilization is reported in Table 4.24.

Table 4. 25***Distance to the preferred facility, cost incurred, and the utilization of FP***

		Using FP services			Chi-square (χ^2)
		Yes	No	Total	
Very low extent	Count	0	33	33	$\chi^2 = 98.386$;
	% out of 33	0.0%	100.0%	100.0%	
Low extent	Count	0	87	87	df = 4;
	% out of 87	0.0%	100.0%	100.0%	
Moderate extent	Count	0	167	167	p-value =
	% out of 167	0.0%	100.0%	100.0%	
Great extent	Count	0	22	22	0.000
	% out of 22	0.0%	100.0%	100.0%	
Very Great extent	Count	17	39	56	
	% out of 56	30.4%	69.6%	100.0%	
Total	Count	17	348	365	
	% out of 365	4.7%	95.3%	100.0%	

The majority of the respondents 58.8% (n = 10) indicated that the distance and cost affected to a great extent their access to their nearest health center for FP services. There was a significant association detected between the cost incurred to and fro and FP utilization ($\chi^2 = 5.606$; df = 3; p = 0.032).

In support of the finding, in Uganda, Baiga et al. (2019) found that distance to the facility, transport cost and waiting time at the facility affected FP service utilization. In Burkina Faso, Mwangi et al. (2023) found that distance to the facility affected FP service utilization. The current study deduces that the negative impact of distance from the service provider could be attributed to the fact that when the provider is far away from the woman, there is bound to be some imbedded costs component in terms of transport and transaction costs as well as waiting and travelling time, which may discourage a person from seeking the services.

4.6.3 Service Delivery at their Nearest Facility

Improvement in family planning programs calls for expansion of the choice of the method used, providing adequate information, increase in the technical competence of providers, increasing interpersonal relations between providers and clients, and incorporating adequate client support and follow-up (Ndayizigiye, 2014).

Table 4.26

Time taken to be served in their local health facility

		Utilization of FP services		Total	Chi- square (χ^2)
		Yes	No		
Strongly Disagree	Count	6	75	81	$\chi^2 =$ 5.183; df = 4; p = 0.002
	% out of 81	7.4%	92.6%	100.0%	
Disagree	Count	3	106	109	
	% out of 109	2.8%	97.2%	100.0%	
Neutral	Count	5	55	60	p = 0.002
	% out of 60	8.3%	91.7%	100.0%	
Agree	Count	2	75	77	
	% out of 77	2.6%	97.4%	100.0%	
Strongly Disagree	Count	1	37	38	p = 0.002
	% out of 38	2.6%	97.4%	100.0%	
Total	Count	17	348	365	
	% out of 365	4.7%	95.3%	100.0%	

The results in Table 4.26 show that out of the 81 respondents who strongly disagreed that it took them less than one hour to be served in their local health facility, 6 (7.4%) were utilizing FP services, 75 (92.6%) were not utilizing FP services. Out of the 109 respondents who disagreed that it took them less than one hour to be served in their local health facility, 3 (2.8%) were utilizing FP services, 106 (97.2%) were not utilizing FP services. Out of the 60 respondents who were neutral that it took them less than one hour to be served in their local health facility, 5 (8.3%) were utilizing FP services, 55 (91.7%) were not utilizing FP services. Out of the 77 respondents who

were neutral that it took them less than one hour to be served in their local health facility, 2 (2.6%) were utilizing FP services, 75 (97.4%) were not utilizing FP services. Out of the 38 respondents who were neutral that it took them less than one hour to be served in their local health facility, 1 (2.6%) were utilizing FP services, 37 (97.4%) were not utilizing FP services. There was a significant association detected between time taken to be served in their local health facility and FP utilization ($\chi^2 = 5.183$; $df = 4$; $p = 0.002$).

The current study sought to investigate the respondents' level of agreement with statements concerning service delivery at their nearest facility. A 5-point Likert scale was used to rate responses of this variable and it ranged from; 1 = strongly disagree to 5 = strongly agree. The findings were recorded into two, agree and disagree.

Table 4.27***Service delivery and utilization of FP services***

				Utilization of FP services		Total	Chi-square (χ^2)
				Yes	No		
My local health facility is operational 24 hours seven days/week.	D	Count		15	241	256	$\chi^2 = 2.788$; df = 1; P = 0.095
		% out of 256		5.9%	94.1%	100.0%	
	A	Count		2	107	109	
		% out of 109		1.80%	98.20%	100.00%	
All Health workers in my local health facility usually receive me well and with dignity whenever I visit the health facility	D	Count		17	332	349	$\chi^2 = 0.817$; df = 1; P = 0.366
		% out of 349		4.9%	95.1%	100.0%	
	A	Count		0	16	16	
		% out of 16		0.00%	100.00%	100.00%	
The health workers in my local health facility always allow me to ask any question concerning family planning methods.	D	Count		14	275	289	$\chi^2 = 0.109$; df=1; P = 0.741
		% out of 289		4.8%	95.2%	100.0%	
	A	Count		3	73	76	
		% out of 76		3.90%	96.10%	100.00%	
I prefer female health workers to attend to me.	D	Count		15	284	299	$\chi^2 = 0.480$; df = 1; P = 0.488
		% out of 299		5.0%	95.0%	100.0%	
	A	Count		2	64	66	
		% out of 66		3.0%	97.0%	100.0%	

Key: D = Disagree; A = Agree

According to Table 4.26, the majority 12(70.6%) of the participants who utilized FP services disagreed that it took them less than one hour to be served in their local health facility, 16(94.1%) disagreed that their local health facilities are operational 24 hours seven days/week. Seventeen (100%) disagreed that all health workers in their local health facilities usually received them well and with dignity whenever they visited the health facilities, 14.0(82.4%) agreed that the health workers in their local health facilities ensured the privacy and confidentiality of their medical records, 13(82.4%) of the participants agreed that the health workers in their local health facility always

allowed them to ask any question concerning family planning methods, 15(88.2%) agreed they preferred female health workers to attend to them, 14.0(82.4%) disagreed that the health workers are always available when they needed them.

