LEVEL OF UTILISATION AND ASSOCIATED FACTORS ON FAMILY PLANNING AMONG FEMALES 15 – 19 YEARS AT KAMULI GENERAL HOSPITAL AND NAMWENDA HC IV KAMULI DISTRICT

DOREEN TUKAMUSHABA

RJ20M21/086

A DISSERTATION SUBMITTED TO THE FACULTY OF PUBLIC HEALTH, NURSING AND MIDWIFERY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A DEGREE OF MASTER OF PUBLIC HEALTH OF UGANDA CHRISTIAN UNIVERSITY

August, 2024

UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa

DECLARATION

I Doreen Tukamushaba. declare that this research dissertation titled, 'Level of utilization, and associated factors on family planning among females 15 – 19 years at Kamuli general hospital and Namwenda HC IV, Kamuli district" is my original work and has not been presented in any other institution except where due acknowledgment has been made.

Signature **Date**

15th August 2024

Doreen Tukamushaba (BSc. in Population studies) RJ20M21/086

SUPERVISOR APPROVAL

This is to certify that work in this Research dissertation titled, “Level of utilization, and associated factors on family planning among females aged 15 – 19 at Kamuli general hospital and Namwenda HC IV, Kamuli district” has been done under my supervision and has also been submitted for review with my approval

Sign **Date**

August 12, 2024

Rev. Canon Evatt Mugarura

DEDICATION

This research is dedicated to my mother Mrs. Claudia Nkorenta, who has morally and spiritually supported me always, My lovely Husband Mr. Erass Omusei and our beloved children Ellah, Erinne and Elvie who have provided Spiritual, moral, financial, psychosocial support and encouragement throughout my study.

ACKNOWLEDGMENT

I would like to thank the Almighty God who has enabled me to attain knowledge from my childhood till today without which this dissertation would not have been a success.

I sincerely convey my earnest gratitude to and appreciate the following;

My supervisor Rev. Evatt Mugarura for his support and professional help in terms of time, quick response, and guidance towards the accomplishment of this dissertation, The Head of the Department of Public Health Dr. Mukooza Edward, all my lecturers and staff of Uganda Christian University in their various capacity, all my classmates and workmates.

My Supervisor at Ministry of Health Dr. Richard Mugahi the Commissioner Reproductive and Child Health department who has provided all the necessary support i.e professional, financial and Moral during my study.

Table of contents

Contents

LIST OF ABBREVIATIONS/ACRONYMS

ABR	Adolescent Birth Rate
DHIS2	District Health Information System
FP	Family Planning
HMIS	Health Management Information Systems
LAC	Latin American and Caribbean
LMICs	low- and middle-income countries
MOH	Ministry of Health
SDGs	Sustainable Development Goals
SSA	Sub Saharan Africa
TFR	Total fertility rate
UBOS	Uganda Bureau of Statistics
UDHS	Uganda Demographic Health Survey
UNFPA	United Nations Population Fund
WHO	World Health Organization

OPERATIONAL DEFINITIONS

Females of reproductive age: Females aged 15 – 49 years

Unmet need for family planning: Females who are capable of bearing children and sexually active but are not using any method of contraception, and report not wanting any more children or wanting to delay the next child.

Total Fertility Rate (TFR): The number of children a woman would have at the end of her reproductive life if she experienced the current age-specific fertility rates.

ABSTRACT

Introduction

This study was to establish the Level of utilization, and factors associated with family planning use among females 15 – 19 years at Kamuli general hospital and Namwenda HC IV, Kamuli district. The study specifically sought to determine the level of utilization of family planning services among females15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district and to identify the factors associated with the level of utilization of family planning services among females 15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district.

Method

This study used both qualitative and quantitative methodologies in a descriptive cross-sectional design. The study involved 147 females aged 15-19 years. Data was collected using a questionnaire and key informant interview guide. The data was then analyzed at univariate, bivariate, and multivariate levels using SPSS version 20. Qualitative that was analyzed using Open Code software

Results

Most (52.4%) of the respondents were aged between 18 and 19, with a mean age of 18.3 (SD=1.2). At the bivariate level of analysis, age (X^2=9.77, df =3, P-value=0.001), educational level (X^2=17.16, df =1, P-value=0.002), and marital status (X^2=19.06, df =2, P-value=0.001), achievement of a number of desired children, (X^2=13.66, df =1, P-value=0.001), knowledge about family planning method, (X^2=9.13, df =1, P-value=0.002), religious support for family planning (X^2=14.70, df =1, P-value=0.001), and attitude of the community towards family planning (X^2=17.71, df =1, P-value=0.001), distance to the facility (X^2=21.06, df =2, P-value=0.000), and knowledge of the availability of family planning at the facility (X^2=19.44, df =1, P-value=0.000) were found to significantly influence the uptake of family planning. P-value <0.05

At multivariate level of analysis age (AOR=2.7; 95% CI: 0.65-1.99; p= 0.001), educational level (AOR=6.1; 95% CI: 1.11- 4.76; p= 0.000), religious support for FP (AOR=3.3; 95% CI: 0.06-2.75; p= 0.003and distance to the health facility (AOR=5.1; 95% CI: 0.44-1.89; p= 0.001) were found to significantly influence the utilization of family planning

Conclusion

The study established that the prevalence of contraceptive use stood at (26.5%) this is low compared to the national prevalence target of 39.6% by 2025.

Recommendations

Mass sensitization by the district health office, promotion of girl child education, the District health Officer should intentionally partner with faith, cultural leaders to meaningly engage adolescents in marriage on use of family planning and educating the adolescents on use of family planning and The healthcare services providers of Kamuli general hospital and Namwenda HCIV are advised to adopt a nonjudgmental approach, to enhance physical accessibility and to train nurses and other healthcare professionals on reproductive health needs of adolescents

CHAPTER ONE: INTRODUCTION

1.0. Background to the study

The World Health Organization (WHO) Department of Reproductive Health and Research, defines family planning (FP) as the ability of individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births which is achieved through use of contraceptive methods and the treatment of involuntary infertility(Butler and Clayton, 2009).

The provision of FP information and services is considered fundamental to the health and human rights of all individuals. Family planning should be easily accessible, affordable and effective to the end user (UNFPA,2023)

Family planning is one sure way of reducing maternal mortality but also reducing infant mortality while guaranteeing good maternal and child health it also goes a long way in improving sexual and reproductive health rights of women by ensuring that women only conceive when they ready hence making pregnancy a safe and satisfying experience (UDHS, 2022)

As of 2019, adolescents aged 15–19 years in low- and middle-income countries (LMICs) had an estimated 21 million pregnancies each year, of which approximately 50% were unintended and which resulted in an estimated 12 million births(Sully et al., 2020; WHO, 2022). Furthermore, 55% of unintended pregnancies among adolescent girls aged 15–19 years end in abortions, which are often unsafe in LMICs, adolescent mothers (aged 10–19 years) face higher risks of eclampsia, puerperal endometritis and systemic infections than females aged 20–24 years, and their babies face higher risks

of low birth weight, preterm birth and severe neonatal condition(Sully et al., 2020; WHO, 2022). Therefore, preventing pregnancy among adolescents and pregnancy-related mortality and morbidity are foundational to achieving positive health outcomes across the life course and imperative for achieving the Sustainable Development Goals (SDGs) related to maternal and newborn health(Sully et al., 2020; WHO, 2022).

Sub Saharan Africa (SSA) reported a marked decline in the total fertility rate (TFR) – 4.1 children per woman of reproductive age in 2022, compared to 5.9 in 1994. More than half of these are young females and as a result adolescent pregnancy rates in the region are twice the global average at 92 births per 1000 girls (UNFPA, 2014).

Globally, contraceptives are not easily accessible to adolescents in many places. Furthermore, it is reported that even when adolescents can obtain contraceptives, they may lack the agency or the resources to pay for them, knowledge on where to obtain them and how to correctly use them(WHO, 2022). In addition, they may also face stigma when trying to obtain contraceptives, are often at higher risk of discontinuing use due to side effects, and due to changing life circumstances and reproductive intentions(WHO, 2022). Consequently, there is a need to monitor utilization of FP services among the adolescents if we are to achieve the SGDs.

Uganda has one of the world's highest maternal mortality rates of 189 per 100,000 live births (UDHS,2022). The TFR in Uganda ranges from 4.9 in Buganda, 5.7 in Busoga,5.2 in Acholi, 4.7 in Ankole, 5.1 west nile to 6.7 in karamoja (UDHS,2022)

At 9 million, adolescents make up a quarter of Uganda's population. According to the UDHS 2022 the teenage pregnancy rate in Uganda has stagnated at 24% with a slight decrease from 25% in the 2016 UDHS data. Utilization of adolescent health services

including FP is fundamental to addressing the high prevalence of teenage pregnancies.

Uganda also has one of the fastest-growing populations in the sub-Saharan Africa (SSA) region at a rate of 3.2% per annum with persistently high fertility rate of 5.4 children born per woman which is higher than the total wanted fertility rate of 4.3 (Ochen and Chi, 2022).

There is a low prevalence (38%) of current FP use among females of reproductive in Uganda and 28% of them have an unmet need for contraception(Nuwasiima et al., 2019; Ochen and Chi, 2022). The odds of utilization of FP are higher among older females in Uganda, are associated with geographical differences as females in Lango sub-region are more likely users as compared to other regions of Uganda(Ochen and Chi, 2022).

Over the years, the Government of Uganda has pledged to increase uptake of modern contraception to 50% and reduce the unmet need to 10% by increasing access to FP information, targeting youth, and addressing the social and cultural misconceptions about contraception(Nuwasiima et al., 2019). Despite the ongoing efforts, high knowledge and awareness of modern contraceptive methods in Uganda, utilization remains low especially among adolescents in rural areas.

1.1. Problem Statement

Family planning plays a crucial role in a woman's health because improved access to contraception prevents unintended pregnancies and unsafe abortions which are leading causes of maternal deaths. By enabling women to choose when and how many children to have, family planning promotes healthier pregnancies and childbirth, ultimately saving lives.

Ministry of health-Uganda with support from partners have put in place efforts and strategies to improve the utilization of family planning such efforts include taking services closer to people, especially in underserved areas, through community health workers or mobile clinics, Integrating family planning into other healthcare services (e.g., antenatal care, maternal health) to reach more people, Offering a wide range of modern contraceptive methods to meet diverse needs and preferences and Maintaining a reliable supply of contraceptives to avoid shortages among other efforts.

Despite these efforts and the well documented benefits of family planning, statistics indicate that In Uganda, the contraceptive prevalence rate is still has low as 38%(UDHS 2022) also in eastern Uganda and Kamuli District in particular there was a significant number of teenage pregnancies, with 3,570 cases recorded between August 2020 and January 2021 (UNFPA,2021). This high numbers of teenage pregnancy suggest low utilization of family and yet no studies have been carried to specifically establish the level of utilization family planning in Kamuli district. If this trend and statistics are not reversed, the attainment of SDG goal targets of reducing MMR to 70 per 100,000 live births and to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births may not be achieved.

It is therefore against this background that the study on the Level of utilization and associated factors on family planning among females 15 – 19 years at Kamuli general hospital and Namwenda HC IV, Kamuli district was conducted

1.2. Study Objectives

1.2.1 General Objective

The main objective of this study is to determine the level and factors associated with utilization of family planning services among females 15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district.

1.2.2. Specific Objectives were

1. To determine the level of utilization of family planning services among females15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district
2. To identify the factors associated with the level of utilization of family planning services among females 15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district.

