UTILIZATION OF MODERN CONTRACEPTIVE METHODS AMONG FEMALE REFUGEE ADOLESCENTS AT KYANGWALI REFUGEE SETTLEMENT, KIKUUBE DISTRICT, SOUTH-WESTERN UGANDA

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DECLARATION

This Dissertation is my original work and has not been presented for a degree in a University or any other academic institution.

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DECLARATION BY THE SUPERVISOR

I/We confirm that the work in this Dissertation was done by the candidate under our supervision

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ABSTRACT

Despite global efforts, inadequate contraceptive provision remains a significant issue, particularly among vulnerable populations such as teenagers, travelers, those residing in slums, and refugees (WHO, 2020). In Uganda, 30.4% of adolescents have unmet family planning needs (UDHS, 2016). Refugees and migrants face various challenges in accessing family planning services, such as language barriers, low education levels, lack of information, cultural and religious taboos, limited income, and personal experiences with contraceptive side effects.

This study aims to assess the utilization of modern contraceptives among female refugee adolescents in Kyangwali refugee settlement, identify factors influencing their contraceptive use, determine knowledge and accessibility of contraceptive methods, and determine the proportion of adolescents utilizing these methods.

A cross-sectional study design was employed, utilizing structured questionnaires, focus group discussions (FGDs), and key informant interviews (KIIs) for data collection. Data were analyzed using SPSS version 23 and thematic content analysis. Univariate and bivariate methods were utilized, including frequency generation at the univariate level, chi-square tests, and binary logistic regression to test variable associations.

The study interviewed 399 sexually active female refugee adolescents (aged 15–19 years). The prevalence of modern contraceptive use (all methods) was 15.3% (95% CI: 11.8–19.0). Condoms (54.1%) and injectables (31.1%) were the most preferred methods, with lack of family planning knowledge cited as the primary reason for non-use. Significant associations were found between socio-demographic factors (e.g., age, marital status, education level, and school attendance) and modern contraceptive use.

The study reveals a low prevalence of modern contraceptive utilization (15.4%), with injectables being the most known method (35.0%). Barriers to uptake include: side effects, lack of knowledge, myths, misconceptions, inadequate privacy and functionality of adolescent-friendly healthcare facilities. These findings directly relate to the study objectives by highlighting the critical need to assess the factors influencing contraceptive use, examine knowledge, accessibility, and determine the proportion of adolescents utilizing these methods.

Urgent measures are needed to improve adolescents' access to high-quality sexual and reproductive healthcare in refugee settings, thereby addressing the identified barriers and enhancing contraceptive uptake among female refugee adolescents in Kyangwali.

By focusing on these objectives, the research seeks to highlight the barriers to contraceptive use in this demographic and inform targeted interventions to improve reproductive health outcomes.

ABBREVIATION AND ACRONYMS

AIDS:	Acquired Immunodeficiency Syndrome
DRC:	Democratic Republic of Congo
FGD:	Focus group discussion
KII:	Key Informant Interview
HC:	Health Centre
HIV:	Human immunodeficiency virus
HMIS:	Health management information system
SDG:	Sustainable Development Goal
SRH:	Sexual Reproductive Health
STI:	Sexually transmitted infection
UBOS:	Uganda Bureau of Statistics
UDHS:	Uganda Demographic and Health Survey
UNHCR:	United Nations High Commissioner for Refugees
UNICEF:	United Nations Children's Fund
WFP:	World Food Programme
WHO:	World Health Organization

DEFINITION OF KEY TERMS

Refugee

A refugee is a person who has been compelled to leave their country due to persecution, war, or other hardships.

Adolescent

According to the WHO, an adolescent is a person between the ages of 10 to 19 years.

Contraceptive

A contraceptive is a device or medication that prevents pregnancy.

Family planning

This is the process of limiting one's births and spacing between them, especially through the use of contraception or voluntary sterilization.

Family planning services

These are services provided to women of childbearing age to delay or permanently prevent conception.

Sexual Reproductive Health

This is a state of complete physical, mental, and social well-being in all matters relating to the reproductive system.

CHAPTER ONE

INTRODUCTION

1.1 Background

Modern contraceptive methods are medications, devices, or medical procedures that hinder the sperm cell and egg cell from meeting and resulting in pregnancy. Examples of modern contraceptive methods include; injectable, pills, implant, tubal ligation, intra uterine devices, condoms. The study focused on the mid-adolescents (15-17) and late adolescents (18-19).

The global refugee population is growing rapidly and has reached 25.9 million (UNHCR, 2019). Notably, more than 1.3 million people have fled conflict-ridden areas such as South Sudan and the Democratic Republic of Congo. Located in East Africa, Uganda is the third largest host country for refugees in the world and the largest in Africa, with a substantial refugee population exceeding 1.4 million individuals (UNHCR, 2022). This diverse population consists of individuals forcibly displaced from their home countries due to conflict, persecution or other life-threatening circumstances.

In this global context, it is crucial to recognize that there is still significant inadequate contraception, with the largest populations being teenagers, travelers, people living in slums and refugees (WHO, 2020). This demographic has a substantial unmet need for contraception, as evidenced by the fact that 13 million adolescent women worldwide who are sexually active or in a relationship report a desire to delay childbearing but do not use any contraception (UNFPA, 2016). Adolescent pregnancy is more common among refugees or other displaced individuals compared to non-displaced people, with rates of 30% and 19%, respectively (WHO, 2020). Each year, low-income countries report an estimated 10 million unplanned pregnancies among girls aged 15 to 17 (WHO, 2020). Due to their increased risk of forced marriage, sexual and/or gender-based abuse, and other circumstances leading to unexpected pregnancy and unsafe abortion, the number of unwanted pregnancies among refugee adolescents is believed to be significantly higher (Nara *et al.,* 2019).

In Uganda, teenage pregnancy is driven by multiple factors, including poverty, limited access to sexual and reproductive health services, cultural norms that encourage early marriage, and gender inequality (UBOS, 2018). The 2016 Uganda Demographic and Health Survey (UDHS) reported that 25% of adolescent girls aged 15 to 19 had begun childbearing, which is

significantly higher than the global average (UBOS & ICF, 2018). Refugee adolescents are at an even higher risk due to their displacement, reduced access to healthcare, and increased vulnerability to sexual violence (UNHCR, 2017). Studies have shown that the contraceptive prevalence rate is particularly low among refugee and rural adolescents in Uganda, contributing to high rates of unplanned pregnancies (Ninsiima *et al.*, 2020; UNFPA, 2018).

Uganda legalized the use of contraception by sexually active adolescents in 2006 to reduce the rate of teenage pregnancy and the problems associated with it (MOH, 2012). However, due to low contraceptive use, many adolescents continue to become pregnant (UNHCR, 2011). For instance, some adolescents start engaging in sex and experimenting with substances such as alcohol, drugs (Yakubu *et al.*, 2018).