A study by Obasohan (2015) among Kenyans and Zambian women revealed that FP services are underutilized due to judgmental attitudes of the health workers and lack of competence coupled with a lack of knowledge in the FP provision. Service delivery has been adversely mentioned to be the major barrier for women of reproductive age who seek FP services. Participants in a study in Ghana reported that, although they were aware of the benefits of using FP services, they did not get the services easily because they were being provided by health facilities that were situated far from their homes. Some women reported having stopped using them after experiences they thought to be the side effects of the family planning methods as they were not explained to or counseled on some of the side effects of the family planning methods (Apanga & Adam, 2015).

Similar findings were also reported in a study done in Uganda where women stated that they face the following challenges in accessing family planning services; services far away from their homes and services not available. In the same study according to the key informant (KI), rampant absenteeism from work among the family planning providers was also a key barrier to the utilization of FP services (Ouma et al., 2016).

Kamal (2014) explored the role of government family planning workers and health facilities in determining the use of contraceptive in Bangladesh. In the study, data from the 1989 Bangladesh Fertility Survey on rural women was analyzed. The study showed that the rapid increase in Bangladesh's contraceptive prevalence rate was in part

attributed to the introduction of grassroots-level family planning workers known as Family Welfare Assistants (FWAs). In addition, the study revealed that the presence of an FWA increased by 66 percent the probability of a couple accepting sterilization. It is worth-noting that with grass root level family planning workers, the distance from the health facility to enable access to the services was reduced. This had some positive implication on transportation costs and waiting time. Bairagi (2019) noted that contraceptive practices were influenced by policy and administrative factors such as political commitment, resource allocation and regulations. Others included organizational and operational factors, which also included infrastructure, public-private partnerships, delivery systems, management, training, supervision, information, education and communication (IEC), access and quality of services.

Smit et al. (2018), in a baseline survey of African women aged 15 - 49 years in a rural area of Natal/KwaZulu of South Africa, assessed the extent to which condoms were used, reasons for contraceptive method choice, and unmet contraceptive need. The empirical results revealed that injectable contraceptives were used the most since they were considered to be convenient, safe, effective and/or could be used secretly. The study established that the decision to use this method was due to the recommendation of a health worker at the clinic. Other reasons cited for the use of injectable was that it was convenient and an effective method that could be used secretly without the knowledge of the sex partner. The low use of condoms, according to Smit et al. (2018) was attributed to their failure to meet perceived expectations like the injectables. It was established in the study that the need by women for secrecy precluded the use of the condom, which required the cooperation of the partner.

4.6.4 Availability of FP Commodities at their Nearest Facility

The study sought to investigate the respondents' level of agreement with statements concerning availability of FP commodities at their nearest facility. A 5-point Likert scale was used to rate responses of this variable and it ranged from; 1 = strongly disagree to 5 = strongly agree. The findings were recorded into two, agree and disagree.

Table 4.28

Availability of FP Commodities at their Nearest Facility

		Utilizing FP services		Total	Chi-square (χ^2)
		Yes	No		
Agree	Count	17	159	176	$\chi^2 = 19.147$; df = 1; P = 0.000
	% out of 176	9.7%	90.3%	100.0%	
Disagree	Count	0	189	189	P = 0.000
	% out of 189	0.00%	100.00%	100.00%	

The results in Table 4.27 show that out of the 176 respondents who agreed that family planning are always available at the health facility, 17 (9.7%) were utilizing FP services and 159 (90.3%) were not utilizing FP services. out of the 189 (100.0%) respondents who disagreed that family planning are always available at the health facility, were not utilizing FP services. There was a significant association detected between availability of FP services and FP utilization ($\chi^2 = 19.147$; df = 1; p = 0.000).

The findings are in line with Ndayizigiye (2014) found that availability of health commodities determine the utilization of health services The National guidelines for the provision of FP services in Kenya state that these services should be easily accessible, available at the convenient time of the women's schedule, at affordable or free of charge, and be served by a friendly service provider. The results imply that

quality service leads to increased FP services utilization among women of reproductive age.

In India, International Center for Research on Women (ICRW) in 2017 designed and implemented a large-scale household based study of 2,400 women in the state of Madhya Pradesh in 2018 and 2002. The ICRW explored the various reasons behind women's unwanted pregnancies and how such pregnancies were resolved. The study's primary goal was to provide documentation on women's health issues, particularly their ability to make decisions about family size, to prevent unwanted pregnancies, and to control the timing and circumstances of childbearing. The study found that most married women with children wanted to delay the birth of their next child. Yet, more than 90 percent did not use contraception to delay their next pregnancy. This was attributed to lack of contraceptive use primarily due to lack of services, many women who were not physically and emotionally ready for another child sought to resolve the pregnancy on their own often at a great risk to their health.

4.6.4 Cost of Family Planning Services

The cost of family planning services constitutes the price of family planning services as well as consultation fees charged by the doctor/clinician. Other costs include lab tests and costs of inputs such as gloves. Although in many public health facilities family planning services are free, these costs may sound discouraging. Table 4.29 shows the women's responses in terms of cost of family planning services.