1.3. Research Questions

1. What is the level of utilization of FP services among females 15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district?

2. What are the factors associated with the level of utilization of FP services among females 15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district?

1.4. Justification and Significance of the study

Uganda has one of the most youthful populations in the world, with slightly more than half of its population under age 15. Uganda's Maternal Mortality Ratio (MMR) stood at 336 deaths per 100,000 live-births and 17.2 percent of the maternal deaths were among those aged 15-19 years(UNFPA Uganda, 2021).

The Sustainable Development Goals (SDGs) set for 2030 are aimed at ensuring that sexual and RH services are widely available and used. This includes supporting contraceptive services through effective government policies and the provision of high-quality services for individuals(WHO, 2017). Preventing adolescent pregnancy and childbearing as well as child marriage is part of the SDG agenda with dedicated indicators, including indicator 3.7.2, "Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1000 females in that age group," and 5.3.1, "Proportion of females aged 20–24 years married before the age of 18 years"(WHO, 2022).

Many times, pregnancy among adolescents results in complicated births and abortions, often requiring emergency obstetric care. Also many teenage mothers in LMICs do not have access to adequate RH care and die while trying to give life (UNICEF Uganda, 2010).FP services are part of the core services that all females need and use during

their reproductive years and should be expanded and strengthened, to improve the health of women, their partners and their children.

This study will aim to provide and insight on the level, associated factors and describe the facilitators and barriers and facilitators of utilization of FP methods among females15 – 19 years at health facilities in Kamuli district to generate evidence that could improve their FP use.

The findings from this research will inform stakeholders at the selected health facilities, District Health Team, Ministry of health and its implementing partners on the strategies that can be used to enhance family planning uptake through mitigating barriers to FP use adolescents.

The evidence generated from our study will provide critical information to stakeholders like healthcare providers, public health practitioners, government, and policymakers; on the barriers and facilitators of utilization of FP methods among adolescents.

1.5. Scope of the study

Geographically, the study was conducted at the adolescent health clinics of Kamuli General Hospital and Namwenda HC IV. The research was conducted within a period of 6 months and the study looked at the utilization of family planning and associated factors among females 15- 19 years

1.6. Conceptual framework

independent variables

Health system factors

- **Accessibility**
- **Customer care**
- **Stock outs**
- **Staff competence**
- **Providers perspectives**
- **Facility type**
- **Incentives in FP programs**
- **Partner engagement and collaboration in FP services**

Socio-demographics

- **Age**
- **Marital status**
- **Education level**
- **Income**
- **Occupation**
- **Residence**
- **Religion**
- **Current school**

Socio-cultural factors

- **Knowledge on FP methods**
- **Stigma**
- **Religious support**
- **Cultural support**
- **Urgency or desire to use FP**
- **taboos**
- **Decision about FP**
- **Desire for a certain sex of child**
- **Attitude of thecommunity**

Dependent variable

Figure 1. Conceptual framework showing the possible factors associated with utilization of FP services among females aged 15 – 19 years

Figure 1 above shows the various factors influencing FP use among females 15 – 19 years as well as its consequences. The factors that will be identified in the study include socio-demographics, health system, community, and socio-cultural factors. We shall explore how the interaction of these factors with other various intervening variables explored qualitatively can influence the level of family planning service utilization among females 15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district. The utilization of FP among females15 – 19 years may result from behavioral changes which depend on the environment, people, and behavioral factors. A person's behavior determines aspects of the environment to which the person is exposed, and that behavior is continuously altered by the environment. Also, an individual's opinions, attitudes, and knowledge are the processes that occur

between external perceptible stimuli and reactions that occur in real-life situations. The social and physical environments affect a person's behavior with the social environment constituting family, friends, and colleagues, while the physical environment is the size of the room, the ambient temperature, or the accessibility of certain foods which could positively or negatively impact one's ability to take up FP services. The socio-demographics, clinical, health system, community, individual knowledge/perceptions and the level of utilization of FP services (High versus low) form the framework to further understand one's uptake and utilization of FP services.

CHAPTER TWO: LITERATURE REVIEW

2.1 Family planning definition, methods, and importance

Family planning allows people to decide when and if to have children, using the information, means and methods they need to do so(UNFPA, 2014). There are many different types of contraception, with varying rates of effectiveness depending on correct usage. Some methods may be obtained over the counter, others may require medical advice or even surgical intervention(WHO, 2017).

Healthcare providers play an important role in helping people find and use a method that is both effective and acceptable(WHO, 2017). Methods include: Hormonal contraceptive methods (Usually oral pills or implants, patches or vaginal rings – these release small amounts of one or more hormones which prevent ovulation), Intrauterine devices (IUDs), devices inserted into the uterus where they release either a copper component or a small amount of a hormone (Levnorgesterol) to prevent the sperm from reaching the egg, emergency contraception – (It is possible to prevent pregnancy after unprotected sex or if contraception has failed, either with a pill or with an IUD and there is a five-day window for this), Condoms – (Male condoms sheath a penis while female condoms fit loosely inside a vagina and both form a barrier that

prevent sperm and egg from meeting), Sterilization – (considered a permanent method that blocks sperm in men and eggs in women, voluntary and informed choice is essential for this method), Lactational amenorrhea method – (a temporary method of contraception for new mothers whose monthly bleeding has not returned, during this period, eggs are not released, and so pregnancy cannot occur)(WHO, 2017).

Family planning serves three critical needs: (i) it helps couples avoid unintended pregnancies; (ii) it reduces the spread of sexually transmitted diseases (STDs); and (iii) by addressing the problem of STDs, it helps reduce rates of infertility(Butler and Clayton, 2009). Also, a large average family size makes it difficult for families and the government to make the requisite investments in education and health that are needed to develop high-quality human capital and achieve a higher level of socioeconomic development(UNFPA, 2021).

According to the United Nations Population Fund (UNFPA), every year, almost half of all pregnancies are unintended, between 2015 and 2019, there were roughly 121 million unintended pregnancies globally each year(UNFPA, 2022). Globally, an estimated 257 million females who want to avoid pregnancy are not using safe, modern methods of contraception and in 47 countries, about 40 percent of sexually active females were not using any contraceptive methods to avoid pregnancy(UNFPA, 2022). It is reported that about half (49%) of pregnancies in LMICs—111 million annually—are unintended and adolescents in LMICs have an estimated 21 million pregnancies each year, 50% of which are unintended(Sully et al., 2020).

Over 60 percent of unintended pregnancies globally, and almost 30 percent of all pregnancies, end in abortion. Also, 45 percent of all abortions performed globally are unsafe - unsafe abortions hospitalize about 7 million females a year globally and cause 5 to 13 percent of all maternal deaths, one of the leading causes of maternal death(UNFPA, 2022). In developing countries, unsafe abortions cost an estimated $553 million per year in treatment costs alone – which can be avoided by addressing the growing unmet need for contraception among women, especially young women(UNFPA, 2022).

Every year, it is reported that an estimated 21 million girls aged 15–19 years in developing regions become pregnant and approximately 12 million of them give birth(WHO, 2022). Globally, the Adolescent Birth Rate (ABR) decreased from 64.5

births per 1000 females in 2000 to 42.5 births per 1000 females in 2021(WHO, 2022). However, rates of change were uneven in different regions of the world with the sharpest decline in Southern Asia (SA), and slower declines in the Latin American and Caribbean (LAC) and sub-Saharan Africa (SSA) regions(WHO, 2022).

Although declines have occurred in all regions, SSA and LAC continue to have the highest rates globally at 101 and 53.2 births per 1000 women, respectively, in 2021(WHO, 2022). Also, there are enormous differences in ABR within regions. In LAC, for example, Nicaragua recorded the highest estimated ABR at 85.6 per 1000 adolescent girls in 2021, compared to 24.1 per 1000 adolescent girls in Chile(Sully et al., 2020). Even within countries, there are enormous variations, for example in Zambia the percentage of adolescent girls aged 15–19 who have begun childbearing (females who either have had a birth or are pregnant at the time of interview) ranged from 14.9% in Lusaka to 42.5% in the Southern Province in 2018(WHO, 2022). In the Philippines, this ranged from 3.5% in the Cordillera Administrative Region to 17.9% in the Davao Peninsula Region in 2017 (Ochen and Chi, 2022).

While the estimated global ABR has declined, the actual number of childbirths to adolescents continues to be high. The largest number of estimated births to 15–19-year-olds in 2021 occurred in SSA (6 114 000), whereas far fewer births occurred in Central Asia (68 000). The corresponding number was 332 000 among adolescents aged 10–14 years in SSA, compared to 22 000 in South-East Asia (SEA) in the same year(Sully et al., 2020).

In Uganda, the six regions with the highest numbers of teenage pregnancies in 2020 were; Busoga: the most affected districts were Kamuli (6,535) and Mayuge (6,205 teenage pregnancies). North Central: the most affected districts were Mukono (5,535) and Luweero (4,545). Lango: (Oyam 6,449 and Lira 4,697). South Central: (Wakiso 10,439 and Rakai, 2711). West Nile: (Arua 4,705 and Yumbe 3,973). Tooro/Rwenzori: Kasese (7,319) and Kyenjojo (4,341) (UNFPA Uganda, 2021). In 2020, the number of teenage pregnancies in Uganda was highest in Wakiso (10,439), Kampala (8,460), Kasese (7,319), Kamuli (6,535), Oyam (6,449), and Mayuge (6,205) (UNFPA Uganda, 2021).

Busoga sub-region contributes to over 7% of the teenage pregnancies in the nation with Kamuli and Luuka districts reporting the highest number of teenage births for the

years 2020, and 2021(UNFPA Uganda, 2021). Kamuli district is located in the region with one of the highest adolescent pregnancy rates in Uganda at 30% (UBOS, 2012) and 27% of rural adolescents were child-bearing compared to 19% among urban dwelling adolescents (UBOS, 2017). There is a need to monitor and track the utilization of FP methods among the adolescents in Kamuli district to potentially address the unmet needs.

Studies of risk and protective factors related to adolescent pregnancy in LMICs indicate that levels tend to be higher among those with less education or of low economic status (Nuwasiima et al., 2019). However, progress in reducing adolescent first births has been particularly slow amongst these vulnerable groups, which has resulted in increasing inequity.

Uganda has one of the world's highest maternal mortality rates, with 18 mothers dying every day in pregnancy or during and after childbirth(UNICEF Uganda, 2010). Complicated births and abortions, often requiring emergency obstetric care, are all too common among adolescent girls. But many teenage mothers do not have access to adequate reproductive health care and die while trying to give life(UNICEF Uganda, 2010).

2.2 Utilization of family planning methods among adolescent girls

Unmet need for FP is defined as those females who are fecund and sexually active but are not using any method of contraception and report not wanting any more children or wanting to delay the next child. The concept of unmet need points to the gap between women's reproductive intentions and their contraceptive behavior(UNFPA, 2021).

In 2019, sexual and reproductive health services fell well short of needs in LMICs(Sully et al., 2020). Approximately 218 million females of reproductive age (15–49) in these countries have an unmet need for modern contraception—that is, they want to avoid a pregnancy but are not using a modern method(Sully et al., 2020).

Globally, among 1.9 billion females of the Reproductive Age group (15-49 years) in 2019, 1.1 billion needed family planning; of these, 842 million were using

contraceptive methods, and 270 million had an unmet need for contraception(WHO, 2020).