Uganda has the youngest population with a median age of 15.2 and an adolescent population of 24%. The Ugandan government is committed to increasing the use of modern contraception to 50% and reducing unmet need to 10% to ensure that every woman in Uganda can choose when and how much to have (MOH, 2020). There are 11 refugee camps in Uganda that host these refugees. These include Achol-Pii, Bidi Bidi, Kampala, Kiryandogo, Nakivale, Kyaka II, Kyangwali, Imvepi, Pagirinya, Rhino, Rwamwanaja Refugee Settlement. Of these, Kyangwali Camp was chosen as the study area, the refugees are mainly from Kenya, South Sudan, Congo, Rwanda and Burundi. Kyangwali refugee settlement hosts a total of 135,346 refugees and asylum seekers, with 82% being the most vulnerable women and children (UNHCR Uganda fact sheet, October 2021). More than 80% of the world's refugees are women and children. Adolescent refugee girls are particularly vulnerable due to the increased risk of early or forced marriage, sexual exploitation and abuse (UNHCR, 2017). As of March 2022, the population of Kyangwali refugee settlement reached 137,847 refugees in 44,584 households. Of these, 81% are women and children and 19% are young people aged 15-24 (UNHCR, 2022).

Family planning, including the use of contraception, is essential to achieving Sustainable Development Goal (SDG) 3 – good health and mental well-being. SDG 3 aims to ensure access to reproductive health services for all and reduce maternal mortality by 75% (Ganchimeg et al., 2014). Unfortunately, maternal and child health morbidity and mortality among adolescents have increased worldwide. This trend is attributed to low contraceptive use among adolescents,

resulting in high levels of fertility and unintended pregnancies, which remain a significant public health problem.

1.2 Statement of the problem

Family planning is a crucial intervention that empowers women and girls by providing them with the information, resources, and methods to decide when and whether to have children. However, it remains underfunded and often overlooked in humanitarian responses. Refugees and migrants face various challenges in accessing family planning services, such as language barriers, low education levels, lack of information, cultural and religious taboos, limited income, and personal experiences with contraceptive side effects (Achola *et al.*, 2019). In Nakivale refugee settlement, refugee adolescents are reported to engage in early sexual intercourse in exchange for money. (Okumu *et al.*, 2019). In Kyangwali Refugee Settlement, the contraceptive prevalence rate among women of reproductive age was 29.3% in 2021, yet teenage pregnancies increased by 22.5% from the previous year. In Uganda, 30.4% of adolescents have unmet family planning needs (UDHS, 2016). Despite family planning's recognized benefits for maternal health, empowerment, and economic growth, significant barriers prevent successful programs from being implemented. Without intervention, adolescent refugees will continue to face unwanted pregnancies, leading to serious health risks like unsafe abortions, obstetric complications, and infections. Therefore, it is vital to assess the introduction of modern contraceptives and the barriers to their use among adolescent women in Kyangwali Refugee Settlement.

1.3 Objectives of the study

1.3.1 General objective

To assess the utilization of modern contraceptives and the influencing socio-cultural, economic, and accessibility-related barriers among female refugee adolescents at Kyangwali Refugee Settlement.

1.3.2 Specific Objectives

1. To identify factors and barriers for modern contraceptive use among female adolescents.

2. To determine the knowledge and accessibility of modern contraceptives among female refugee adolescents.

3. To determine the proportion of adolescents using modern contraceptives at Kyangwali refugee settlement.

1.4 Research hypothesis

HO1: Socio-demographic characteristics are not associated with modern contraceptive use among female refugee adolescents in Kyangwali Refugee Settlement.

HO2: There is no relationship between accessibility and modern contraceptive use among female refugee adolescents in Kyangwali Refugee Settlement.

HO3: The proportion of female refugee adolescents using modern contraceptives at Kyangwali Refugee Settlement is lower than those that are not using.

1.5 Significance of the study

The aim of this study was to offer support for the reorganization of adolescent family planning programs. This was to strengthen the government's efforts to educate all sexually active adolescent refugees on the use of modern contraception through a multi-organisational partnership.

With the number of pregnancies reduced, adolescents can focus on school and become better and more useful citizens serving the country tomorrow.

Empowering reproductive health decision-making: The study is of great importance in empowering women to make informed decisions about their reproductive health. By identifying the factors that influence the use of modern contraception, it empowers women to take control of their family planning decisions and overall well-being. This empowerment is essential to ensure that women have the knowledge and ability to make decisions that are consistent with their reproductive health needs and preferences. Ultimately, by empowering women in this way, the study contributes to promoting women's reproductive health and autonomy, leading to improved health outcomes and overall well-being.

Impact on gender equality: A key highlight is the study's contribution to gender equality. By promoting access to modern contraception, the study would promote equal opportunities for women in education, careers and personal aspirations, ultimately leading to more just societies.

Informed policy and program development: The results of the study would provide a solid basis for policy making and program development. Policymakers can create evidence-based policies to improve access to contraceptives, while public health programs can tailor interventions that effectively address barriers and meet the unique needs of diverse populations.

Prevention of unwanted pregnancies: The findings of the study had a tangible impact on the health of mothers and children. By identifying barriers and facilitating informed choice, the study would help reduce unintended pregnancies, reduce maternal mortality, and improve the overall health of women and families.

Global contribution to health and research: Beyond its immediate scope, the study has broader implications for global health initiatives. Its importance extends to contributing empirical evidence to the academic field, strengthening research efforts, and stimulating discussions on reproductive health.

1.6 Study Justification

In 2020, Kyangwali refugee settlement saw 3% of teenage girls under the age of 18 years becoming pregnant, increasing to 4% in 2021. These adolescents survive on World Food Program (WFP) refugee monthly rates (18,000) per individual per month, and others engage in commercial sex to earn a living. This study therefore identified challenges and opportunities in the adoption of modern contraceptives among this adolescent group.

A similar study by Windle International Uganda showed that despite awareness and availability of educational opportunities, dropout rates were high in both Palabek and Kyangwali refugee settlements. The main causes of teenage girls leaving include pregnancy, lack of access to sanitary hygiene materials for menstruation, lack of basic needs to support their education, cultural restrictions, lifestyle where girls are introduced to sex at an early age, family. Poverty that leads to the commercialization of girls as soon as they reach the age of 12 exposes teenagers to several health complications (Windle, 2022).

The findings of this study focused on strengthening future developments in the provision of health services to adolescent refugees, and also directed the Ministry of Health and partner organizations to expand family planning services across the country in refugee settlements.