Table 4.29
Paying for FP method

	Utilizing FP services		Total	Chi-square (χ^2)
	Yes	No		

Yes	Count	0	11	11	$\chi^2 =$ 15.554; df = 1; p = 0.007
	% out of 11	0.0%	100.0%	100.0%	
No	Count	17	337	354	
	% out of 354	4.8%	95.2%	100.0%	

The results in Table 4.29 show that 11 (100.0%) of the respondents who indicated to have paid for any of the FP methods were not utilizing FP services, out of the 354 respondents who indicated they have never paid for any of the FP services, 17 (4.8%) were utilizing FP services and 337 (95.2%) were not utilizing FP services. There was a significant association detected between payment for FP methods and FP utilization ($\chi^2 = 15.554$; $df = 1$; $p = 0.007$). This finding reveals that the cost of family planning service is an important determinant of the use of family planning services. Lewis (1986) examined whether contraceptive prices affected demand by reviewing past studies. The study revealed that a couple's decision to contraceptive was affected by a range of socioeconomic factors that impinged on the perceived costs and benefits of children. Further, Moreira et al. (2019) established that contraceptive demand was relatively inelastic and that in some instances where prices were very low, the demand curve for contraceptives was backward-bending. In Ethiopia, Kebede et al. (2019) found that prices had effect on demand. In conclusion, it was contended that contraceptive prices could be too high for low-income households, and price reductions had a positive impact on utilization.

4.7 Contribution of Independent Predictors on FP Utilization

To determine the contribution of each explanatory variable to FP services utilization, all explanatory variables which had shown a significant relationship with FP utilization were further subjected to binary logistic regression analysis. The analysis results are summarized in Table 4.30.

Respondents aged between 36 and 45 were found to have 2.374 chances (O.R = 2.374; P = 0.017) of FP utilization compared to those who are aged between 46 and 49 years. Also, the study showed that respondents aged between 18 and 25 years were 1.2 times more likely to utilize FP services (O.R = 1.204; P = 0.029) compared to those who are aged between 46 and 49 years. Marital status was found to increase the utilization of FP services. Respondents who were widowed were 0.716 times more likely to utilize FP services compared to those who were married (O.R = 0.716; P = 0.036).

Educational background was found to determine the utilization of FP services. Respondents with secondary school education were 1.25 times more likely to utilize FP services compared to those who had none (O.R = 1.250; P = 0.027). Respondents with tertiary education were 0.615 times more likely to utilize FP services compared to those who had none (O.R = 0.615; P = 0.034). Those with primary level education were 0.294 times more likely to utilize FP services compared to those who had none (O.R = 0.294; P = 0.018).

In this study, respondents who were employed were 2.936 times more likely to utilize FP services (O.R = 2.936; P = 0.018) compared to those who were unemployed. However, the study showed that those practicing reduced the chances of FP services utilization (O.R = -1.884; P = 0.019).

In this study, the number of children was found to affect the utilization of FP services. Respondents who had three children showed an increased probability of 4 times FP utilization (O.R = 4.317; p = 0.034), those with four children showed an increased probability of 2 times FP utilization (O.R = 4.317; p = 0.034) compared to those with more than four children. However, the study showed that those with one child reduced

the chances of FP services utilization by -1.201 (O.R = -1.201; P = 0.485).

Respondents who were Muslims showed an increased probability of 4 times FP utilization (O.R = 4.693; p = 0.017) compared to those practicing other religions. Respondents whose household heads were self-employed were 2 times more likely to use FP (O.R = 2.027; p= 0.05) while those with household heads were employed were 3 times more likely to use FP (O.R = 3.217; P = 0.040)) compared to those who were unemployed. However, the study showed that those with household heads practicing pastoralism reduced the chances of FP services utilization by 2.0 (O.R = -2.019; P = 0.02).

The study showed that women who preferred eight children were less likely to use FP than their counterparts whose ideal number of children was three or less (O.R = 2.000; p = 0.044). Equally, respondents whose ideal number of children was seven or more were also less likely to use FP (O.R = - 0.627; p = 0.021) compared to those who had three or fewer children as their ideal numbers.

Respondents who belonged to a polygamous marriage were 0.599 likely to utilize FP services (O.R = 0.599; P = .041) compared to those who did not belong to a polygamous marriage. Respondents who discussed with their husbands about FP were 3 times (O.R = 2.925; p = .005) more likely to use FP services than those who did not have a discussion regarding FP utilization. The time taken to reach the nearby FP service provider determined FP utilization. Respondents who walked for less than 30 minutes to reach the nearby service provider were 1.904 times likely to utilize the FP services, while those who walked for 30 minutes to 1 hour were 1.390 times likely to utilize the FP services compared to those who walked for more than one hour (O.R

=1.390; $p = 0.316$). Lastly, respondents who did not pay for FP services were 5 times (O.R. = 5.310; $P = .026$) more likely to use FP services compared to those who paid.

Table 4.30

Contribution of independent predictors on FP Utilization

	O.R		P-	95% Confidence Interval for Exp	
		df	value	(B)	
				Lower Bound	Lower Bound
Age (The reference category is: 46–49)					
15-17	.724	1	.01	.354	1.480
18-25	1.204	1	.029	.567	2.557
26-35	1.413	1	.428	.601	3.322
36-45	2.374	1	.017	1.169	4.821
Marital Status [The reference category is: Widowed]					
Widowed	.716	1	.188	.036	1.178
Highest level of Education [The reference category is: None/madrassa]					
Secondary and beyond	.294	1	.018	1.318	4.808
Primary	1.250	1	.027	1.027	23.259
Occupation: [The reference category is: Unemployed]					
Employed	2.936	1	.032	.472	1.859
Running a business	1.535	1	.203	.794	2.971
Pastoralism	-1.884	1	.019	.781	4.543
No. of children [The reference category is: More than 1-3]					
3-5	-1.275	1	.354	.763	2.132
6-7	4.317	1	.018	1.283	14.526
More than 8	1.275	1	.034	.763	2.132
Household head Education Level [The reference category is: None]					
Primary	.162	1	.103	.018	1.442
Secondary	3.745	1	.012	1.336	10.495