A study conducted using Demographic and Health Surveys (DHS) between 1995 and 2020 across 37 SSA countries among females of reproductive age found an overall prevalence of FP use at 22.0%. It ranged from 3.5% in the Central Africa Republic to 49.7% in Namibia and the most common types used were injections (39.4%), condoms (17.5%), and implants (26.5%)(Boadu, 2022).

A study conducted in Wakiso district, central Uganda among females 15 – 49 years found that the total demand for modern contraceptives was 84.9%, modern contraceptive prevalence was 47.4% nearly meeting the national target of 50%, and the unmet need was 37.3%, which much higher than the national target of 10%(Tetui et al., 2021).

Globally, adolescents have substantial unmet needs for sexual and reproductive health care. For example, females aged 15–19 who want to avoid pregnancy have much higher unmet need for modern contraception than do all females of reproductive age who want to avoid a pregnancy (43% vs. 24%)(Sully et al., 2020).

A study conducted in Benin using 2017–2018 Demographic and Health Survey data found that 8.5% of females ages 15–24 were using modern contraceptives and it was 13% among females ages 25 or more (Ahissou et al., 2022).

A cross-sectional study conducted using the Uganda Demographic and Health Survey (UDHS) 2022 data, found that the prevalence of modern contraceptive utilization among women was at 38% (UDHS,2022).

2.3 Factors influencing utilization of family planning methods among adolescent girls.

in a study of differences in factors associated with current modern contraceptive use among youth and adult women Prata et al established that older women were more likely to be currently using modern contraceptives than younger women (Patra et al 2016). Similarly, Nieves et al in their study of the influence of partnership on contraceptive use among HIV-infected women accessing antiretroviral therapy in rural Uganda established that the same that women age 15-19 were markedly less likely to be using any method of family planning than women age 20-24 (5% and 23%,

respectively) (Nieves et al 2020) a finding that is consistent with the finding in this study.

Allen et al 2019 established that the relationship between education and the use of family planning is mixed. they established that young women with no education were slightly less likely than women with secondary or higher education to use a modern method of family planning (93% versus 100%) (Allen et al 2019)

Kushwah et al showed that the use of family planning was slightly higher among women with secondary or higher education (17%) than among women with no education (15%), while use is lowest among women with primary education (11%) (Kushwah,2020)

Findings from a study using DHS data among females of reproductive age in SSA countries showed that females were less likely to use modern contraceptives if had no education, had no children, had not told of family planning at a health facility, had not heard of family planning in the media and being poor(Boadu, 2022). Females were more likely to use modern contraceptives if they were between the age of 35–39 years, married, had seven or more children, had knowledge of any method of contraceptives, and when field workers visited and talked about family planning (Boadu, 2022).

A study conducted in Wakiso, central Uganda among females of reproductive age found that lower total demand for contraceptives was associated with higher women's education status and preference to have another child, while higher total demand was associated with having at least one living child (Tetui et al., 2021). They also found that higher modern contraceptive use was associated with older age, having at least one living child, and high decision-making power, while lower modern contraceptive use was associated with higher education and undetermined fertility preference (Tetui et al., 2021).

Globally, adolescent females face many barriers to obtaining contraceptive care, including fear of exposing that they are sexually active (if they are unmarried) and social pressure to have a child (if they are married) (Sully et al., 2020). Restrictive laws and policies regarding the provision of contraceptives based on age or marital

status pose an important barrier to the provision and uptake of contraceptives among adolescents in some countries. This is often combined with health worker bias and/or lack of willingness to acknowledge adolescents' sexual health needs(WHO, 2022).

Several factors contribute to adolescent pregnancies and births – which factors indirectly influence the utilization of FP(UNICEF Uganda, 2010). First, in many societies, girls are under pressure to marry and bear children. As of 2021, the estimated global number of child brides was 650 million: child marriage places girls at increased risk of pregnancy because girls who are married very early typically have limited autonomy to influence decision-making about delaying child-bearing and contraceptive use(UNICEF Uganda, 2010). Second, in many places, girls choose to become pregnant because they have limited educational and employment prospects. Often in such societies, motherhood – within or outside marriage/union – is valued, and marriage or union and childbearing may be the best of the limited options available to adolescent girls(UNICEF Uganda, 2010).

A study by Sato et al in their study of the Effect of distance to health facilities and access to contraceptive services among urban Turkish women established that the effect of distance to a health facility on contraceptive use significantly differed according to contraceptive availability at the facility. They established that further distance to a health facility decreased the use of contraception (Sato et al 2021)

Bilikisu et al a study of the distance-quality trade-off in women's choice of family planning provider in North Eastern Tanzania showed that Only 33% of women received contraception from a health facility nearest to them. According to their study, Women, may not seek contraception from the nearest facility, rather opting for a more distant facility with better quality services or to ensure greater privacy and anonymity (Balikusu et al 2022).

The factors for the many teenage pregnancies in the SSA region include poverty, negative media influence that is characterized by nudity and obscenity, low acceptance and uptake of contraceptives, and lack of youth-friendly corners(Forum, 2021).

A study conducted among females of reproductive age in Benin, West Africa found that females15–24 had a higher unmet need, and a lower demand satisfied by modern

contraceptive methods compared with females ages 25 or more (Ahissou et al., 2022). Also, 60.8% (56.9% to 64.7%) of all unmarried young females had an unmet need for modern contraceptives and young females were more likely to use male condoms which they obtained mainly from for-profit outlets, pharmacies, and relatives(Ahissou et al., 2022).

From their findings, the factors associated with demand satisfied by a modern method were literacy, being unmarried, knowing a greater number of modern contraceptive methods and experiencing barriers in access to health services(Ahissou et al., 2022). The qualitative component of the study found that barriers to using modern methods included community norms about pre-marital sexual intercourse, perceptions about young women's fertility, spousal consent, and the use of non-modern contraceptives(Ahissou et al., 2022).

a study of Factors affecting family planning use among women of childbearing age by kassim et al established that religious beliefs were found to affect women's family planning use. In their study, participants reported that catholic religion discouraged them to use family planning because doing so prevented eggs fertilization by the sperm thus preventing pregnancy. This, according to them, is against God's will for people to fill the earth. Family planning thus constitutes interfering with God's plan (Kassim et al 2022)

A qualitative study that used the Theory of Reasoned Action (TRA) model to understand the processes that influence contraceptive decision-making among young adolescents (10–14 years old) in urban Lilongwe, Malawi showed that contraceptive decision-making was influenced by social factors (individual, interpersonal, society) and adolescents' perceptions regarding hormonal contraceptives(Dombola et al., 2021). They also reported a disconnect between Education and Adolescent Sexual and Reproductive Health Policies(Dombola et al., 2021).

A study conducted using Uganda DHS data for 2016 found that the odds of contraceptive utilization were higher among married adolescents compared to unmarried adolescents (Sserwanja et al., 2021). Adolescents whose age at first birth was less than 15 years were twice more likely to utilize a modern contraceptive compared to those whose age at first birth was above 15 years (Sserwanja et al., 2021). Females belonging to the Central region and those in the middle wealth

quintile were 93% and 91% more likely to utilize a modern contraceptive compared to those in the Northern region and those in the poorest wealth index respectively (Sserwanja et al., 2021).

CHAPTER THREE: RESEARCH METHODS

3.0. Introduction

This chapter points out the methods, tools, techniques, and procedures the researcher used to undertake the study.

3.1 Study Design

This was a mixed-methods design. A cross-sectional study design employing both quantitative and qualitative methods. The quantitative approach was used on descriptive and explanatory data obtained from respondents while the qualitative approach involved interpretation of data from the respective sources. Therefore, the mixed method used here help in triangulation of data

3.2 Study Setting

Kamuli district is located in South-Eastern Uganda in the Busoga region. The district borders River Nile and Kayunga district in the west, Jinja district in the South, Iganga district in the Southeast, and Kaliro. Kamuli is composed of three counties namely: Budiope, Bugabula and Buzaaya. It is also composed of 17 lower local councils (Sub-

counties) and one Town council, One hundred and five (105), and 1,284 villages. It has a population of It has a total population of 486,319, people as per the National Housing Census 2014. Of which 236,389 are males and 249,930 are females. Kamuli District also recorded a 20 percent increase in teenage pregnancies in 2020, exacerbated by the closure of schools due to the COVID-19 pandemic(UNICEF Uganda, 2021).

The health system of Kamuli district comprises 70 health facilities: 38 government-owned/public health facilities, 15 Private for Profit (PFP), and 17 Private not-for-profit (PNFP). Of the 38 public facilities, there is only 1 general hospital (Kamuli Hospital) and 1 health center IV (Namwendwa HC IV). Kamuli General Hospital is located in the central business district of Kamuli town with a bed capacity of 100.

The general hospital and health center IV in Kamuli provide all FP services including youth-friendly services, and health center threes provides all including youth-friendly services apart from the long-term methods because they do not have operating theaters(DSW, 2016). Health center IIs provide pills and condoms. Private facilities in Kamuli bring FP services closer to the population. However, they are not visited by all the people due to financial constraints(DSW, 2016). This study will be conducted at Kamuli General Hospital and Namwenda HC IV, because they are the highest volume public health facilities providing all FP services including youth-friendly services.

The commonly used family planning methods in Kamuli include: IUDs, Pills, Injectables, Implants, Condoms, Vasectomy, and Tubuligation (DSW, 2016).

3.3 Study Population

Females aged 15 – 19 years, attending adolescent health clinics at Kamuli General Hospital and Namwenda HC IV during the study period and consented to participate in the study

3.4 Eligibility criteria

3.4.1 Inclusion criteria

Females aged 15 – 19 years attending adolescent health clinics at Kamuli General Hospital and Namwenda HC IV in Kamuli district during the study period who consented to participate in the study were included in the study

3.4.2 Exclusion criteria

Four adolescents who were mentally ill and too sick to sustain the interviews were excluded from the study.

3.5 Sampling procedure

Females aged 15 – 19 years, attending adolescent health clinics in selected health facilities in Kamuli district during the study period were systematically enrolled in this study as they sought care. A systematic sampling proportionate to size approach was used. A random starting point achieved using a table of random numbers on the expected sample size per health facility was used. After selecting the starting participant, the selection of every (kth) participant was done as they accessed the adolescent health services during the study period. The sampling interval, k= (total number of adolescents expected to visit the clinic during the study period /required minimum sample size for the study) for example (1094 adolescents expected to visit Kamuli General Hospital and Namwendwa HCIV during the 1month study period. Adolescents are expected to visit kamuli General hospital during the month of the study k = 714/102= 7^{th} and Namwendwa HCIV adolescents expected to visit k= 380/50=8^{th}.)

Proportionate sample size = 2/3x152= 102 for kamuli General Hospital and Namwendwa HCIV Sample size = 1/3x152= 50.

3.6 Sample size estimation

This study used Kish Leslie formula (1965) formula

$N = (Z^2\ \alpha/2\ P(1-P))/d^2$ Where,

Zα/2 = the standard normal value corresponding to 95% Confidence Interval (CI) = 1.96.

P = the estimated level of utilization of FP methods among females aged 15 – 19 years Based on findings of a cross-sectional study conducted using in western ugandawhich found that the prevalence of modern contraceptive utilization among female adolescents aged 15 – 19 years was 10% (Sserwanja et al., 2021).

d = the tolerable random error at 5%.

- $n= \underline{1.96^2x0.1x0.9}$

0.05^2

n= 138

- Considering 10% non-response. Total sample size = 152

3.7. Study variable

3.7.1. Independent variable

Demographic factors (age, educational level, marital status), socio-cultural factors (religious approval, cultural approval, decision to use of family planning, community attitude etc), health related factors (distance to the health unit, waiting time, attitude of health workers, counseling on family planning among others).