1.7 Conceptual framework

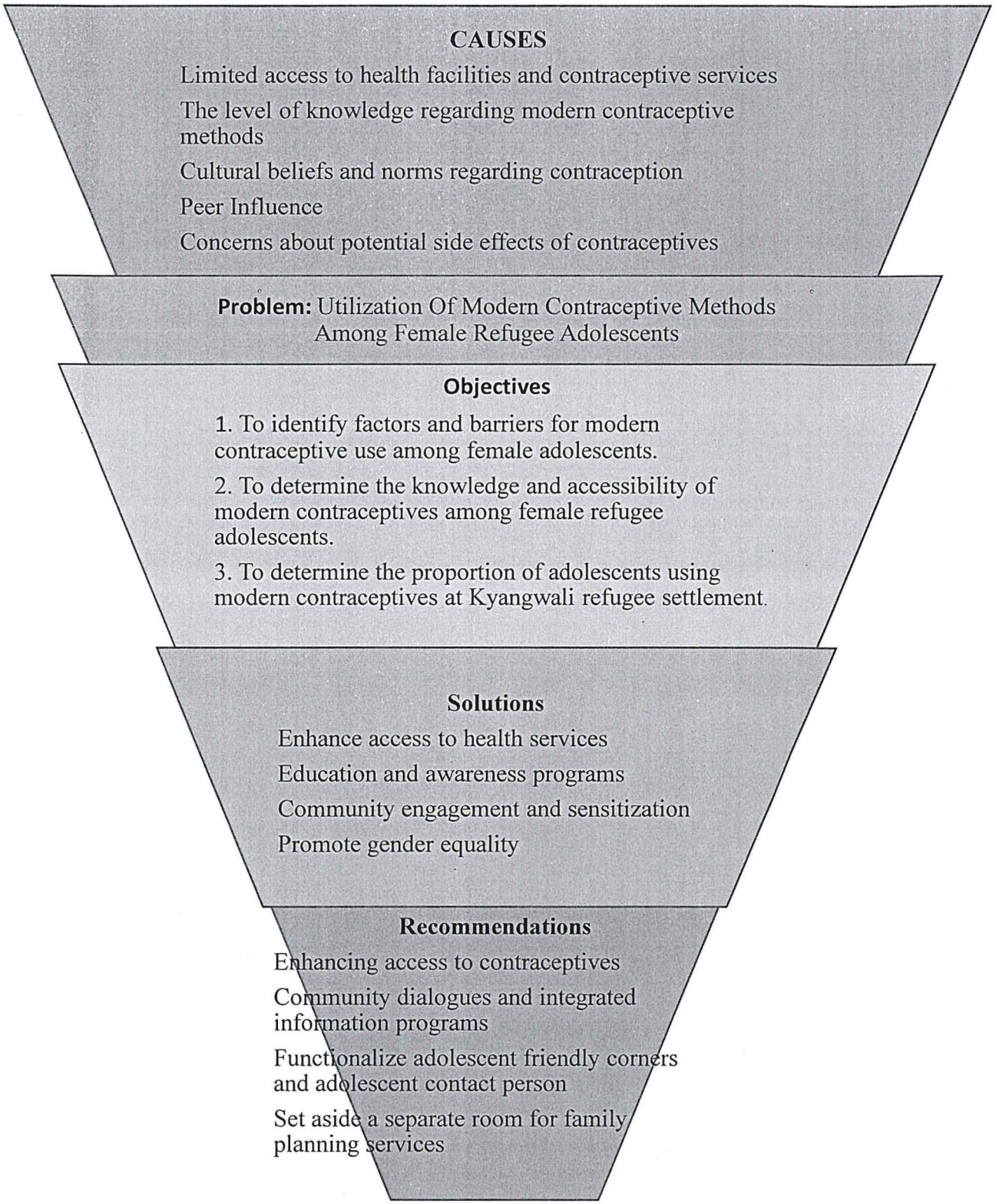


Figure 1.1: *A conceptual framework showing the relationship between the dependent and independent variables.*

The conceptual framework demonstrates the intricate interplay between contextual factors, knowledge and communication, overcoming barriers, and their collective influence on the adoption of modern contraceptives among female refugee adolescents. Socio-demographics set the stage, while informed decision-making through awareness, communication, and attitude interacts with practical challenges to determine contraceptive use. This synthesis offers a comprehensive understanding, guiding interventions for effective reproductive health outcomes (Achola *et al.,* 2019).

CHAPTER TWO

LITERATURE REVIEW

2.1 Contraceptive utilization and their status

The rising rates of unintended pregnancies among adolescents, particularly in refugee settings, underscore the urgent need to explore factors influencing contraceptive use in this vulnerable group. Globally, adolescents face challenges such as limited access to healthcare and cultural stigma around contraception. Nationally, Uganda experiences low contraceptive uptake among female refugees due to systemic barriers. Locally, studies in refugee camps like Kyangwali reveal specific obstacles, including misinformation and accessibility issues.

2.2 Factors that influence utilization and use of modern contraceptives

The field of reproductive health is a tapestry of complex factors influencing the acceptance and use of modern contraceptives among young women, with profound implications that resonate across health, education and social dimensions. According to a comprehensive review by WHO (2020), the consequences of an unplanned pregnancy extend far beyond the immediate, including social rejection, stigmatization and discrimination. This global perspective highlights the urgent need for tailored interventions that address the multifaceted nature of contraceptive behavior.

In Malawi, qualitative research by Dombola (2021) delves into the transformative potential of debunking myths and harmonizing reproductive health policies to promote adolescent contraceptive use. Based on interviews and analysis, the study highlights the importance of policy coherence for empowering young women to make informed reproductive decisions.

The plight of Somali girls in a refugee camp in Kobe sheds light on the barriers young women face in accessing reproductive health services. Kgesten's (2017) qualitative research reveals problems in access to contraceptive methods and menstrual hygiene products. The study, conducted through interviews and analysis, highlights the impact of limited access to reproductive health services due to the distance to health facilities. Less than one in five (19.2%) Somali girls in the Kobe refugee camp reported that many adolescent girls did not have access to contraceptive methods such as condoms, nor did they have access to cloth or pads to use during menstruation. Kgesten (2017). Distance to health facilities is a major factor contributing to limited access to SRH services.