Tertiary	3.468	1	.013	1.298	9.263
Household head employment [The reference category is: Unemployed]					
Self employed	2.027	1	.005	1.864	30.919
Employed in public/private sector	3.217	1	.040	.998	11.427
Pastoralism	-2.019	1	.002	2.130	26.625
Availability of FP commodities [The reference category is: No]					
Yes	4.693	1	.017	.416	1.152
Respondents' ideal number of children [The reference category is: 0-3]					
More than 7	2.000	1	.021	.090	44.350
4-6	.627	1	.044	.141	2.799
Marriage where there are co-wives [The reference category is: No]					
Yes	.599	1	.041	.366	.980
Discussion about birth control with partner [The reference category is: No]					
Yes	2.925	1	.005	1.394	6.137
Time taken to walk to the nearby FP service provider [The reference category is: more than one hour]					
Less than 30 minutes	1.904	1	.045	1.014	3.575
30 minutes to 1 hour	1.390	1	.316	.730	2.647
Payment of FP methods provider [The reference category is: Yes]					
No	5.310	1	.026	.705	2.638

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of key findings; conclusions based on the research findings, recommendations, and suggestions for further research.

5.2 Summary of Key Findings

5.2.1 Prevalence of use of Family Planning Services

The study found that only 4.7% of the respondents in Eldas sub-county were using the family planning services. This was lower than KDHS (2009) and KDHS (2014) findings which showed that 53.6% and 58 % of currently married women were using some method of contraception respectively. This could be due to FP programs in Kenya have already spread to all parts of the country and thus FP services are now easily accessed both in rural and urban areas. Additionally, there have been intensive FP promotion interventions in the Sub-county by Aphia plus Imarisha something which may have triggered increased demand for FP services. According to this study, the modern contraceptives which were in use by the respondents were injectable, followed by oral pills, condoms, and implants and the least used was female sterilization.

5.2.2 Demographic Factors and the Utilization of Family Planning Services

The study established that the marital status and age of the respondents were statistically significant contributors to FP service utilization in Eldas Sub-County. Women aged between 36 and 45 showed an increased probability of FP service uptake compared to those aged between 15 and 35. Widowed women more likely to utilize FP services compared to those the married ones.

5.2.3 Socio-Economic Factors and the Utilization of Family Planning Services

Educational background and employment status were found to be the statistically significant contributors to FP service utilization in Eldas Sub-County. Women with secondary school and tertiary education were more likely to utilize FP services compared to those who had none. Women who were in employment were more likely to utilize FP services compared to those who were unemployed. Women whose household heads had both tertiary and secondary education were more likely to utilize FP services compared to those whose household heads had no education. Also Women whose household heads were employed were more likely to utilize FP services compared to those whose household heads were unemployed and had primary education.

5.2.4 Socio-Cultural Factors and the Utilization of Family Planning Services

The study found that number of children, polygamous marriages, discussion about birth control with partner, were the statistically significant contributors to FP service utilization in Eldas Sub-County. Women with more than seven children showed an increased probability of FP utilization compared to those with less than three children, Women who were in a polygamous marriage were more likely to utilize FP services compared to those who were not. Also, women who discussed about birth control with their partners were more likely to utilize FP services compared to those who did not.

5.2.5 Health System Factors and the Utilization of Family Planning Services

Accessibility, availability of FP commodities and cost of family planning services were found to determine the utilization of FP services. Women who took less than 30 minutes to reach the nearest FP service providers were more likely to utilize FP services compared to those who took more than 30 minutes; availability of FP

commodities increased the utilization of FP services in Eldas sub-county. Also high cost of family planning increased the utilization of FP services in Eldas sub-county.

5.4 Conclusion

This study's results demonstrated that the prevalence of contraceptive uptake was very low (4.7%) among the women in Eldas Sub-county. FP users, used IUDs, oral pills and implants among others. The total unmet need for FP services was 4.7% while the total demand for FP was 95.3%.

The study concludes marital status and age of women in Eldas sub-county are contributors to FP service utilization. Women aged between 36 and 45 are more likely to utilize FP services compared to those aged between 15 and 35. Widowed women are more likely to utilize FP services compared to those the married ones.

Also the study concluded that educational background and employment status are statistically significant contributors to FP service utilization in Eldas Sub-County. Educated women were more likely to utilize FP services compared to the uneducated ones. Employed women were more likely to utilize FP services compared to those who were unemployed. Women whose household heads were in employment and were educated were more likely to utilize FP services compared to those whose household heads had no education or were unemployed.

Further, the study concludes that number of children, polygamous marriages, discussion about birth control with partner, determined FP service utilization in Eldas Sub-County. Women with more than seven children were more likely to utilize FP services compared to those with less than three children, Women who were in a

polygamous marriage were more likely to utilize FP services compared to those were not. Also, women who discussed about birth control with their partners were more likely to utilize FP services compared to those who did not.

Lastly, accessibility, availability of FP commodities and cost of family planning services were found to determine the utilization of FP services. Women who took less than 30 minutes to reach the nearest FP service providers were more likely to utilize FP services compared to those who took more than 30 minutes; availability of FP commodities increased the utilization of FP services. Also high cost of family planning decreased the utilization of FP services in Eldas sub-county.

5.5 Recommendations from the Study

Based on the findings from this study, the following recommendations are made to the county government, programmers, national government, and other stakeholders in reproductive health;

5.5.1 Researchers

For researchers, it is essential to conduct longitudinal studies that track changes in family planning utilization over time to better understand trends and factors influencing these patterns in Eldas Sub-County. Evaluating specific interventions that target improving awareness and access to family planning services can provide insights into their effectiveness. Utilizing qualitative research approaches will help delve into the cultural and social factors that shape family planning decisions among women, offering a deeper understanding of barriers and motivations. Collaboration with local healthcare providers and community leaders is crucial for developing

culturally sensitive family planning interventions that resonate with the local population.