3.7.2. Dependent variable

Utilization of family planning

3.8. Data Collection and study procedure

A semi-structured questionnaire was designed based on literature and findings from similar studies. It was pre-tested in a sample of 10 participants before data collection. A team of trained research assistants interviewed the females using the semi-structured questionnaire. on the methods of interview administration. The information was assessed using the respondents self-report where applicable, further verification of the self-reported information was made using the patient files and registers.

3.9. Quality Control

The questionnaires were pretested by the principal investigator and amendments were made to improve its validity and reliability. The research assistants were oriented before data collection. Regular cross checking and inspection of collected data was done by the principal investigator to ensure the accuracy, consistency and uniformity. Data cleaning was done to further minimize errors.

3.10. Data Management

All the collected quantitative data were cleaned and edited in the statistical software Epidata version 3.1 and thereafter exported to STATA version 20. We regularly save and backup the data on Google Drive. The data management tools and instruments including the filled questionnaires were kept securely under lock and key.

3.11. Data analysis

Data was first checked manually for completeness. Data was cleaned, coded, and entered into Excel. The data was then exported to STATA version 20 for statistical analysis.

The analysis was done at Univariate, Bivariate, and Multivariate levels. At the univariate level, the researcher obtained summaries, frequencies, and percentages of the variables under study.

At the bivariate level, Pearson's Chi-square (x^2) tests were used to determine the relationship or association between the dependent and independent variables. The corresponding P-values were obtained, and variables with P-values less than 0.05 were considered statistically significant. At the multivariate level, logistic regression of variables that were statistically significant at the bivariate level was analyzed. The corresponding P-values, Adjusted Odds ratio, and Confidence Intervals were also obtained.

3.12. Qualitative study

The qualitative study was conducted with the aim of exploring the barriers and facilitators to family planning use among females aged 15 – 19 years . Three qualitative data collection approaches used were 1) Key informant interviews (KIIs), 2) In-depth interviews (IDIs), and 3) Focus group discussions (FGDs).

3.12.1 Key informant interviews

8 Key informant interviews were carried out with Health workers at Kamuli General Hospital and Namwenda HC IV to assess health-related factors influencing family planning use among females aged 15 – 19 years. The participants included medical officers (1), nurses and midwives(4), and other caregivers in the adolescent health clinic (2). These were carried out by the PI in English. They were recorded, and notes were taken during the interviews. They were interviewed for 10 minutes each. Interviews were conducted until we reached a point of saturation.

3.12.2 In-depth interviews

8 in-depth interviews were conducted with females aged 15 – 19 years to determine individual-level barriers and facilitators of family planning use. These were carried

out in both English and the local language. An in-depth interview tool guide was used to guide the discussion. The interviews took 20 – 30 minutes. Interviews were conducted until we reached a point of saturation.

3.12.3 Focus group discussions

2 FGDs were conducted with females aged 15 – 19 years to explore group or community-level barriers and facilitators of family planning use. Participants provided the most information in the IDIs were purposively selected and invited to participate in FGDs that were scheduled in a convenient and quiet room within the adolescent health clinic.

Each of the 2 FGDs consisted of a minimum of 8 females who provided written consent to participate in the study. The 2 groups were homogeneous in age, background, and experiences with family planning as guided by the findings from the IDIs.

A trained social anthropologist (moderator) and research assistant (note-taker) conducted the FGDs. Each participant was allowed to share their views about the FGD guide questions. Permission to record the meeting for future reference were sought from the participants before the start of the FGD. We conducted 2 FGDs among the selected participants for which we aimed to have a saturation of the participant's ideas.

3.13. Qualitative Data analysis

Audio recordings of the study proceedings were transcribed verbatim and cross checked by a trained social anthropologist with the supervision of the researcher. The transcripts were then exported into Open Code software for further analysis. A thematic and deductive approach were used to analyze the data. Meaning units were identified to form codes and themes from the data. The trustworthiness of the qualitative data were evaluated through triangulation with the quantitative data and comparing the field notes and transcripts.

3.14 Ethical Considerations.

Permission to conduct the study was obtained from Faculty of Public Health, nursing and Midwifery. Ethical clearance was obtained from research ethics committee Uganda Christian University. Administrative approval was obtained from the District Health Office and the management of the selected health facilities. Informed consent

was obtained from the study participants and they were informed that all information collected from them will be kept confidential. They were also informed of their right to withdraw from the study anytime they feel uncomfortable and that would not affect the services they receive from the health facility

3.15 Dissemination of Results and findings.

The Results and findings from this research will be disseminated at the various fora, including Ministry of Health, Uganda Christian University, Health facility management, and Kamuli District Health Team. The study results and findings will also be published in peer reviewed journals. Oral and poster presentations will be made at both local and international conferences.

CHAPTER FOUR: RESULTS

4.0 Introduction

This chapter presents results from the two levels of analysis. Results are presented starting with exploratory analysis, followed by the inferential.

4.1 Social demographic characteristics of respondents

The total eligible sample size of 147 participated in the study which yielded a response rate of about 96.7%. Respondents were interviewed from 74 (50.3%) Kamuli General Hospital and 73 (49.7%) Namwenda HC IV.

Table 1. Social demographic characteristics of the respondents

Variables	Frequency	Percentage
Type of residence		
Urban	50	34%
Rural	90	61.2%
Peri-urban	7	4.8%
Age		
15-17	70	47.6%
18-19	77	52.4%
Participant in school		
Yes	87	59.2%
No	60	40.8%
education level attained		
Not educated	1	0.7%
Primary	52	35.4%
Secondary	87	59.1%
Tertiary	7	4.8%
Religion		
Anglican	78	53%
Catholic	46	31.3%
Muslim	17	11.6%
Pentecostal	4	2.7%
Others	2	1.4%
Employment		

Yes	5	3.4%
No	142	96.6%
Income level		
Low	134	91.2
Middle	11	7.5
High income	2	1.3
Marital status		
Single	85	57.8%
Married	58	39.4%
Separated	4	2.7%

Table 1 above shows that, the majority 90 (61.2%) of the respondents resided in rural area. the age of Individuals ranged from 15-19 years with a mean age of 18.3 (SD=1.2) years and most 77(52.4%) of them were aged between 18-19 years. A total of 87(59.2%) respondents were still in school.

In addition, a total of 87 (59.1%) of the respondents had attained a secondary level of education.

Regarding the religion total of 78 (53%) were Anglican, followed by Catholics 46(31.3%) and Muslims 17(11.6%). The majority 142(96.6%) of respondents were not employed.

Regarding the marital status of respondents, most 85(57.8%) were single, and 58(39.4%) were married.

4.2. Level of utilization of family planning

Table 2: Level of utilization of family planning

Variables	Frequency	Percentage
Ever used any Family Planning Method		
Yes	68	46.3
No	79	53.7
FP Methods Used		

Pills	12	17.6
Injectables	32	47.1
IUD	1	1.5
Implants	8	11.8
Male condoms	13	19.1
Emergence contraceptives	2	2.9
Currently using any Family Planning method		
Yes	48	26.5
No	99	73.5
Method currently using		
Pill	4	8.3
Injectables	35	72.9
Implant	9	18.8
Source of family planning for women		
Health facility	97	65.9
Drug shops	38	25.9
Outreach point	8	5.4
others	4	2.7

Of the total only 68 (46.3%) of the respondents reported ever using family planning method.

Of those who had ever used a family planning method, 32(47.1%) reported having used injectable as a family planning method.

Only 48(26.5%) of the respondents reported that they were currently using family planning.

Also, the key informants reported that there are fewer numbers of girls using family planning

".....the number of teenage pregnancies is high among teenagers in this community and this is because they have not embraced the use of family planning. Family planning is free but still, most of the adolescents and women in

***this health facility are not using it hence the very low percentage of utilization reported……..."* (29-year-old assistant nursing officer)**

majority 35(72.9%) of the respondents also reported using injectables as a family planning method.

Similarly, the majority of the key informants reported that the most preferred family planning method was injectable.

***"……most women who come here for family planning come for injectables. It is the most used methods mainly depoprovera and sayana press. To them injectable is easy to use and cheap in the drug shops……..." (*42-year-old assistant nursing officer)**

Health facility was the major source of family planning for women as reported by 97(65.9%) of the respondents.

4.3. Socio- cultural factors associated with utilization of family planning

Table 3. Socio- cultural factors associated with utilization of family planning

Variables	Frequency	Percentage
Family Planning Important		
Yes	138	93.9
No	9	6.1
number of children n=62		
one	53	85.5
two	8	12.9

more than two	1	1.6
Have you achieved your desired number of children?		
Yes	2	3.2
No	60	96.8
Knowledge about family planning methods		
Yes	140	95.2
No	7	4.8
Are there taboos in your community in relation to use of family planning		
Yes	51	34.7
No	96	65.3
Know where to obtain an FP method		
Yes	134	95.7
No	6	4.3
Culture supports the use of FP		
Yes	145	98.6
No	2	1.4
Religion supports the use of FP		
Yes	101	68.7
No	46	31.3
Decision to use family planning		
My self	48	32.7
My husband	86	58.5
Joint decision	12	8.2
others	1	0.6
Attitude of the community towards family planning		
Positive	41	27.9
Negative	106	72.1

From the table above majority 138(93.9%) of the respondents reported that family planning was important and 53(85.5%) of the respondents reported having only one child.

Regarding the source of knowledge about family planning, a total of 107(33.4%) respondents reported the health facility as their source of knowledge about family planning.

More than half 96(65.3%) of the respondents reported that their communities did not have taboos in relation to family planning. and 51(34.7%) reported that their communities had taboos in relation to family planning.

Also, majority 134 (95.7%) of the respondents knew where to obtain family planning

Nearly all respondents 145(98.6%) reported that their culture supports the use of FP. Similarly, the key informants reported that most of the cultural practices were not in conflict with the use of family planning

"……..in this community, there are very few cultural practices/norms that are in conflict with the use of family planning. Most of the cultures here support the use of family planning. Because of the culture of early sexual debut majority of the teenagers become pregnant and drop out of schools so these teenagers have been encouraged to use family as a solution ……" **(38 year sold clinician)**

However, majority of the participants in FGD reported that that there are cultural practices that affect the use of family planning

"…….in Most cultures here, when you are married, you are expected to produce children even if you feel you have enough children, the man will force you to produce because children are the pride of amen. The more the children the more influential the man is……." **(18-year-old FG discussant)**

similarly, 101(68.7%) of the respondents reported that their religion supports the use of family planning and 46(31.3%) reported that their religion does not support the use of family planning.

True to this findings, majority of the key informants and focus group discussants reported that their religion is in support of the use of family planning but also some key informants reported that their religion discourages the use of family planning

"…….am a protestant and my religion has got no problem with using family planning so we use it freely without fear of religious contradiction ……. **(42-year-old assistant nursing officer)**

Similarly, a focus group discussant reported that ***"…….. being a catholic, my religion discourages the use of family planning, use of family planning is seen as a sin against God plan of procreation so as a catholic, I never use family planning and strongly discourage it's use……'*** **(17-year-old Focus group discussant)**

More than half 86(58.5%) of the respondents reported that it is the husband to decides whether to use or not to use family planning. Only 12(8.2%) of the respondents jointly decided the use of family planning.