Similar complexities emerge from Ghana. Quantitative research by Enuameh (2015) underscores the importance of accessibility in shaping contraceptive behavior and highlights that improved access could act as a deterrent against unwanted pregnancies. Ganle et al. (2019) extended this understanding through a quantitative study among migrants in Ghana reporting a low prevalence of contraceptive use, suggesting an urgent need to increase awareness and improve access. According to a study from Ghana by Enuameh (2015), the youngest women with a history of pregnancy would use contraception if it was readily available to prevent these pregnancies. Furthermore, a survey of migrants in Ghana found that 7.3% of them were currently using contraception (Ganle *et al.*, 2019)

Further highlighting the Ghanaian context, a quantitative cross-sectional study by Nyarko (2015) reveals a complex interplay of demographic factors that influence contraceptive use among adolescent girls. Factors such as education, employment, awareness of ovulatory cycles, attendance at health facilities and marital status combine to shape these young women's reproductive health decisions. Adolescent age, education, job position, awareness of the ovulatory cycle, attendance at a health facility, and marital status all had significant effects on contraceptive use by adolescent women in Ghana. According to Nyarko, adolescent girls with secondary or higher education had the highest prevalence of contraception (19.9%), while girls without formal education had the lowest prevalence (3.5%).

Regarding the context of Uganda's Kyangwali refugee settlement, a quantitative cross-sectional study by Bakesiima *et al.* (2020) reveals a stark reality: teenage refugee girls face limited use of modern contraception, making them vulnerable to unwanted pregnancies. The study uses a probability sampling technique to analyze the dynamics of contraceptive use and finds that the dynamics of partner age play a role in the decision-making of these vulnerable adolescents. Few teenage refugees reported wanting to become pregnant, and modern contraceptive use among them was very low, leaving them vulnerable to unwanted pregnancies. Use of modern contraception decreased by 7% for each unit increase in partner age. Therefore, adolescents in older relationships used modern contraception less often than adolescents dating people of the same age. (Bakesiima *et al.*, 2020).

Together, these studies paint a dynamic portrait where education, socioeconomic status, cultural norms, and access to reproductive health services converge to shape contraceptive behavior. This

complex interplay plays out across global, regional, national and local domains, leading researchers and policymakers to design comprehensive interventions to empower adolescent women to navigate contraceptive choices with knowledge and agency.

2.3 Knowledge and accessibility of modern contraceptive use

The landscape of modern contraceptive use among adolescent refugees is profoundly influenced by dimensions of knowledge and access. These factors, which vary across global, regional, national and local contexts, play a key role in shaping contraceptive behavior and revealing disparities that require targeted interventions.

A study at the University of Iowa sheds light on the knowledge gaps surrounding contraception among college students. The mixed-methodology approach revealed that while the majority of participants were familiar with oral contraceptives, only a small fraction (8%) was aware of implants. This highlights the importance of improving information dissemination about a wider range of contraceptive options (Smith *et al.*, 2019). However, focusing on college students alone limits the generalizability of these findings, indicating a need for further research into knowledge gaps among different segments of the adolescent population, including refugees and out-of-school youths (Jones & Maxwell, 2020).

Zooming into the local context, Mwaka *et al.* (2019) highlighted the effectiveness of community education programs in improving knowledge and access. Although specific details of the study design, sample size, and selection method were not provided, the focus on community-level interventions demonstrated the potential for local efforts to bridge information gaps and improve accessibility. This localized approach emphasized the importance of tailoring interventions to the unique needs of the refugee population.

The journey begins by recognizing that adolescent sexuality and reproductive practices are rooted in moral debates across different regions. This complexity is illustrated in a study by Gyan *et al.* (2013) within the Ghanaian fishing community. The study used qualitative research using interviews to explore adolescent sexuality and reproductive practices and found that 86% of the 50 adolescents interviewed had completed their education. The links between education, sexual behavior and access to reproductive health services are emerging as crucial themes that encourage further investigation into factors contributing to early school leaving and their consequences.

The complex findings from these studies underscore the complex interplay between knowledge and access in shaping modern contraceptive use among refugee adolescents. Diverse methodologies and geographic contexts reveal common threads of awareness and accessibility barriers. When researchers and policymakers delve into these complexities, the need for multifaceted interventions becomes apparent. Collaboration of global, regional, national and local efforts is necessary to ensure that these young women receive accurate information and accessible reproductive health services.

The complexities of modern contraceptive use among refugee adolescents stem from intersecting factors such as cultural norms, education, and access to information and healthcare services. Studies that utilize diverse methodologies, including mixed-methods, qualitative, and quantitative approaches, provide depth to understanding these issues (Biddlecom *et al.*, 2018). Addressing these diverse influences necessitates holistic interventions tailored to the unique contexts of different adolescent groups. By considering these multi-layered factors, researchers and policymakers can design interventions that reflect the realities of adolescent reproductive health in vulnerable populations (UNFPA, 2017).

Tanabe (2018) conducted a facility assessment and qualitative analysis across sites and revealed differences in availability and availability of different contraceptive options, particularly long-acting and permanent methods. Although specific sample size and location were not provided, this methodology allowed for an in-depth exploration of device-based barriers. Access issues emerged, including remote service locations, transportation costs, misinformation, and lack of understanding of contraceptive alternatives.

Rahman *et al.* (2019) adopted a mixed-methods approach to examine knowledge and access in different geographic regions. Despite the lack of specified sample sizes or sampling methods, this design enabled a comprehensive understanding of knowledge gaps and accessibility issues in different contexts. The results of the study pointed to a global pattern of insufficient knowledge and limited access to modern contraceptive methods. This again highlighted the importance of addressing both information gaps and accessibility barriers.

Adanikin *et al.* (2018) ventured into sub-Saharan Africa with a facility-based study that included several countries. Although the specific sample size and sampling methods were not detailed, this cross-country survey revealed regional differences in contraceptive knowledge and

availability. Socio-economic factors, education and health infrastructure have been identified as contributors to the disparity. This design provided insight into the larger regional dynamics that influence contraceptive use.

In the Ugandan refugee settlement of Kyangwali, Bakesiima *et al.* (2020) delved into the importance of knowledge and accessibility. Using a quantitative cross-sectional design, the study revealed that almost all adolescent refugee women (99.6%) were aware of the medical center as a primary source of current contraception. However, a substantial proportion (70.2%) were not aware of contraceptive sources within a 10-minute walk from their residence. Although the study did not specify the sample size, a probability sampling technique using stratified random sampling was used to ensure representativeness. These findings underscore the critical importance of increasing contraceptive availability and knowledge, both with spatial and informational barriers.

Nationally, the Uganda Health and Demographic Survey (UHDS), conducted by the Uganda Bureau of Statistics (2020) through the Demographic and Health Survey, sheds light on urban-rural disparities. A large-scale survey approach using probability sampling techniques offered insight into wider trends in knowledge and attitude. Differences in knowledge and availability have been shown to persist based on education level and geographic regions.

In conclusion, the literature underscores that the factors influencing modern contraceptive use among refugee adolescents form a complex ecosystem. Addressing these challenges requires interventions that empower young women to make informed decisions about their reproductive health. Comprehensive approaches, informed by diverse research methods, can catalyze positive change and improve the reproductive well-being of refugee adolescents (Guttmacher Institute, 2021).