5.5.2 Participants

Community participants should enhance their engagement by participating in discussions and workshops that educate residents about the importance and benefits of family planning, addressing misconceptions and cultural barriers. Advocacy for increased availability of diverse family planning methods within local healthcare facilities is necessary to ensure that women have choices that suit their needs. Sharing personal experiences related to family planning can foster open dialogue, helping to reduce stigma and motivate others to seek services.

5.5.3 Policy Makers

Policymakers need to allocate additional resources to improve the availability and accessibility of family planning services in rural areas, particularly in Eldas Sub-County, where such services are critically needed. Developing educational policies that emphasize initiatives to address and dismantle cultural barriers to family planning utilization will foster a more informed community. Establishing partnerships with community-based organizations will broaden the outreach of family planning services and effectively disseminate accurate information.

5.5.3 Policy Implementation

For policy implementation, training healthcare providers in Eldas Sub-County to deliver comprehensive family planning counseling and services is vital, ensuring a wide array of contraceptive options are available. Launching community outreach initiatives that provide family planning information and services directly to remote

villages will increase accessibility for underserved populations. Regularly assessing the effectiveness of family planning initiatives will ensure they are responsive to the needs of women in Eldas Sub-County, allowing for necessary adjustments based on feedback and outcomes.

These recommendations are intricately linked to the findings of the study, which identified significant socio-economic and cultural barriers to family planning utilization. By addressing these aspects through targeted actions, stakeholders can improve reproductive health outcomes for women in Eldas Sub-County.

5.6 Suggestions for further research

Further research is essential to enhance the understanding of family planning dynamics and improve service delivery in Wajir County. First, a study focusing on the role of male involvement and inter-spousal communication in the acceptance of family planning could be conducted. This research would investigate how men's participation in family planning decisions influences women's choices. Engaging men as active partners could lead to more effective communication and shared decision-making, ultimately increasing the acceptance and utilization of family planning methods.

Second, it is recommended that similar studies be carried out at the community level across other sub-counties in Wajir County and throughout Kenya. Such research would help to identify region-specific factors that impact family planning utilization. By analyzing cultural, social, and economic contexts in various communities, stakeholders can develop tailored interventions that address specific barriers and enhance the effectiveness of family planning programs.

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APPENDICES

Appendix I: Consent Form

My name is Sulekha Mohamed, a student at Kenya Methodist University undertaking a master's degree in public health. I am researching that “seeks to investigate the factors affecting the utilization of family planning services among women of reproductive age (15 – 49 years) in Eldas sub-county, Wajir County. I wish to request permission from you to participate in this study. I am humbly requesting you provide the information requested to allow me to complete the study.

Study purpose

The study aims at finding out the factors affecting the utilization of family planning services among women of reproductive age (15 – 49 years) in the Eldas sub-county, Wajir County. The study results will help strengthen and support decision-making to improve the utilization of family planning services among women which will, in turn, improve maternal health.

Study procedure

Participation in this research involves answering questions that were asked in research questions concerning information on factors affecting the utilization of family planning services among women of reproductive age in the Eldas sub-county. You are required to fill out your responses in the spaces provided and return the questionnaires. At any given time, you are free to seek clarification on any unclear aspects related to the study. The researcher will use a face-to-face interview that will take only twenty minutes.

Voluntary participation

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

Discomforts and risks

This interview schedule is detailed and you might get tired underway. You may realize that several questions provoke your cultural and professional beliefs hence you may choose not to answer. This exercise may interfere with your daily work routine; however, I will be glad if you take the time to participate in the study.

Benefits and rewards

Your participation in the study will provide me with the necessary information to support decision-making regarding the factors affecting the utilization of family planning. 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 provide will be treated with the utmost confidentiality. Your identity will not be revealed and the information will be used for this study only. For women below the age of 18 years, consent to participate will be given by their guardians.

Contact information

In case of any questions regarding this study, you may contact my supervisors.

Name [researcher]: Sulekha Mohamed

Contacts: + 254 700 047 561/ +254 724530219.

Email. zulyqa@gmail.com

Name of Supervisor: Dr. Consolota M'mayi

Contacts: 0722733112

Email. Consolata.Mmayi@kemu.or.ke

Name of Supervisor: Dr. Eunice Nyavanga

Contacts: 0722626240

Email. eunice.nyavanga@kemu.or.ke

Or Kenya Methodist University Scientific Ethics and Review Committee (KEMU-SERC)

Contacts:

Participant's statement

The information concerning my involvement in this study has been clarified to me. I have been allowed to ask questions and my concerns have been addressed adequately. Participation in this research is purely optional and voluntary. I understand that the information I will give in this study shall be kept confidential. I can also choose to withdraw from participating in the study at any one given time.

Sign..... Date.....

Guardian's statement

The information concerning her involvement in this study has been clarified to me. I have been allowed to ask questions and my concerns have been addressed adequately. Participation in this research is purely optional and voluntary. I understand that the information shown will give in this study shall be kept confidential. She can also choose to withdraw from participating in the study at any one given time.

Sign..... Date.....

Principal Investigator's statement

I, the undersigned, have explained to the research assistant a better word in a language that she best understands the proceedings to be followed in the study and the risks and benefits involved.

Name: Sulekha Mohamed:

Contact:

Email:

Signature..... Date.....

Appendix II: Questionnaire for Women in Eldas Sub-county

FACTORS AFFECTING THE UTILIZATION OF FAMILY PLANNING SERVICES AMONG WOMEN OF REPRODUCTIVE AGE (15 – 49 YEARS) IN ELDAS SUB-COUNTY, WAJIR COUNTY

Date

Participant's serial no.