The majority 106 (72.1%) of the respondents reported that the community had a negative attitude toward family planning

4.4. Health system factors associated with utilization of family planning

Table 4. Health system factors associated with the utilization of family planning

Variables	Frequency	Percentage
What is the distance of your home to the health facility		
>5km	127	86.4
<5km	20	13.6
Waiting time at the facility		
<30min	19	12.9
30min-1 hr	116	78.9
>1 hr	12	8.2
Services friendly for 15-19 years		
Yes	131	89.1
No	16	10.9
Why services are not friendly		

Attitude of health worker	1	6.3
Long waiting hours	12	75.0
No privacy	3	18.8
Attitude of health workers		
Excellent	1	0.7
Very good	68	46.3
Good	76	51.7
Poor	2	1.4
Received counseling/advice about family planning method		
Yes	130	88.4
No	17	11.6
Aware of the availability of family planning methods at the HF		
Yes	128	87.1
No	19	12.9
Paid any fees for family planning services		
Yes	19	12.93
No	128	87.1
Health provider told you about the FP method's side effects		
Yes	137	93.2
No	10	6.8
Told what to do in case of side effects		
Yes	137	93.2
No	10	6.8

From the table above, the majority 127(86.4%) of the respondents stay more than 5km away from the health facility and only 20(13.6%) of the respondents reported staying <5km away from the health facility

Also, majority of the key informants reported that majority of the patients stay far away from the health facility.

"……. majority of the patients we receive here come from very far. Some come as far as 10 km away. This long distance is associated with high cost of transport which becomes costly for the patients to come and access quality services including family planning as a result we record low utilization …….. **(37-year-old clinical officer)**

More than three quarters 116(78.9%) of the respondents reported 30min to 1 hour as the waiting time at the health facility.

The majority 131(89.1%) of the respondents reported that the services were friendly

Of those who reported that the services were not friendly, the majority 12(75%) reported the long waiting time as the reason for unfriendly services

In regards to the attitude of health workers, slightly more than half 76(51.7%) of the respondents reported that health workers had a good attitude

The majority 130(88.4%) of the respondents reported having received counseling about family planning

The majority 128(87.1%) of the respondents were aware of the availability of family planning at the health facility and the same respondents reported not paying any fees for family planning services.

Nearly all respondents 137(93.2%) reported that they were told about the side effects of family planning and what to do in case of side effects.

4.5. Bivariate analysis of the demographic characteristics.

Table 5: Bivariate analysis of the demographic characteristics.

Variables	Contraceptive use				
	Yes	No	X^2	df	p-value
	48(32.7%)	99(67.3%)			
Type of residence					
Urban	50	28	22	1.46	3	0.610

Rural	90	17	73			
Peri-urban	7	3	4			
Age						
15-17	70	12	58	12.67	1	0.001
18-19	77	36	41			
Participant in school						
Yes	87	9	78	1.40	1	0.072
No	60	39	21			
education level attained						
Not educated	1	0	1	9.77	3	0.001
Primary	52	8	44			
Secondary	87	36	51			
Tertiary	7	4	3			
Religion						
Anglican	78	29	49	2.39	4	0.069
Catholic	46	4	42			
Muslim	17	12	5			
Pentecostal	4	2	2			
Others	2	1	1			
Employment						
Yes	5	3	2	4.001	1	0.510
No	142	45	97			
Income level						
Low	134	39	95	2.97	2	0.091
Middle	11	7	4			
High income	2	2	0			
Marital status						
Single	85	11	74	19.06	2	0.001

Married	58	35	23
Separated	4	2	2

From the bivariate table of analysis above, age (X^2=9.77, df =3, P-value=0.001), educational level (X^2=17.16, df =1, P-value=0.002), and marital status (X^2=19.06, df =2, P-value=0.001), were found to significantly influence the uptake of family planning p-value <0.05

4.7. Bivariate analysis of socio-cultural factors

Table 7: Bivariate analysis of socio-cultural factors

Variables	Contraceptive use					
		Yes	No	**X^2**	**df**	**p-value**
		48(32.7%)	99(67.3%)			
Family Planning Important						
Yes	138	46	92	2.40	1	0.072
No	9	2	7			
Number of children (Mean, SD: 5.35± 1.2) n=62						
one	53	44	9	1.79	2	0.810
two	8	3	5			
more than two	1	1	0			
Have you achieved your desired number of children						
Yes	2	2	0	13.66	1	0.001
No	60	46	14			
Knowledge about family planning methods						
Yes	140	47	93	9.13	1	0.002
No	7	1	6			

Are there taboos in your community about use family planning						
Yes	51	9	42	2.77	5	0.629
No	96	39	57			
Know where to obtain FP method						
Yes	134	47	94	1.60	1	0.089
No	6	1	5			
Culture supports the use of FP						
Yes	145	47	98	1.75	1	0.856
No	2	1	1			
Religion supports the use of FP						
Yes	101	41	60	14.70	1	0.001
No	46	7	39			
The decision to use family planning						
My self	48	11	37	1.99	4	0.074
My husband	86	32	54			
Joint decision	12	5	7			
others	1	0	1			
The attitude of the community towards family planning						
Positive	41	39	2	17.71	1	0.001
Negative	106	9	97			

From the bivariate analysis of sociocultural factors above, achievement of a number of desired children, (X^2=13.66, df =1, P-value=0.001), knowledge about family planning method, (X^2=9.13, df =1, P-value=0.002), religious support for family planning (X^2=14.70, df =1, P-value=0.001), and attitude of the community towards

family planning (X^2=17.71, df =1, P-value=0.001), were found to significantly influence the uptake of FP p-value <0.05.

4.8. Bivariate analysis of health system factors

Table 8: Bivariate analysis of health system factors

Variables		**Contraceptive use**				
		Yes	No	**X^2**	**df**	**p-value**
		48(32.7%)	99(67.3%)			
What is the distance of your home to the health facility						
>5km	127	35	92	21.06	1	0.000
<5km	20	13	7			
Waiting time at the facility						
<30min	19	11	8	5.63	2	0.051
30min-1 hr	116	34	82			
>1 hr	12	3	9			
Services friendly for 15-19 years						
Yes	131	46	85	2.90	1	0.063
No	16	2	14			
Why services are not friendly						
Attitude of health worker	1	0	1	4.99	3	0.054
Long waiting hours	12	2	10			
No privacy	3	1	2			
Attitude of health workers						
Excellent	1	1	0	1.04	3	0.070
Very good	68	39	29			
Good	76	7	69			
Poor	2	1	1			
Received counseling/advice about family planning method						

Yes	130	41	89	1.99	1	0.603
No	17	7	10			
Aware of the availability of family planning methods at the HF						
Yes	128	46	82	19.44	1	0.000
No	19	2	17			
Paid any fees for family planning services						
Yes	19	1	18	3.66	1	0.052
No	128	47	81			
Health provider told you about the FP method's side effects						
Yes	137	43	94	1.19	1	0.720
No	10	5	5			
Told what to do in case of side effects						
Yes	137	45	92	4.06	1	0.057
No	10	3	7			

From the table above, distance to the facility (X^2=21.06, df =2, P-value=0.000) and knowledge of the availability of family planning at the facility (X^2=19.44, df =1, P-value=0.000) were found to significantly influence the uptake of family planning. P-value <0.05

4.9. Multivariate analysis of factors associated with the utilization of family planning

Table 9: Multivariate analysis of factors associated with the utilization of family planning

Variable	**AOR**	**95% CL**	**P-Value**
Age			
15-17	1		

18-19	2.7	0.65-1.99	0.001***
Educational level			
Not educated	1		
Primary	1.4	0.03- 2.11	
Secondary	2.8	1.63-2.94	
Tertiary	6.1	1.11-4.76	0.000****
Marital status			
Single	1		0.041
Married	4.6	2.06-4.09	
Separated	1.9	1.84-2.78	
Achievement of desired number of children			
Yes	0.7	1.44-3.19	0.062
No	1		
Knowledge about FP methods			
Yes	3.4	2.07-4.44	0.073
No	1		
Does religion support the use of FP			
Yes	3.3	0.06-2.75	0.003****
No	1		
Does the culture support the use of FP			
Yes	1.7	1.23-4.77	0.062
No	1		
Attitude of the community towards the use of FP			
Positive	1		0.081
Negative	0.4	2.28-4.01	
Distance to the facility			
>5km	1		
<5km	5.1	0.44-1.89	0.001****
Aware of the availability of FP at the HF			
Yes	5.6	1.36-3.80	0.052
No	1		

From the multivariate analysis above age (AOR=2.7; 95% CI: 0.65-1.99; p= 0.001), educational level (AOR=6.1; 95% CI: 1.11- 4.76; p= 0.000), religious support for family planning (AOR=3.3; 95% CI: 0.06-2.75; p= 0.003) and distance to the health facility (AOR=5.1; 95% CI: 0.44-1.89; p= 0.001) were found to independently influence the use of family planning p-value

CHAPTER FIVE: DISCUSSION OF RESULTS

5.0 Introduction.

This chapter presents a discussion of the study findings about the specific objectives of the study as analyzed and presented in chapter four. It tries to relate the finding in this study with findings from other related studies reviewed in literature

5.1. Utilization of family planning.

This study established that 48(26.5%) of the respondents were currently using family planning. this finding is not consistent to a finding of the Uganda Demographic and Health Survey (UDHS) 2022 that established that the prevalence of modern contraceptive utilization was 38% (UDHS 2022). The finding from this study is equally not in agreement with A finding in a study conducted in Wakiso district, central Uganda among females 15 – 49 years that established that the total demand for modern contraceptives was 84.9%, modern contraceptive prevalence was 47.4% nearly

meeting the national target of 50%, however the unmet need was 37.3%, which much higher than the national target of 10%(Tetui et al., 2021).

5.2. Socio-demographic factors influencing the use of family planning

This study established that age was significantly associated with the use of contraceptives (AOR=2.7; 95% CI: 0.65-1.99; p= 0.001), the younger women were less likely to use family planning compared to the older women. this finding is consistent with a finding in a study by Prata et al who in their study of differences in factors associated with current modern contraceptive use among youth and adult women established that older women were more likely to be currently using modern contraceptives than the younger women (patra et al 2016). Similarly, Nieves et al in their study of the influence of partnership on contraceptive use among HIV-infected women accessing antiretroviral therapy in rural Uganda established that the same that women aged 15-19 were markedly less likely to be using any method of family planning than women aged 20-24 (5% and 23%, respectively) (Nieves et al 2020) a finding that is consistent with the finding in this study.