2.4 Proportion of Adolescents Using Modern Contraceptives at Kyangwali Refugee Settlement

Understanding the proportion of adolescents using modern contraception in Kyangwali Refugee Settlement is essential for improving reproductive health practices. Globally, studies by the Guttmacher Institute have tracked contraceptive prevalence trends, providing a broader perspective on reproductive health behaviors and patterns (Guttmacher Institute, 2021). Regionally, research by the African Population and Health Research Center has explored

contraceptive use in African countries, highlighting the impact of cultural norms, socioeconomic conditions, and healthcare accessibility on contraceptive uptake (APHRC, 2019).

Nationally, the Uganda Demographic and Health Survey (UDHS) consistently reports contraceptive prevalence rates across various demographic groups, contributing to evidence-based policymaking and program development (Uganda Bureau of Statistics, 2020). At the local level, studies conducted by the Ministry of Health and organizations such as Reproductive Health Uganda provide specific insights into the unique challenges faced by refugee populations. These localized studies are crucial for understanding the factors affecting contraceptive use in settings like Kyangwali Refugee Settlement (Ministry of Health Uganda, 2022).

Sserwanja's (2021) study in Uganda reveals a diverse landscape of contraceptive use among adolescent females. Using a qualitative research methodology, the study reveals a prevalence rate of 9.4% for the use of modern contraception. This raises the need for interventions that respond to a spectrum of demographic variables. Research highlights that married teens (60%) show higher rates of modern contraceptive use compared to their unmarried counterparts. Additionally, the study shows significant differences based on wealth index, location and even age at first birth, women were 91% more likely to use a modern form of contraception. The implications of these variations prompt calls for interventions that are sensitive to the nuanced realities of diverse adolescent populations.

CHAPTER THREE

MATERIALS AND METHODS

3.1 Study Area

The study was conducted in Kyangwali Refugee Settlement, located in Southwestern Uganda in Kikuube District (formerly Hoima District), approximately 287.7 km from Kampala at an altitude of 1,143 meters (3,750 ft), longitude 30.72524° and latitude 1.13727° (UNHCR, 2021). The camp is located near the town of Hoima and not far from the border with the Democratic Republic of Congo. As of 2021, the Kyangwali refugee settlement had a total population of approximately 136,636, of which 134,106 were refugees. Of these, 19% are young people aged 15-24. Majority are females with 53% of the population. (UNHCR Uganda Fact Sheet, 2022).

There are nine health centers in the settlement including Kyangwali HC IV, Kasonga HC III, Maratatu HC III, Rwenyewawa HC III, Ngurwe HC III, Malembo HC III, Mombasa HC II, Kagoma HC II and Kavule HC II. These centers provide family planning services such as male and female condoms, oral contraceptive pills, intrauterine devices (IUDs), injections, implants, and emergency contraception.

Inside the Kyangwali refugee camp, life is like any other village without the tents erected by the United Nations High Commissioner for Refugees. The camp is a scattered group of settlements on a large plot of land owned by the Government of Uganda. Almost every household has half an acre of land that they can use to grow food, including vegetables, beans, yams, corn, and sugarcane. Many refugees also keep chickens, goats, sheep or cattle (UNHCR, 2021).

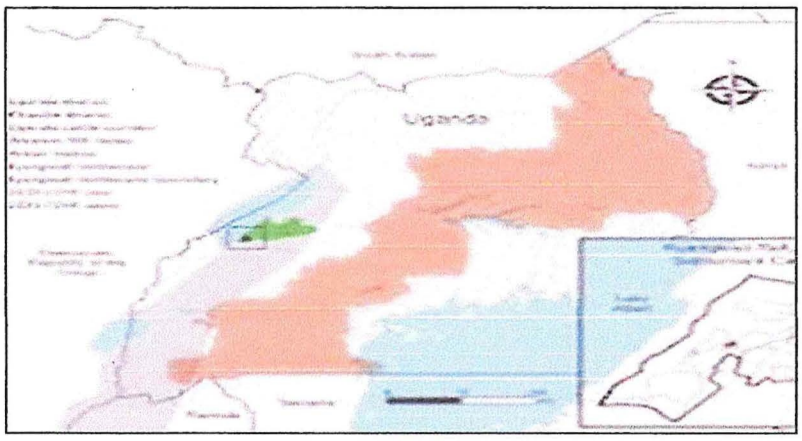


Figure 3.1 *A map of Uganda showing Kyangwali refugee settlement.*

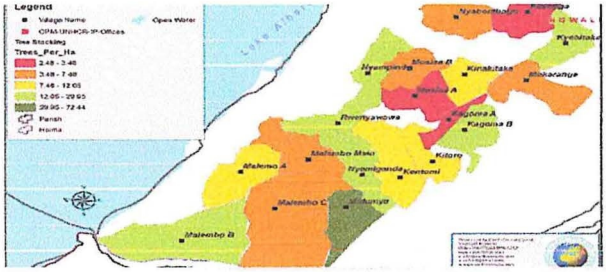


Figure 3.2 *A map showing Kyangwali refugee settlement.*

3.2 Study Design

A cross-sectional study design was employed for this research. This design was chosen because it allowed for the collection of sufficient information to meet the study objectives.

3.3 Study Population

The study targeted refugee adolescents between 15-19 years and service providers at Kyangwali refugee settlement. The study participants were primarily sexually active female refugee adolescents who were identified through interviews and collaboration with the service providers. No matter their level of schooling or employment, a mix of married and unmarried refugee adolescents were considered in the study.

3.4 Sample Size

A sample size of 399 was determined using a random sampling technique and Slovin's formula Slovin, E. (1960)

$$n = N/(1+Ne^2)$$

$$n = 125039/(1+125039 \times 0.05^{2)}$$

n= 399

Where:

n = number of samples

N = Total population

e = error tolerance

3.5 Sampling Technique

3.5.1 Random Sampling

The study utilized a random sampling technique to ensure each female refugee adolescent aged 15-19 within the Kyangwali Refugee Settlement had an equal chance of selection, minimizing

bias and allowing for generalization of findings. However, the sexually active were selected using snowball sampling. I obtained a list of eligible participants from health records, assigned unique identification numbers, then employed a random number to select 399 individuals from the total population of 136,636. Data collected included demographic information, contraceptive use, knowledge and accessibility of contraceptive services, and cultural and social influences on contraceptive attitudes. This comprehensive data collection facilitated an assessment of modern contraceptive utilization among the study population.

3.5.2 Snowball sampling

A snowball sampling technique was adopted, in which a known adolescent immigrant recommended the research assistant to one of her peers with whom she shared experiences related to sexual and reproductive health. The Snowball method was employed because adolescents who are sexually active are a sensitive population that was therefore hidden.