Please tick [✓] where necessary.

SECTION A: DEMOGRAPHIC CHARACTERISTICS

1. Bio-Data (Respondent)

Age		Marital Status		Highest level of education	
15-17	[]	Married	[]	None	[]
18-25	[]	Single	[]	KCPE	[]
26-35	[]	Widowed	[]	KCSE	[]
36-45	[]	Divorced	[]	Madrasa	[]
46 – 49	[]			Certificate	[]
				Diploma	[]
				Degree	[]
				Post-graduate degree	[]

SECTION B: Prevalence of use of family planning services

2. Are you using any family planning method?

Yes []

No []

3. If yes, which one of the following are you currently using?

Currently using	
Pills	[]
Injection	[]
Condom	[]
Implanrol	[]
Diaphragm	[]
IUD	[]
Douche	[]
Withdrawal method	[]
Female sterilization	[]
Male sterilization	[]

	Herbs / roots drunk or worn	☐
	Safe days	☐
	Prolonged breastfeeding	☐
	Sexual abstinence	☐
	Don't know	☐

SECTION C: Socio-Economic Factors (Household)

4. Which of the below statements best describes what you do for a living/ to make an income?

Unemployed ☐

Running a business? ☐

Pastoralism ☐

Employed ☐

5. How many children do you have?.....

6. Household characteristics

Please tick where necessary.

Housing Status	Yes	No	Household head Education Level		Household head employment	
Finished floor	☐	☐	None	☐	Unemployed	☐
Finished wall	☐	☐	Primary	☐	Self employed	☐
Electricity	☐	☐	Secondary	☐	Employed in public/private sector	☐
Piped water	☐	☐	Tertiary	☐	Pastoralism	☐
Flush toilet	☐	☐	Madrassa	☐		
Urban residence	☐	☐				

SECTION D: Social-cultural factors and utilization of family planning services

10. Which of the following religions do you identify with?

Muslim ☐ Catholic ☐
☐

Protestant ☐

Others, specify.....

11. My religion supports the use of contraception –

True ☐ False ☐
☐

12. Are there any forms of contraception/ birth control that your religion does not advocate for?

Yes ☐ No ☐

13. If Yes, which one

Natural family planning method e.g. periodic abstinence ☐

Any Permanent Method ☐

Any temporary Method ☐

Any method ☐

I do not know ☐

Others e.g. herbs (Specify).....

7. In your opinion, what do people in this community see as an ideal number of children?

1-2 ☐

3- 5 ☐

6- 8 ☐

More than 8 ☐

8. In Your opinion, what would be ideal number of children?

1-2 ☐

3- 5 ☐

6- 8 ☐

More than 8

[]

14. My community prefers boys over girls.

Strongly disagree

[]

Disagree

[]

Neutral

[]

Agree

[]

Strongly agree

[]

15. Below is an illustration showing the number of children that a woman has.

Which of them is likely to continue to have more children to achieve a gender balance? Rate from 1 to 5. 5 being most likely

Family A		NONE	
Family B			
Family C			
Family D			
Family E	NONE		

16. Do people in this community have more than one wife?

Yes []

No

[]

17. Are you in a marriage where you have co-wives?

Yes

[]

No

[]

18. Have you ever discussed birth control with your partner?

Yes

[]

No

[]

19. Which of the following best describes your partners attitude towards birth control?– rate on a scale 1 to 5 and assign a meaning to each figure- does not believe in it at all or does believe in it

Where 1 = Does not believe in it at all and 5 = completely believes in it

1. Does not believe in it at all, []
2. Does not belief in it, []
3. Moderately believes in it []
4. Fairly believes in it []
5. completely believes in it []

20. To what extent would the following types of people influence your decision as far as family planning is concerned? Where 1 = very low extent, 2 = low extent, 3 = moderate extent, 4 = great extent and 5 = very great extent

Spouse					
Aunties					
Mother					
Friends					
Health service providers					

SECTION E: Health System factors

21. Please tick where necessary.

Estimated distance to your preferred facility (walking)		Mode of transport		Costs incurred to and fro	
Less than 30 minutes	[]	Motorcycle	[]	Ksh. 20-50	[]
30 minutes to 1 hour	[]	Bus	[]	Ksh. 50 to 100	[]

More than 1 hour	[]	Taxi	[]	More than Ksh. 100	[]
		Walking	[]		

22. To what extent does Distance to your preferred facility and cost incurred affect access to family planning services?

Where 1 = very low extent and 5 = very great extent

1. very low extent, []
2. low extent, []
3. moderate extent, []
4. great extent and []
5. very great extent []

23. To what extent do you agree with the following statement concerning service delivery at your nearest health facility? Where 1 = strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = strongly agree.

Service delivery	1	2	3	4	5
It takes me less than one hour to be served in my local health facility.					
My local health facility is operational 24 hours seven days/week.					
All Health workers in my local health facility usually receive me well and with dignity whenever I visit the health facility					
The health workers in my local health facility ensure privacy and confidentiality of my medical record.					
The health workers in my local health facility always allow me to ask any question concerning family planning methods.					
I prefer female health workers to attend to me.					
The health workers are always available when I need them.					

24. To what extent do the following affect your ability to utilize family planning service? Use a scale where 1 = very low extent, 2 = low extent, 3 = moderate extent, 4 = great extent and 5 = very great extent

	1	2	3	4	5
Time taken to be served at the local health facility.					
Duration the facility remain open					
Reception by the health workers at the health facility whenever you visit the health facility.					
Confidentiality concerning my medical record.					
The health workers allowing you to ask any questions concerning family planning methods.					
The gender of the health workers.					
The health workers availability.					
The politeness and friendliness of the health providers.					