Allen et al 2019 established that The relationship between education and the use of family planning is mixed they established that Young women with no education were slightly less likely than women with secondary or higher education to use a modern method of family planning (93% versus 100%) (Allen et al 2019) similar finding was established by Kushwah et al who showed that was slightly higher among women with secondary or higher education (17%) than among women with no education (15%), while use is lowest among women with primary education (11%) the finding from the above studies agree with the finding in this study that established that educational level(AOR=6.1; 95% CI: 1.11- 4.76; p= 0.000) significantly influenced the use of family planning whereby those with no or primary level education where less likely to use family planning compared to those with tertiary level education (Kushwah,2020)

Similarly, in another study of Factors associated with modern contraceptive use among young and older women in Uganda which used nationally representative data, a woman's educational attainment showed a positive association with the use of contraception. The study showed that education alone, irrespective of the effects of

a woman's mobility and decision-making role, had a significant effect on the use of contraception. Women with higher educational attainment were more likely to be users of contraception a finding that was in agreement with a finding in this study (Asiimwe et al)

5.2 The cultural factors associated with the low utilization of Family Planning Among women

This study established that the participants whose religion supported the use of family planning were 3.3 times more likely to use family planning than the participants whose religion did not support the use of family planning (AOR=3.3; 95% CI: 0.06-2.75; p= 0.003) this finding is in agreement with the finding in a study of Factors affecting family planning use among women of childbearing age by kassim et al who established that Religious beliefs were found to affect women's family planning use. In their study, participants reported that catholic religion discouraged them to use family planning because doing so prevented eggs fertilization by the sperm thus preventing pregnancy. This, according to them, is against God's will for people to fill the earth. Family planning thus constitutes interfering with God's plan (Kassim et al 2022)

5.3 Health factors associated with low utilization of family planning among women.

This study established that the distance to the nearest health facility significantly influenced the use of family planning (AOR=5.1; 95% CI: 0.44-1.89; p= 0.001) where those who resided less than 5km away from the health unit 5 times more likely to use family planning compared to those who resided more than 5km away from the facility this finding is consistent with the finding in a study by Sato et al in their study of Effect of distance to health facilities and access to contraceptive services among urban Turkish women they established that the effect of distance to a health facility on contraceptive use significantly differed according to contraceptive availability at the facility. They established that Further distance to a health facility decreased the use of contraception (sato et al 2021)

However, the finding in this study is not in agreement with a study of the distance-quality trade-off in women's choice of family planning provider in North Eastern Tanzania by Bilikisu et al who showed that Only 33% of women received contraception

from a health facility nearest to them. According to their study, Women, may not seek contraception from the nearest facility, rather opting for a more distant facility with better quality services or to ensure greater privacy and anonymity (Balikusu et al 2022).

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This chapter presented the conclusion and recommendations of the study based on the study results /findings and in line with the study objectives.

6.1 Conclusion

The study established that the level of utilization of contraceptives among females aged 15-19 years stood at (26.5%). This is low compared to the national prevalence target of 39.6% by 2025.

The factors associated with the use of family planning were age (AOR=2.7; 95% CI: 0.65-1.99; p= 0.001), educational level (AOR=6.1; 95% CI: 1.11- 4.76; p= 0.000), religious support for FP (AOR=3.3; 95% CI: 0.06-2.75; p= 0.003), and distance to the health facility (AOR=5.1; 95% CI: 0.44-1.89; p= 0.001).

6.2. Recommendation

1. This study established that the level of utilization of family planning among females 15-19 years was as low as 26.5%. therefore, there is a need for ministry of health, partners in health and the district health officer Kamuli district to sensitize the masses on the importance of family planning this will help create awareness but also demystify the traditional beliefs /taboos about family planning that tend to discourage women from using family planning.

2. This study established that educational level influenced the use of family planning where by those with lower level of education were less likely to use family planning compared to those with higher level of education as such, there is need for the government through the ministry of education to promote girl child education so as to have them empowered with knowledge to make independent decision about family planning.

3. The District Health Office/Ministry of Health should intentionally partner with faith and cultural leaders for meaningful engagement on family planning services among adolescents in marriage relationships and provision of general family planning education among all adolescents in Kamuli district

4. From this study, the distance to the facility was associated with the use of family planning where by those who stay far away from the facility were less likely to use family planning.so there is need for the district health office of Kamuli district to extend family planning services nearer to the population by carrying out family planning out reaches with an aim of reaching out the hard-to-reach population.

5. The healthcare services providers of Kamuli general hospital and Namwenda HCIV are advised to adopt a nonjudgmental approach, to enhance physical accessibility and to train nurses and other healthcare professionals on reproductive health needs of adolescents

6.3. Area of further study

This study recommends Future research on the roles of men in promoting uptake and use of family planning.

References

Ahissou, N.C.A., Benova, L., Delvaux, T., Gryseels, C., Dossou, J.-P., Goufodji, S., Kanhonou, L., Boyi, C., Vigan, A., Peeters, K., Sato, M., Matsui, M., 2022. Modern contraceptive use among adolescent girls and young females in Benin: a mixed-methods study. BMJ Open 12, e054188. https://doi.org/10.1136/bmjopen-2021-054188

Boadu, I., 2022. Coverage and determinants of modern contraceptive use in sub-Saharan Africa: further analysis of demographic and health surveys. Reprod Health 19, 1–11. https://doi.org/10.1186/s12978-022-01332-x

Butler, A.S., Clayton, E.W., 2009. Overview of Family Planning in the United States, A Review of the HHS Family Planning Program: Mission, Management, and Measurement of Results. National Academies Press (US).

Dombola, G.M., Manda, W.C., Chipeta, E., 2021. Factors influencing contraceptive decision making and use among young adolescents in urban Lilongwe, Malawi: a qualitative study. Reproductive Health 18, 209. https://doi.org/10.1186/s12978-021-01259-9

DSW, 2016. FAMILY PLANNING BUDGET ANALYSIS REVIEW REPORT UGANDA FINANCIAL YEAR 2015/16 by Deutsche Stiftung Weltbevoelkerung (DSW).

Forum, B.H., 2021. BHF leads teenage pregnancy fight in Busoga. Busoga Health Forum. URL https://www.busogahealthforum.org/bhf-leads-teenage-pregnancy-fight-in-busoga/ (accessed 4.18.23).
Nuwasiima, A., Nuwamanya, E., Babigumira, J.U., Nalwanga, R., Asiimwe, F.T., Babigumira, J.B., 2019. Acceptability and utilization of family planning benefits cards by youth in slums in Kampala, Uganda. Contraception and Reproductive Medicine 4, 10. https://doi.org/10.1186/s40834-019-0092-2
Ochen, A.M., Chi, P.C., 2022. Family planning uptake and its associated factors among femalesof reproductive age in Uganda: an insight from the Uganda Demographic and Health Survey 2016. https://doi.org/10.1101/2022.08.31.22279440
Sserwanja, Q., Musaba, M.W., Mukunya, D., 2021. Prevalence and factors associated with modern contraceptives utilization among female adolescents in Uganda. BMC Women's Health 21, 61. https://doi.org/10.1186/s12905-021-01206-7
Sully, E.A., Biddlecom, A., Darroch, J.E., Riley, T., Ashford, L.S., Lince-Deroche, N., Firestein, L., Murro, R., 2020. Adding It Up: Investing in Sexual and Reproductive Health 2019.
Tetui, M., Baroudi, M., Ssekamatte, T., Birabwa, C., Kibira, S.P., Atuyambe, L., Delamou, A., Makumbi, F.E., 2021. Total Demand, Use and Unmet Need for Modern Contraceptives Among FemalesLiving in Informal Settlements in Kira Municipality, Wakiso District, Uganda. Implications for Urban Health. Front. Glob. Womens Health 2. https://doi.org/10.3389/fgwh.2021.655413
The DHS Program-Uganda, 2016.
UNFPA, 2022. Nearly half of all pregnancies are unintended—a global crisis, says new UNFPA report [WWW Document]. United Nations Population Fund. URL https://www.unfpa.org/press/nearly-half-all-pregnancies-are-unintended-global-crisis-says-new-unfpa-report (accessed 4.18.23).
UNFPA, 2021. Unmasking Inequalities: Going Beyond National Averages - Family Planning Atlas.
UNFPA, 2014. Family planning [WWW Document]. UNFPA ESARO. URL https://esaro.unfpa.org/en/topics/family-planning (accessed 4.12.23).
UNFPA Uganda, 2021. FACT SHEET ON TEENAGE PREGNANCY, 2021.
UNICEF Uganda, 2021. Child protection & HIV/AIDS actions enhance access to HIV care and fight against child marriage | UNICEF Uganda [WWW Document]. URL https://www.unicef.org/uganda/stories/child-protection-hivaids-actions-enhance-access-hiv-care-and-fight-against-child-marriage (accessed 4.17.23).
UNICEF Uganda, 2010. Adolescent development | UNICEF Uganda [WWW Document]. URL https://www.unicef.org/uganda/what-we-do/adolescent-development (accessed 4.12.23).
WHO, 2022. Adolescent pregnancy [WWW Document]. URL https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy (accessed 4.11.23).
WHO, 2020. Family planning/contraception methods [WWW Document]. The World Health Organization. URL https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception (accessed 3.28.23).
WHO, 2017. Contraception [WWW Document]. URL https://www.who.int/health-topics/contraception (accessed 3.29.23).

Appendices

Appendix 1: Consent form for females 18 – 19 years old

The consent form will be administered by an interviewer on the research team.

Study title

Level of utilization, associated factors, barriers and facilitators of family planning among females15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district: a mixed methods approach

Principal Investigator

Doreen Tukamushaba, Uganda Christian University, Faculty of Public Health, Nursing and Midwifery, Mobile: +256 774442860 Email; doreendant@gmail.com

Background and rationale of the study

You are requested to participate in a research study about level of utilization, associated factors, barriers and facilitators of family planning among females15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district. Your participation in the study is voluntary. If you accept to participate, we shall use about 15 to 25 minutes of your time.

Purpose of the study

The study aims to investigate the utilization, associated factors, barriers and facilitators of family planning among females 15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district.

Study Procedure

You will be asked some personal questions about yourself and some other questions that pertain to your health and family planning services.

Who will participate in the study?

The study will engage females, 15 – 19 years attending adolescent health clinics at Kamuli general hospital and Namwenda HC IV in Kamuli district.

Risk and Benefits

Taking your time could delay your other activities of the day. There are no direct benefits, but the results of this study will provide information that will help in

improving the utilization of family planning services among females, 15 – 19 years attending adolescent health clinics at Kamuli general hospital and Namwenda HC IV.

Cost and compensation

There will be no payment required for you to participate in this study. You will be given 10,000/= for your transport.

Confidentiality

If you accept to participate in this study, your record will be kept confidential. Your name will not appear on any study documents or publications. You will be known only by a study number. The research ethics committee Uganda Christian University and Uganda National Council for Science and Technology (UNCST) are entities which may have access to private information that identifies the research participants by name if required.

Alternatives to participation

Participation in research is completely voluntary. You may refuse to participate in this study or withdraw your consent at any time for any reason and this will not affect you in any way. You have the right not to answer questions you may not be comfortable answering.

In case of problems or questions

If you have any questions, complaints or concerns regarding this study, you can contact the Principle investigator: Ms Doreen Tukamushaba, Mobile Telephone: +256 774442860

Dissemination of results:

All participants and stakeholders will get routine feedback on the findings and progress of the study and any new information that affects the study or data that has relevance to research participants (including incidental findings) will be made available to research participants and relevant stake holders.

Ethical approval:

This study has been approved by the research ethics committee Uganda Christian University.

Participants' statement of consent

I have read and or someone has read and explained to me the information in this consent form. I understand why the research is being done, what will be done, the risk, benefits, and my rights regarding the study. I understand that by signing this form, I do not waive any of my legal rights nor relieve the investigator of any liability, but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate.

A copy of this consent form will be provided to me.

…… …… ……

Name of participant Signature or Thumb print Date

…….. …… ……..

Name of Witness Signature (if applicable) or Thumb print Date

…… …… …….