3.6 Variables

In the study, the dependent variable was modern contraceptive use among refugee adolescents while the independent variables included the degree of knowledge, accessibility, and socio-demographic variables. These independent variables were assessed to determine their influence on the dependent variable, providing insights into the factors that affect modern contraceptive use among this population.

3.7 Data collection methods

Data was collected through structured interviews using interviewer-administered questionnaires. The questionnaire included both open-ended and closed-ended questions covering socio-demographic data, knowledge and preferences regarding modern contraception, availability and affordability of family planning services. This questionnaire was adapted from Tlay *et al.* (2018) and adapted to suit the current research context.

Service providers were involved during the interview using key informant interviews (KIIs). Focus group discussions (FGDs) were also conducted with adolescent refugees to determine factors influencing the use of modern contraceptives. The interview and FGD guide were taken from Mutea *et al.* (2020) and modified to be consistent with the objectives of this study.

3.8 Data Analysis

Social Sciences, version 21.0 (SPSS) was used to analyze the quantitative data. Descriptive and inferential statistics were used, with socio-demographic characteristics presented in percentages, frequencies and standard deviations, displayed through tables and graphs.

Chi-square ($\chi 2$) statistical test performed with 95% confidence interval was used to assess the significance of the relationship between socio-demographic characteristics, knowledge and availability with the use of modern contraception among adolescent refugee girls in Kyangwali refugee settlement. This test was particularly suitable for evaluating the investigated hypotheses.

Logistic regression analysis was used to identify significant predictors of modern contraceptive use among refugee adolescent girls in Kyangwali refugee settlement. The incidence of modern contraceptive use among refugee adolescents was the dependent variable, while sociodemographic characteristics, knowledge, and use of availability served as independent variables. The results were presented in tables and graphs to provide a comprehensive understanding of the significance of the relationship.

A logistic regression model facilitated the determination of odds ratios and 95% confidence intervals for each independent variable while controlling for confounding variables. The level of significance for statistical tests was set at $p<0.05$.

The model included sociodemographic characteristics, knowledge and use of availability as independent variables, with modern contraceptive use among refugee adolescents as the dependent variable. The logistic regression equation used for the analysis was specified accordingly.

$$\textbf{Logit (P)} = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon$$

Where:

- P is the probability of using modern contraception among adolescent refugees.
- $\beta 0$ is the intercept.
- $\beta 1$, $\beta 2$ and $\beta 3$ are the regression coefficients for the independent variables X1 (use of accessibility), X2 (sociodemographic characteristics) and X3 (knowledge).
- ε is the error term.

A logistic regression model was used to estimate the odds ratio (OR) and 95% confidence interval (CI) of each independent variable. An OR greater than 1 indicates a positive association with modern contraceptive use among adolescent refugees, while an OR less than 1 indicates a negative association.

Potential confounding variables, including sociodemographic characteristics, knowledge, and accessibility use, were controlled for in the logistic regression model. The level of significance for statistical tests was set at $p<0.05$.

Through a logistic regression model, valuable insights into the factors contributing to the use of modern contraception among refugee adolescent girls in Kyangwali refugee settlement were obtained. This analysis allowed a comprehensive understanding of the relationship between various factors and the use of modern contraception in this population.

3.9 Quality control measures

Data were collected by a group of researchers after they underwent orientation and training on the purpose of the study and variables, questionnaire components, interview guide, focus group discussions, and data quality control. Pre-testing of the research instruments was conducted in Kyangwali refugee camp. This process provided valuable insights into the duration of administration of individual instruments during the interviews.

3.10 Ethical Considerations

A letter of introduction was obtained from Kyambogo University address to the Office of the Prime Minister (OPM) obtained administrative permission to conduct research in the refugee camp. The Institutional Review Board (IRB) offered project-specific ethics approval (TASO-2022-164).

After a thorough description of the purpose of the study and its voluntary nature, study participants and service providers, including nurses, midwives, clinical officers and health center consultants, were asked to provide informed consent. They were assured of their right to withdraw at any time and could refuse to answer any survey questions. It was made clear that refusal to participate would not have any harmful effects on them or their relatives.

To maintain confidentiality, the participants' names were not written on any questionnaire or document. For participants under the age of 18, consent was obtained from their parents or

guardians. Consent was granted only after basic eligibility was confirmed. Privacy was ensured by selecting locations with maximum privacy, and all study documentation, including informed consent forms, was securely stored in a locked filing cabinet. Computer data entry and networking programs recognized only coded identification numbers, and only members of the research team had access to password-protected databases.

Informed consent forms and participant information sheets were translated into Kyangwali mother tongue or languages as needed. Participants were given a detailed explanation of the study procedures and the implications of their participation, tailored to their level of understanding. They were given ample opportunity to review the information presented and ask any questions before deciding whether to volunteer for the study.

CHAPTER FOUR

RESULTS

4.1 Bio data

A total of 399 interview questionnaires were administered to sexually active female refugee adolescents aged between 15 – 19 years with a response rate of 100%.

4.2 Factors and Barriers for Modern Contraceptive Use

A total of 399 sexually active female refugee adolescents participated in this study. The mean age of the respondents was 17years, age range was 15 – 19, and 58.6% of the respondents were between ages 15 – 17 while 42.4% between ages 18 – 19. Majority of the respondents were unmarried (78.9%) while 21.1% of the respondents were married. Regarding educational status, less than half of the respondents were school going (49.6%) with the biggest proportion having completed primary education (88 %), however only 4% had completed secondary education and 8% had reached tertiary institutions. Barriers to contraceptive use identified in the study included lack of awareness about contraceptive methods, cultural and social influences discouraging contraceptive use, limited access to family planning services, and negative personal experiences with contraceptive methods. These variables were further analyzed to identify their association with modern contraceptive use.

Table 4.1 Factors and barriers for modern contraceptive use at univariate analysis level

VARIABLE	FREQUENCY	PERCENT
Age group of the respondents		
15-17	234	58.6
18-19	165	41.4
Marital status		
Never Married	315	78.9
Married	84	21.1
Education level		
Primary	351	88
Secondary	16	4
Tertiary	32	8
Are you in School		
YES	198	49.6
No	201	50.4
Awareness of Ovulation Cycle		
Yes	183	45.9%
No	216	54.1%

4.2.1 Associations between socio-demographic characteristics and use of modern contraceptives

The association between socio-demographic characteristics and modern contraceptive use was examined using the Chi-square test. A P-value of ≤ 0.05 was considered statistically significant, indicating a meaningful relationship between the variables. This statistical analysis allowed for the assessment of whether there were significant differences in contraceptive use across different socio-demographic groups such as age, marital status, educational level, etc. The findings of this analysis provided valuable insights into how various demographic factors influenced the likelihood of modern contraceptive utilization among female refugee adolescents in the Kyangwali settlement.