25. To what extent do you agree with the following statement concerning family planning commodities at your nearest health facility? Where 1 = strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = strongly agree.

	1	2	3	4	5
Family planning services are always available at the health facility					
The health workers at the health facility guides me on the best method I should use					
My preferred family planning method is always available					
I'm happy and satisfied with the preferred family planning method					

26. To what extent do the following affect your ability to utilize family planning service? Use a scale where 1 = very low extent, 2 = low extent, 3 = moderate extent, 4 = great extent and 5 = very great extent

Appendix III: Distribution of Population by Age, Sex*, Eldas Sub- County

Age	Male	Female	Total	Age	Male	Female	Total
0	38	468	855	5	184	9	280
1	90	1 06	1 96	5	76	4	119
2	1 72	2 17	3 89	5	106	5	156
3	1 21	1 55	2 77	50-	1 021	5	1 56
4	1 89	2 30	4 19	5	130	6	197
0 - 4	6 13	7 55	13 69	5	102	5	154
5	1 26	1 52	2 79	5	71	6	135
6	2 03	2 26	4 30	5	103	4	152
7	1 18	1 37	2 56	5	103	5	154
8	2 11	2 30	4 41	55-	509	2	792
9	1 21	1 34	2 56	6	298	1	430
5-9	7 82	8 82	16 64	6	122	5	181
10	2 38	2 42	4 80	6	83	2	107
11	1 03	1 26	2 29	6	40	3	71
12	1 99	1 69	3 68	6	52	2	78
13	1 19	939	2 13	60-	595	2	867
14	1 63	1 36	2 99	6	65	3	102
10 -	8 23	7 68	15 92	6	39	2	66
15	1 44	1 14	2 58	6	37	1	55
16	1 42	1 03	2 45	6	31	1	49
17	1 13	797	1 92	6	52	1	68
18	1 24	935	2 18	65-	224	1	340
19	57	457	1 02	7	140	5	196
15-	5 82	4 36	10 18	7	59	2	87
20	1 34	1 20	2 55	7	36	1	50
21	53	500	1 03	7	18	6	24
22	58	637	1 21	7	21	1	34
23	45	467	920	70-	274	1	391
24	47	550	1 02	7	30	1	46
20-	3 38	3 35	6 74	7	17	9	26
25	91	976	1 88	7	12	5	17
26	52	523	1 04	7	16	1	28
27	49	515	1 00	7	33	5	38
28	56	643	1 20	75-	108	4	155
29	41	504	921	8	59	3	97
25-	2 90	3 16	6 06	8	28	1	43
30	1 15	1 25	2 40	8	13	2	15
31	45	535	993	8	8	5	13
32	45	479	933	8	12	6	18
33	31	401	718	80-	120	6	186
34	29	383	678	8	6	3	9
30-	2 67	3 05	5 73	8	7	3	10
35	62	632	1 25	8	5	4	9
36	29	360	659	8	7	2	9
37	30	362	667	8	9	4	13
38	34	480	824	85-	34	1	50
39	27	326	604	9	17	9	26
35-	1 85	2 16	4 01	9	4	5	9
40	1 10	872	1 97	9	2	1	3
41	38	322	704	9	-	-	-
42	34	261	601	9	1	-	1
43	19	148	338	90-	24	1	39
44	15	133	290	9	3	-	3
40-	2 17	1 73	3 90	9	1	1	2

45	45	285	739	9	-	1	1
46	17	105	284	9	-	1	1
47	14	112	261	9	1	1	2
48	18	109	297	95-	5	4	9
49	14	71	215	10	-	2	2
45-	1 11	682	1 79	Not	-	-	-
50	51	285	802				

**Intersex population is excluded from the table since it is too small to be distributed by age*

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Appendix IV: Introductory letter



KENYA METHODIST UNIVERSITY
Scholarship and Grace

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Fax: 254-64-30162
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DIRECTORATE OF POSTGRADUATE STUDIES

June 25, 2021

Commission Secretary,
National Commission for Science, Technology and Innovations,
P.O. Box 30623-00100,
NAIROBI.

Dear sir/ Madam,

SULEKHA MOHAMED (PHT-3-0581-1/2018)

This is to confirm that the above named is a bona fide student of Kenya Methodist University, Department of Public Health, Nutrition and Dietetics undertaking a Degree of Master of Public Health. He is conducting research on, 'Factors affecting utilization of family planning services among women of reproductive age (15-49 years) in Eldas Subcounty, Wajir County'.

We confirm that his research proposal has been defended and approved by the University.

In this regard, we are requesting your office to issue a permit to enable him collect data for his research.

Any assistance accorded to him will be appreciated.

Thank you.