Name of study staff/interviewer Signature or Thumb print Date

Appendix 3: Study questionnaire

Question	**Response**
Name of interviewer/study staff	……
Date of interview	……
Health facility	□ Kamuli general hospital □ Namwenda HC IV.
Section 1: socio demographic information	

1. Name of participant	……
2. Participant's ID	……
3. Type of Residence	☐ Urban ☐ Rural
4. Age in completed years	……
5. Is participant in school currently?	☐ Yes ☐ No
6. Highest completed/current level of education	☐ None ☐ Primary ☐ Secondary ☐ Tertiary
7. Religion	☐ Anglican ☐ Catholic ☐ Muslim ☐ Pentecostal
8. Employment (Does participant have a job or occupation currently?)	☐ No ☐ Yes
9. Marital status	☐ Married

	☐ Single ☐ Separated
Family planning utilization	
Have you ever used any FP method?	☐ Yes ☐ No
If yes, are you currently using any form of FP methods? (for those not pregnant)	☐ Yes ☐ No
If yes, which method are you using?	……
Are you currently using afamily planning method	☐ Yes ☐ No
If yes, which method are you currently using?	☐ pills ☐ injectable ☐ implant
source of family planning	☐ health facility ☐ drug shop ☐ outreaches ☐ others

Social cultural factors that influence utilization of family planning	
Is family planning important?	☐ Yes ☐ No
Number of children	☐ One ☐ Two ☐ More than two
Have you achieved your desired number of children?	☐ Yes ☐ No
Knowledge about family planning?	☐ Yes ☐ No
Family planning methods known	……
Are there taboos in this community in regards to use family planning	☐ Yes ☐ No
Know where to obtain family planning?	☐ Yes ☐ No
Does your culture support the use of family planning?	☐ Yes ☐ No
Does your religion support the use of family planning?	☐ Yes

	☐ No
Decision to use family planning and family size	☐ My self ☐ My husband ☐ Joint decision ☐ others
attitude of the community towards family planning?	☐ positive ☐ negative
Health system factors associated with utilization of family planning	
What is the distance of your home to the health facility?	☐ >5km ☐ <5km
Waiting time at the facility?	☐ < 30min ☐ 30min- 1 hr ☐ > 1 hour
Were the services friendly for women 15-19 years?	☐ Yes ☐ No
If not friendly why?	☐ Attitude of health workers ☐ Long waiting hours ☐ No privacy

Attitude of health workers?	☐ Excellent ☐ Very good ☐ Good ☐ Poor
Received counselling/advice about family planning?	☐ Yes ☐ No
Aware of availability of family planning at this health facility?	☐ Yes ☐ No
Have you ever accessed FP methods from this health facility?	☐ Yes ☐ No
Health provider told you about side effect of family planning?	☐ Yes ☐ No
Told what to do in case of side effect?	☐ Yes ☐ No

Appendix 4: Consent for Key informant interviews with health workers at Kamuli general hospital and Namwenda HC IV

The consent form will be administered by an interviewer on the research team.

Study title

Level of utilization, associated factors, barriers and facilitators of family planning among females15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district: a mixed methods approach

Principal Investigator

Doreen Tukamushaba, Uganda Christian University, Faculty of Public Health, Nursing and Midwifery, Mobile: +256 774442860 Email; doreendant@gmil.com

Background and rationale of the study

You are requested to participate in a research study about level of utilization, associated factors, barriers and facilitators of family planning among females15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district. Your participation in the study is voluntary. If you accept to participate, we shall use about 25 to 30 minutes of your time.

Purpose of the study

The study aims to investigate the utilization, associated factors, barriers and facilitators of family planning among females15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district.

Study Procedure

You will be asked some personal questions about yourself and some other questions that pertain to utilization of family planning services among females, 15 – 19 years attending adolescent health clinics at Kamuli general hospital and Namwenda HC IV.

Who will participate in the study?

The study will engage females, 15 – 19 years attending adolescent health clinics at Kamuli general hospital and Namwenda HC IV in Kamuli district. Health workers participating in adolescent health services will also interviews about their perspective on utilization of family planning services among females, 15 – 19 years attending adolescent health clinics at Kamuli general hospital and Namwenda HC IV.

Risk and Benefits

Taking your time could delay your other activities of the day. There are no direct benefits, but the results of this study will provide information that will help in improving the utilization of family planning services among females, 15 – 19 years attending adolescent health clinics at Kamuli general hospital and Namwenda HC IV.

Cost and compensation

There will be no payment required for you to participate in this study. You will be given 10,000/= for your transport.

Confidentiality

If you accept to participate in this study, the record tapes, written notes and your written record will be kept confidential. The information gathered will only be used for the purpose of this study. Your name will not appear on any study documents or publications. You will be known only by a study number. The research ethics committee Uganda Christian University and Uganda National Council for Science and

Technology (UNCST) are entities which may have access to private information that identifies the research participants by name if required.

Alternatives to participation.

Participation in research is completely voluntary. You may refuse to participate in this study or withdraw your consent at any time for any reason and this will not affect you in any way. You have the right not to answer questions you may not be comfortable answering.

In case of problems or questions

If you have any questions, complaints or concerns regarding this study, you can contact the Principle investigator: Ms. Doreen Tukamushaba, Mobile Telephone: +256 774442860

Dissemination of results:

All participants and stakeholders will get routine feedback on the findings and progress of the study and any new information that affects the study or data that has relevance to research participants (including incidental findings) will be made available to research participants and relevant stake holders.

Ethical approval:

This study has been approved by the research ethics committee Uganda Christian University.

Participants' statement of consent

I have read and or someone has read and explained to me the information in this consent form. I understand why the research is being done, what will be done, the risk, benefits, and my rights regarding the study. I understand that by signing this

form, I do not waive any of my legal rights nor relieve the investigator of any liability, but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate.

A copy of this consent form will be provided to me.

…… …… ……

Name of participant Signature or Thumb print Date

…….. …… ……..

Name of Witness Signature (if applicable) or Thumb print Date

…… …… …….

Name of study staff/interviewer Signature or Thumb print Date

Appendix 5: Key informant interview guide (health workers)

Date ……..

Interviewer ……Recorder ……..

Language used …….

Time: Start …….. End ……..

Good morning/afternoon

You are welcome to this discussion. My name is …… and my colleague (recorder) is ……

We are grateful that you have accepted to participate in this study. We would like to have a discussion with you about the issue of family planning utilization. The purpose of this discussion is to assess the factors that are associated with the level of family planning utilization among females 15 – 19 years at at Kamuli general hospital and Namwenda HC IV that are key to you as health workers. Feel free and give us your opinions. All information in this discussion will be kept confidential. We are audio recording and taking notes to be able to keep track of all that is being discussed, is that okay with you? (Interviewer asks for written consent) Thank you very much.

In order for us to discuss freely we could first get to know each other, one name only.

Questions

1. On average, what percentage of females 15 – 19 years who visit this health facility do you think utilize family planning service from this health facility??

PROBE: why that percentage?

2. As a health worker in this health facility, do you think there is poor utilization of family planning services among females, 15 – 19 years attending adolescent health clinics in this health facility?

3. PROBE: If yes, why do you think so?

4. PROBE: If No, why do you think so?

5. What patient factors do you think are associated with the level of utilization of family planning services among females 15 – 19 years at this health facility?

6. What clinical factors do you think are associated with the level of utilization of family planning services among females 15 – 19 years at this health facility?

7. What health system factors do you think are associated with the level of utilization of family planning services among females 15 – 19 years at this health facility?

8. PROBE: What other factors do you think are associated with the level of utilization of family planning services among females 15 – 19 years at this health facility?

9. In your opinion as a health worker, how do you think these issues can be solved? If no solutions, why? If yes, give the solutions.

10. PROBE: Solutions to the patient factors?

11. PROBE: Solutions to the clinical factors?

12. PROBE: Solutions to health system factors?

13. PROBE: Solutions to other factors?

Appendix 6: Consent for In-depth interviews with females 15 – 19 years at Kamuli general hospital and Namwenda HC IV

The consent form will be administered by an interviewer on the research team.

Study title

Level of utilization, associated factors, barriers and facilitators of family planning among females15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district: a mixed methods approach

Principal Investigator

Doreen Tukamushaba, Uganda Christian University, Faculty of Public Health, Nursing and Midwifery, Mobile: Email; doreendant@gmail.com+256 774442860

Background and rationale of the study

You are requested to participate in a research study about level of utilization, associated factors, barriers and facilitators of family planning among females 15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district. Your participation in the study is voluntary. If you accept to participate, we shall use about 30 to 40 minutes of your time.

Purpose of the study

The study aims to investigate the utilization, associated factors, barriers and facilitators of family planning among females15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district.

Study Procedure

You will be asked some personal questions about yourself and some other questions that pertain to your health and family planning services.

Who will participate in the study?

The study will engage females, 15 – 19 years attending adolescent health clinics at Kamuli general hospital and Namwenda HC IV in Kamuli district.

Risk and Benefits

Taking your time could delay your other activities of the day. There are no direct benefits, but the results of this study will provide information that will help in improving the utilization of family planning services among females, 15 – 19 years attending adolescent health clinics at Kamuli general hospital and Namwenda HC IV.

Cost and compensation

There will be no payment required for you to participate in this study. You will be given 20,000/= for your transport.

Confidentiality

If you accept to participate in this study, the record tapes, written notes and your written record will be kept confidential. The information gathered will only be used for the purpose of this study. Your name will not appear on any study documents or publications. You will be known only by a study number. The research ethics committee Uganda Christian University and Uganda National Council for Science and Technology (UNCST) are entities which may have access to private information that identifies the research participants by name if required.

Alternatives to participation

Participation in research is completely voluntary. You may refuse to participate in this study or withdraw your consent at any time for any reason and this will not affect you

in any way. You have the right not to answer questions you may not be comfortable answering.

In case of problems or questions

If you have any questions, complaints or concerns regarding this study, you can contact the Principle investigator: Ms. Doreen Tukamushaba, Mobile Telephone: +256 774442860

Dissemination of results:

All participants and stakeholders will get routine feedback on the findings and progress of the study and any new information that affects the study or data that has relevance to research participants (including incidental findings) will be made available to research participants and relevant stake holders.

Ethical approval:

This study has been approved by the research ethics committee Uganda Christian University.

Participants' statement of consent

I have read and or someone has read and explained to me the information in this consent form. I understand why the research is being done, what will be done, the risk, benefits, and my rights regarding the study. I understand that by signing this form, I do not waive any of my legal rights nor relieve the investigator of any liability, but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate.

A copy of this consent form will be provided to me.

…… …… ……

Name of participant Signature or Thumb print Date

…….. …… ……..

Name of Witness Signature (if applicable) or Thumb print Date

…… …… …….

Name of study staff/interviewer Signature or Thumb print Date

Appendix 7: In-depth interview guide

Date ……..

Interviewer ……Recorder ……..

Language used …….

Time: Start …….. End ……..

Good morning/afternoon

You are welcome to this discussion. My name is …… and my colleague (recorder) is ……

We are grateful that you have accepted to participate in this study. We would like to have a discussion with you about the issue of utilization of family planning services among females 15 – 19 years at this health facility. The purpose of this discussion is to assess the factors that are associated with the utilization of family planning that are key to you. Feel free and give us your opinions. All information in this discussion will be kept confidential. We are audio recording and taking notes to be able to keep track of all that is being discussed, is that okay with you? (Interviewer asks for written consent) Thank you very much.

In order for us to discuss freely we could first get to know each other, one name only.

Questions

1. Have you accessed family planning services at this health facility?

If yes, When and how did you access family planning services?

If no, probe why and where they sought family planning services

2. If yes, which methods do you use?

3. If no, which methods are you aware about and which ones are you willing to use?

4. If no, are you willing to use any methods currently? If yes probe further why and how??

5. Do you think the health facility offers good family planning services?

6. PROBE: If yes, why do you think so?

7. PROBE: If no, why do you think so?

8. What individual factors do you think are associated with you being able to use family planning services at this health facility, also at any other health facility?