Of those using modern contraceptive methods, 67.2% were aged between 18 – 19 years old compared to 36.7% of those not using modern contraceptive methods. The association between age category and use of modern contraceptive methods was statistically significant; X^2 (1, N = 399) = 19.855, P=0.000.

Of those using modern contraceptive methods, 63.9% were unmarried currently compared to 81.7% of those not using modern contraceptive methods. The association between marital status and use of modern contraceptive methods was statistically significant; X^2 (1, N = 399) = 9.765, P=0.002.

Of those using modern contraceptive methods, 67.2% were currently not in school compared to 47.3% of those not using modern contraceptive methods. The association between being in school and use of modern contraceptive methods was statistically significant; X^2 (1, N = 399) = 8.166, P=0.004.

Of those using modern contraceptive methods, 86.9% had attained primary education compared to 88.2% of those not using modern contraceptive methods. The association between being in school and use of modern contraceptive methods was statistically significant; X^2 (1, N = 399) = 8.123, P=0.017.

Table 4.2: Summary of Chi-Square test results for Socio-demographic characteristic

Variable	Contraceptive use Frequency (%)	Contraceptive non-use Frequency (%)	Statistical results using Chi-square tests
Age 15 – 17 18 - 19	 20 (32.8%) 41 (67.2 %)	 214 (63.3%) 124 (36.7%)	X^2 (1, N = 399) = 19.855, P=0.000
Marital status Married Unmarried	 22 (36.1%) 39 (63.9%)	 62 (18.3%) 276 (81.7%)	X^2 (1, N = 399) = 9.765, P=0.002
Are you in School? Yes No	 20 (32.8%) 41 (67.2%)	 178 (52.7%) 160 (47.3%)	X^2 (1, N = 399) = 8.166, P=0.004
Education Level Primary Secondary Tertiary	 53 (86.9%) 6 (9.8%) 2 (3.3%)	 298 (88.2%) 10 (3.0%) 30 (8.9%)	X^2 (1, N = 399) = 8.123, P=0.017

4.2.2 Factors that influence utilization and use of modern contraceptives

The study further identified the factors that influenced utilization and use of modern contraceptives amongst the study participants. Four main themes emerged: side effects of modern contraceptive use, myths and misconceptions regarding contraceptive use, lack of knowledge on modern contraceptives and lack of privacy and non-functionality of the adolescent youth friendly corner.

Most of the adolescents across all FGDs mentioned that modern contraceptive side effects were one of the limiting factors towards acceptance to use them. A FGD participant mentioned that injectables and implants leads to heavy bleeding and sometimes missing of periods. For example:

"..... I used injectables (Depo-Provera) last year, I bled excessively for the first two months, and this gave me discomfort that every time I had to wear pads. I remember also developing strong headaches and mood swings all the time...." (FGD 3, participant)

Heavy bleeding was cited to interfere with the adolescents' school activities. Some of the participants who experienced heavy bleeding reported that they were unable to carry out their school activities for example attending classes as they were weak, dizzy, and unclean because of increased menstrual flow.

"..... *I lost hope for school when I injected family planning because I was unable to concentrate in my studies with heavy bleeding. This made me to develop low self-esteem and since my parents lacked money to buy me pads, I dropped out of school for one term....*" (FGD 5, participant).

4.3 Knowledge and Accessibility of Modern Contraceptives

Majority of respondents had knowledge of contraceptives (77.7%), with a higher percentage reporting accessibility to contraceptives beyond a 10-minute walk (71.9%). Additionally, 59.6% of the participants were aware of multiple contraceptive types, indicating a relatively high level of awareness.

These univariate analyses provide a preliminary overview of key variables related to the study objectives and lay the foundation for further multivariate analyses to explore relationships and associations.

Table 4.3 Knowledge and accessibility of modern contraceptives at univariate analysis level

Variable	Frequency	Percent
Knowledge of Contraceptives		
Yes	310	77.7%
No	89	22.3%
Total	399	100
Accessibility to Contraceptives		
Within 10-Minute Walk	112	28.1%
Beyond 10-Minute Walk	287	71.9%
Total	399	100
Contraceptive Types		
Aware of Multiple Types	238	59.6%
Limited Awareness	161	40.4%
Total	399	100

Myths and misconceptions about family planning were a barrier to modern contraceptive use among the refugee adolescents, several negative myths and misconceptions were noted namely, use of family planning was preconceived to cause infertility in the long run, increases risks of getting cancer, bleeding leading to death, damages a woman's uterus, and can lead to abortion in case one conceives. The root cause of these myths and misconceptions were found to arise from peer influence and inadequate knowledge about modern contraceptive.

"....my friends told me that once you inject yourself with "depo" (injectables), you can bleed a lot for several months then you become very weak and eventually die. My sister also told me that when you insert IUD into your body, it spoils your uterus, and you can never produce in your lifetime....." (FGD 1, participant).

"..... I was told that the oily substance in male and female condoms causes cancer of the cervix once you use condoms for long. Even implants can disappear in the body, and you will only produce disabled children....." (FGD 7, participant).

4.3.1 Knowledge on modern contraceptives

As depicted in (Table 4.4) below, only 34.6% of the adolescents had knowledge about modern contraceptive. To assess the overall level of knowledge of modern contraceptive, the participants were further asked to name the contraceptive methods they knew. Accordingly, the most known methods were injectables (35.0%), condoms (30.0%), oral contraceptives (pills) (18.0%), implants (15.0%) and IUD was the least known method (2.0%).

Table 4.4: Respondents on knowledge of modern contraceptive methods

		Response	Frequency	Percent (%)
1	Do you have any knowledge about modern contraceptives?	Yes	138	34.6
		No	261	65.4
2	Which modern contraceptive are you familiar with?	Condoms	75	30.0
		Oral pills	45	18.0
		Injectables	86	35.0
		Implants	38	15.0
		IUD	5	2.0

4.3.2 Preferences of modern contraceptives and reasons for non-use among respondents.

Regarding association between modern contraceptive method for preference (condoms, pills, injectables and implants), the study subject aged 18 – 19 years, were 2.479, 8.793 and 5.750 times more likely to prefer condoms (*P = 0.014*), pills (*P = 0.045*) and injectables (*P = 0.02)* respectively as compared to those aged 15 – 17 years.

Married female adolescent refugees were 0.192 times more likely to prefer oral contraceptive pills (*P = 0.033*) than the unmarried ones. Those who were currently in school were 0.392 times more likely to prefer condoms (*P = 0.017*) than those not currently in school.

Female refugee adolescents who had attained a secondary education were 10.3 times more likely to prefer injectables (*P = 0.046*), as compared to those who had attained tertiary education.