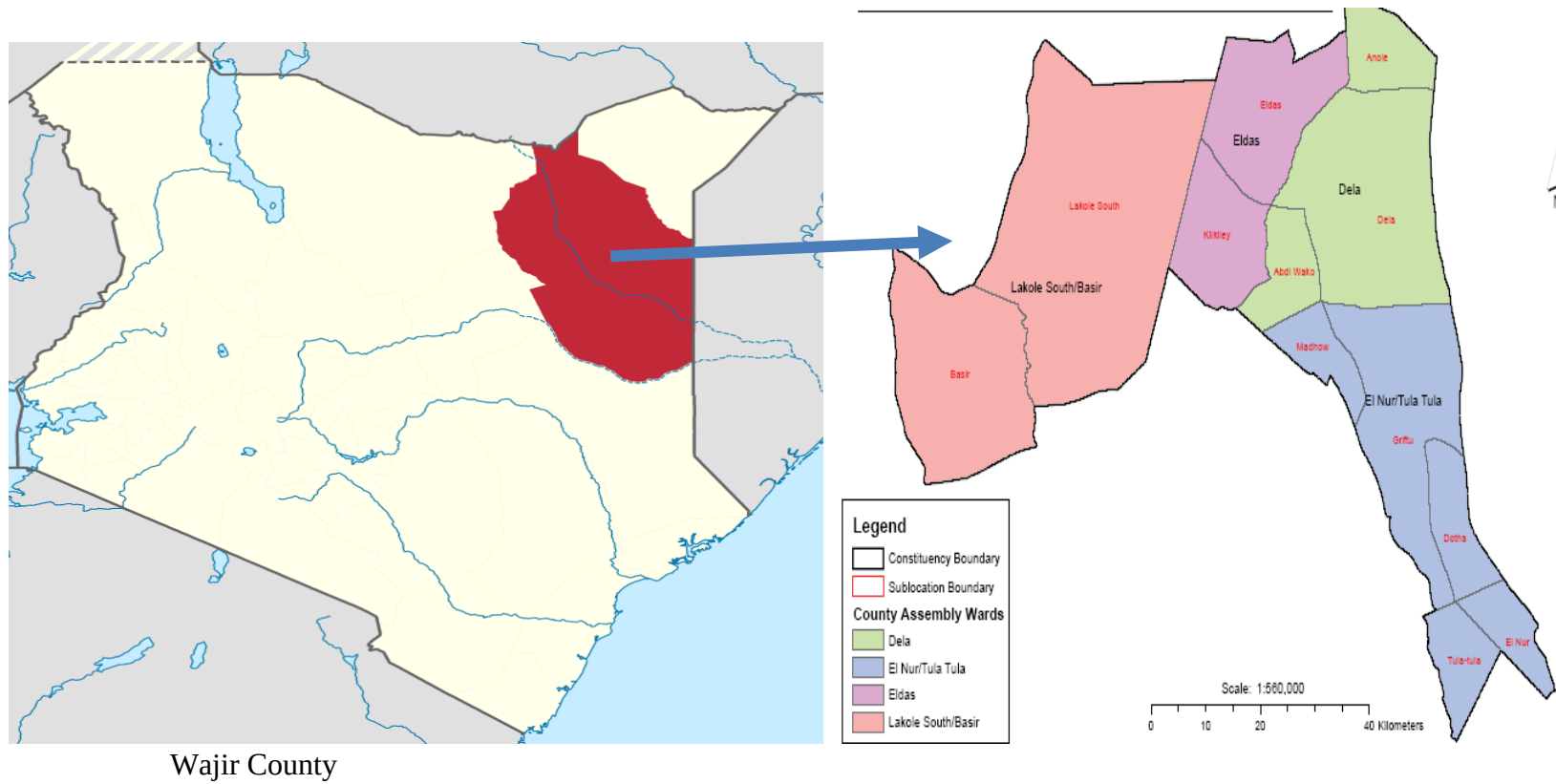


Dr. John Muchiri, PHD.
Director Postgraduate Studies
Cc: Dean SMHS
COD, Public Health
Postgraduate Co-ordinator
Supervisors

Appendix V: Research Permit

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 593929	Date of Issue: 21/July/2021
RESEARCH LICENSE	
	
This is to Certify that Ms., SULEKHA MOHAMED IBRAHIM of Kenya Methodist University, has been licensed to conduct research in <u>Wajir</u> on the topic: FACTORS AFFECTING THE UTILIZATION OF FAMILY PLANNING SERVICES AMONG WOMEN OF REPRODUCTIVE AGE (15 – 49 YEARS) IN ELDAS SUB-COUNTY, WAJIR COUNTY for the period ending : 21/July/2022.	
License No: NACOSTIP/21/11952	

Appendix VI: Wajir County Map



**DEPARTMENT OF MEDICAL SERVICES, PUBLIC HEALTH AND
SANITATION, WAJIR**

When replying, please
Quote our Ref & Date

WCC/CDRO/ADM/VOL1(31)



**WAJIR HEALTH SERVICES
RESEARCH & DEVELOPMENT,
P O Box 2 – 70200
WAJIR**

4th February 2022

Sulekha Mohamed Ibrahim
Kenya Methodist University,
P.O. Box 267 -60200,
Meru

**RE: APPROVAL TO UNDERTAKE RESEARCH STUDY IN WAJIR
COUNTY**

This is to bring to your attention that your request has been accepted and hereby granted permission to carry out the study: **FACTORS AFFECTING UTILIZATION OF FAMILY PLANNING SERVICES AMONG WOMEN OF REPRODUCTIVE AGE (15-49) YEARS IN ELDAS SUB-COUNTY OF WAJIR COUNTY**. This permit is valid for this study only, which is a partial fulfilment of the requirement for your attainment of master's degree at Methodist University. The approval is valid only for a period ending August 2022.

Kindly remember to share the final report of your study with the County for our internal consumption.

Dr. Mohamed Abdirahman Ahmed
Director of Health Research & Development,
WAJIR

CDRO Contact: 0722689028

Appendix VII: Ethical Approval



KENYA METHODIST UNIVERSITY
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June 21, 2021 KeMU/SERC/PHT/34/2021

SULEKHA MOHAMED
Kenya Methodist University

Dear Sulekha,

SUBJECT: FACTORS AFFECTING UTILIZATION OF FAMILY PLANNING SERVICES AMONG WOMEN OF REPRODUCTIVE AGE (15-49 YEARS) IN ELDAS SUB COUNTY, WAJIR COUNTY

This is to inform you that Kenya Methodist University Scientific Ethics and Review Committee has reviewed and approved your above research proposal. Your application approval number is KeMU /SERC/PHT/34/2021. The approval period is 21st June 2021 – 21st June 2022.

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 Kenya Methodist University Scientific Ethics and 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 KeMU SERC 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 KeMU SERC 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 KeMU SERC.

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,



Dr. A. WAMACHI
Chair, SERC