9. What health system factors do you think are associated with you being able to use family planning services at this health facility?

10. PROBE: What other factors do you think are associated with you being able to use family planning services at this health facility?

11. In your opinion as a female 15 – 19 years old in Kamuli, how do you think these issues can be solved? If no, why? If yes, give the solutions.

12. PROBE: Solutions to the patient factors?

13. PROBE: Solutions to the health system factors?

14. PROBE: Solutions to other factors?

Appendix 8: Consent for Focus group discussions with females15 – 19 years at Kamuli general hospital and Namwenda HC IV

The consent form will be administered by an interviewer on the research team.

Study title

Level of utilization, associated factors, barriers and facilitators of family planning among females15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district: a mixed methods approach

Principal Investigator

Doreen Tukamushaba, Uganda Christian University, Faculty of Public Health, Nursing and Midwifery, Mobile: +256 774442860 Email; doreendant@gmail.com

Background and rationale of the study

You are requested to participate in a research study about level of utilization, associated factors, barriers and facilitators of family planning among females15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district. Your participation in the study is voluntary. If you accept to participate, we shall use about 45 to 120 minutes of your time.

Purpose of the study

The study aims to investigate the utilization, associated factors, barriers and facilitators of family planning among females15 – 19 years at Kamuli general hospital and Namwenda HC IV in Kamuli district.

Study Procedure

You will take part in a focus group discussion. You will be in a group of 7 to 9 people (females 15 – 19 years old) interacting to give your views and opinions on the barriers and facilitators of family planning utilization. In order not to miss out on the information during the discussion, the proceedings of the group discussion will be audiotaped, and some brief notes well be taken.

Who will participate in the study?

The study will engage females, 15 – 19 years attending adolescent health clinics at Kamuli general hospital and Namwenda HC IV in Kamuli district.

Risk and Benefits

Taking your time could delay your other activities of the day. There are no direct benefits, but the results of this study will provide information that will help in improving the utilization of family planning services among females, 15 – 19 years attending adolescent health clinics at Kamuli general hospital and Namwenda HC IV.

Cost and compensation

There will be no payment required for you to participate in this study. You will be given 20,000/= for your transport.

Confidentiality

If you accept to participate in this study, the record tapes, written notes and your written record will be kept confidential. The information gathered will only be used for the purpose of this study. Your name will not appear on any study documents or publications. You will be known only by a study number. The research ethics committee Uganda Christian University and Uganda National Council for Science and Technology (UNCST) are entities which may have access to private information that identifies the research participants by name if required.

Alternatives to participation.

Participation in research is completely voluntary. You may refuse to participate in this study or withdraw your consent at any time for any reason and this will not affect you in any way. You have the right not to answer questions you may not be comfortable answering.

In case of problems or questions
If you have any questions, complaints or concerns regarding this study, you can contact the Principle investigator: Ms Doreen Tukamushaba, Mobile Telephone: +256 774442860

Dissemination of results:

All participants and stakeholders will get routine feedback on the findings and progress of the study and any new information that affects the study or data that has relevance to research participants (including incidental findings) will be made available to research participants and relevant stake holders.

Ethical approval:

This study has been approved by the research ethics committee Uganda Christian University.

Participants' statement of consent

I have read and or someone has read and explained to me the information in this consent form. I understand why the research is being done, what will be done, the risk, benefits, and my rights regarding the study. I understand that by signing this form, I do not waive any of my legal rights nor relieve the investigator of any liability,

but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate.

A copy of this consent form will be provided to me.

…… …… ……

Name of participant Signature or Thumb print Date

…….. …… ……..

Name of Witness Signature (if applicable) or Thumb print Date

…… …… …….

Name of study staff/interviewer Signature or Thumb print Date

Appendix 9: Focus group discussion guide

Date ……..

Moderator ……Recorder ……..

Language used …….

Time: Start …….. End ……..

Good morning/afternoon

You are welcome to this discussion. My name is …… and my colleague (recorder) is ……

We are grateful that you have accepted to participate in this study. We would like to have a discussion with you about the utilization of family planning services among females 15 – 19 years old. The purpose of this discussion is to assess the factors that are associated with the utilization of family planning services at this health facility that are key to you as females 15 – 19 years old. Everyone has their own opinion that may differ from the rest and we shall respect that. Feel free and give us your opinions. All information in this discussion will be kept confidential. We are audio recording and taking notes to be able to keep track of all that is being discussed, is that okay with you? (Moderator ask for verbal and written consent) Thank you very much.

In order for us to discuss freely we could first get to know each other, one name only.

Questions

1. Has any of you accessed family planning services at this health facility?

If yes, When and how did you access family planning services?

If no, probe why and where they sought family planning services?

2. If yes, which methods do you use?

3. If no, which methods are you aware about and which ones are you willing to use?

4. If no, are you willing to use any methods currently? If yes probe further why and how??

5. Do you think the health facility offers good family planning services?

6. PROBE: If yes, why do you think so?

7. PROBE: If no, why do you think so?

8. What factors do you think are associated with you being able to use family planning services at this health facility, also at any other health facility?

9. What health system factors do you think are associated with you being able to use family planning services at this health facility?

10. PROBE: What other factors do you think are associated with you being able to use family planning services at this health facility?

11. In your opinion as a female 15 – 19 years old in Kamuli, how do you think these issues can be solved? If no, why? If yes, give the solutions.

12. PROBE: Solutions to the patient factors?

13. PROBE: Solutions to the health system factors?

14. PROBE: Solutions to other factors?

Appendix 10: Budget

CATEGORIES	UNIT COST	TOTAL COST	JUSTIFICATION
IRB Fees	1,500,000	1,500,000	Ethical approval to conduct study
LOGISTICS			Required for data collection
Stationery (photocopying, paper, pens etc.)	Lump sum	600,000	
Audio Recorders	50,000 (4 items)	200,000	
RESEARCH TEAM			
Biostatistician	Lump Sum	2,500,000	Data Analysis
Research Assistants (3)	1,500,000 per month	4, 500,000	Data Collections for 3 months
STUDY PARTICIPANTS			Compensation for Participants time
Allowance for KIIs and IDIs (16 participants)	10, 000 each	160, 000	
Allowance for FGDs (16 participants)	10,000 each	160,000	
GRAND TOTAL		**9,620,000**	

TASK	DETAILS	TIMELINE	RESPONSIBLE

Appendix 11: Work plan/timeline

		JUNE-AUG 2023	SEP-NOV 2023	DEC23	JAN-MAY 2024	
Proposal Development	Drafting the proposal and Review by the Supervisors					PI and Supervisors
Seeking Approval	From REC, District, health facilities					PI
Recruitment & Training	Training and recruitment of Research Assistants					PI
Pilot Study	Pretesting the tools					PI & research assistants
Data Collection and Entry	Using questionnaire, IDIs, KIIs and FGDs					PI and research assistants
Data Analysis	Statistical analysis					Biostatistician
Report Writing	Final report development					PI and Review by Supervisors
Defense	Dissertation Defense					PI
Dissemination of Results	To the district, MoH, UCU, conferences, Journal					PI

Appendix 12: Research REC approval letter

24th January, 2024

Doreen Tukamushaba
Ministry of Health
0774442860
Email: doreendant@gmail.com

UG-REC-026 APPROVAL NOTICE

To: Doreen Tukamushaba, Principal Investigator

Re: UCU-REC Application titled: **Level of Utilization and Associated Factors on Family Planning Among females 15 - 19 years at Kamuli General Hospital and Namwenda HC IV, Kamuli District**

Application Number: UCUREC-2023-779

UGANDA CHRISTIAN UNIVERSITY
APPROVED
24 JAN 2025
RESEARCH ETHICS COMMITTEE

Version: 4.0

Type: [ ] **Initial Review**
[ ] Protocol Amendment
[ ] Letter of Amendment (LOA)
[ ] Continuing Review
[ ] Material Transfer Agreement
[ ] Other, Specify:

I am pleased to inform you that the **UG-REC-026;** UCUREC approved the above referenced application.

Approval of the research is for the period from **24th January, 2024, to 24th January, 2025**
This research is considered minimal risk category.
As Principal Investigator of the research, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and additions to the protocol or the consent form must be submitted to the REC for re-review and approval **prior** to the activation of the changes. The REC application number assigned to the research should be cited in any correspondence.
3. Reports of unanticipated problems involving risks to participants or other must be submitted to the REC. New information that becomes available which could change the risk: benefit ratio must be submitted promptly for REC review.

4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by subjects and/or witnesses should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits.
5. Regulations require review of an approved study not less than once per 12-month period. **Therefore, a continuing review application must be submitted to the REC eight weeks prior to the above expiration date of 24th January, 2025 in order to continue the study beyond the approved period.** Failure to submit a continuing review application in a timely fashion may result in suspension or termination of the study, at which point new participants may not be enrolled and currently enrolled participants must be taken off the study.
6. The REC application number assigned to the research should be cited in any correspondence with the REC of record.
7. Your research details have been shared with the Executive secretary of Uganda National Council for Science and Technology (UNCST) and you are **not** required to get clearance since you are a Masters Degree research. Refer to UNCST Research registration and clearance Policy and guidelines (July 2016) in Uganda section 6(e).

The following is the list of all documents approved in this application by **UG-REC _026:**

	Document Title	Language	Version	Version Date
1.	**Protocol**	**English**	1.0	2024-01-21
2.	Data collection tools	English	1.0	2024-01-21
3.	Informed Consent forms	English	1.0	2024-01-21

Signed and Stamped

.....

Prof. Peter Waiswa.
UCUREC Chairperson,
pwaiswa@musph.ac.ug

UGANDA CHRISTIAN UNIVERSITY
APPROVED
UNTIL
24 JAN 2025
RESEARCH ETHICS COMMITTEE

Appendix 12: Permission letter to collect Data

KAMULI DISTRICT LOCAL GOVERNMENT

FAX: .....043 -4132100
District Chairperson 043-4132100
Resident District Comm..... 043-4353128
Chief Administrative Officer ...043-4132113
URL: .....
http//www.kamuli.co.ug
OUR REF; 157/3
YOUR REF;.....

THE REPUBLIC OF UGANDA

OFFICE OF THE DISTRICT HEALTH OFFICER
P. O. BOX 88, KAMULI.

Date: 25th February, 2024.

TO: Medical Superintendent, **Kamuli General Hospital**
In-charge Namwenda HCIV

REQUEST FOR PERMISSION TO ALLOW DOREEN TUKAMUSHABA COLLECT DATA FOR RESEARCH

The above captioned subject matter refers to Ms. Doreen Tukamushaba who is a student undertaking Masters Of Public Health at Uganda Christian University Kampala Campus. She is doing her research on **"Level of utilization and associated factors on family planning among females 15 – 19 years at Kamuli General hospital and Namwendwa HCIV, kamuli district".** We have noted that her research proposal has been approved by the Research and Ethic Committee of Uganda Christian University **(UG-REC-026)**

The Purpose of this letter is twofold; Firstly, to permit her to conduct her study in Kamuli District and secondly to request you to accord her all the necessary assistance as she collects data in your respective Health faculties' while taking into consideration the ethical issues relating to conducting a research.

For DISTRICT HEALTH OFFICER
22 JUL 2024
KAMULI DISTRICT

Lyagoba Moses

Assistant District Health Officer

Cc: **The Resident District Commissioner, Kamuli District**
The District Chairperson, Kamuli District