The main reasons for not using modern contraceptives were lack of family planning knowledge 104 (30.8%) followed by fear of parents 89 (26.3%).

Table 4.5: *Association between Modern Contraceptive Method for Preference*

	COR [95% CI]	*P-value*
Condom as Dependent Yes = 34 (8.5%) No = 365 (91.5%) Age* 15 - 17 18 – 19 Are you in school? * No Yes	 1.0 2.479 [1.203, 5.108] 1.0 0.392 [0.182, 0.844]	 0.014* 0.017*
Pills as Dependent Yes = 7 (1.8%) No = 392 (98.2%) Age* 15 - 17 18 – 19 Marital status* Unmarried Married	 1.0 8.792 [1.048, 73.735] 1.0 0.192 [0.042, 0.877]	 0.045* 0.033*
Injectable as Dependent Yes = 34 (8.5%) No = 365 (91.5%) Age* 15 - 17 18 – 19	 1.0	

Education Level Primary Secondary Tertiary	5.750 [1.872, 17.657] 1.288 [0.164, 10.123] 10.333[1.046, 102.080] 1.0	0.02* 0.810 0.046*

N.B: ***showed that statistical significance at $P \leq 0.05$.***

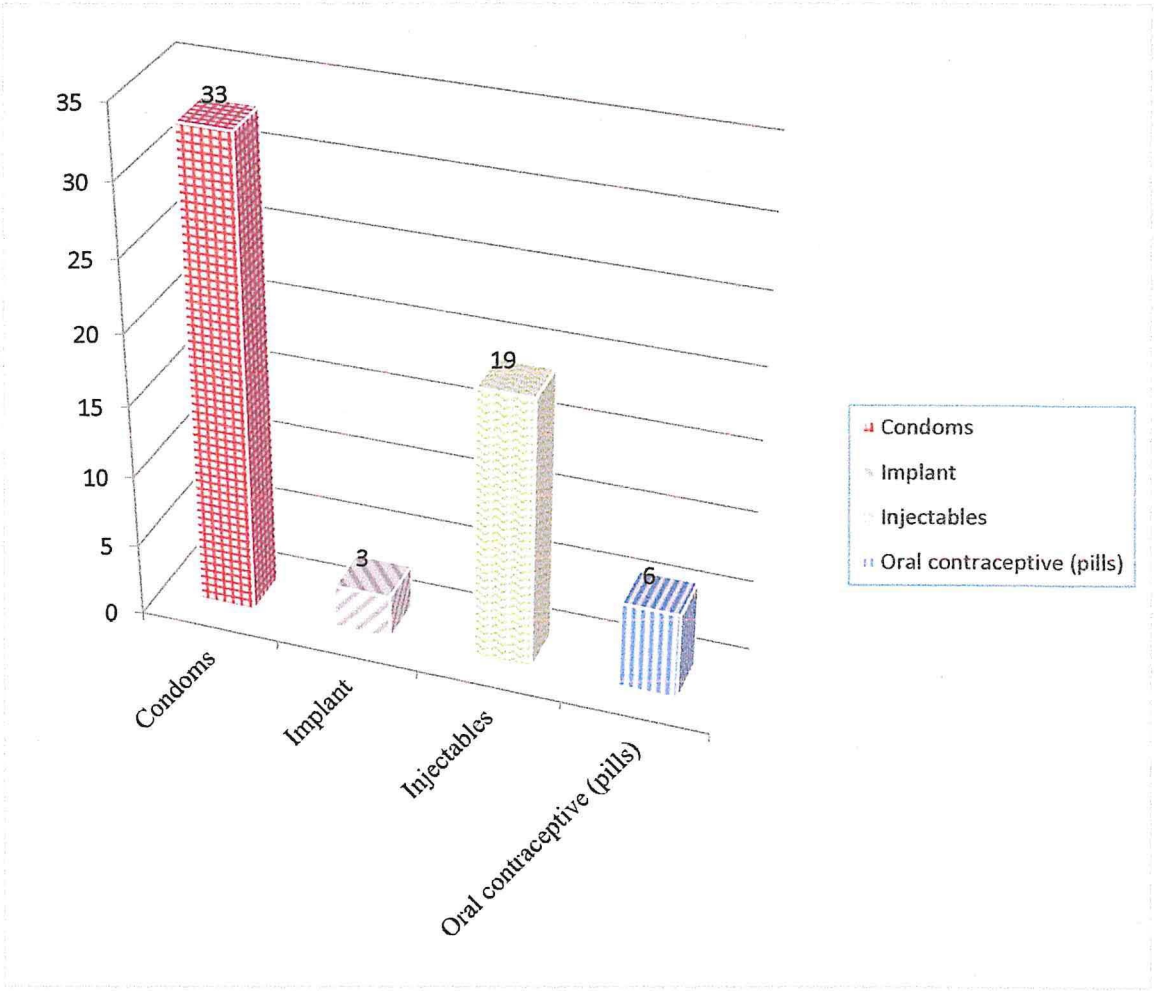


Figure 4.1: Modern contraceptive use and preferences among female refugee adolescents.

4.3.3 Reasons for non-use of modern contraceptives among female refugee adolescents.

According to all the interviews conducted, it was evident that minority (34.6 %) of the adolescents had some knowledge about family planning services while 65.4% of the adolescent's lacked knowledge about modern contraceptives (Table 4.4). Similarly, according to figure 2 above, 30.8 % of the participants mentioned lack of family planning knowledge as the main reason for non-use.

Also, the low awareness and misinformation about the family planning emerged as a contributor to low modern contraceptive uptake among the FGD participants and the key informants reached. One key informant pointed out clearly that lack of knowledge on modern contraceptive has led to low demand for family planning services by the adolescents hence a rise in teenage pregnancies in the refugee settlement.

".....there is inadequate sensitization of the adolescents on sexual and reproductive health services which I believe has greatly contributed to increase in teenage pregnancies in the camp and also health workers do not give a comprehensive package to adolescents with regards to family planning, adolescent family planning clinics should be arranged where fellow adolescents share knowledge with one another and also the health workers should give detailed information about the family planning services, methods available, the side effects and the benefits of using family planning. This will help raise awareness and create more demand for family planning and eventually reduce the burden of teenage pregnancies in Kyangwali refugee settlement...." (Key informant, 004)

Lack of privacy and non-functionality of the adolescent youth friendly services were mentioned as the main reason for low uptake of modern contraceptives among the female adolescents in Kyangwali refugee settlement. Adolescents mentioned that family planning services were offered in a general setting which made it hard for them to access these services together with the adults. Non-functionality of the adolescent youth friendly corner in the different health facilities was mentioned by both adolescents and Key Informants as a hinderance towards adolescent sexual reproductive health services.

".... Whenever we go to the health center for family planning services, the midwives tell us to sit and wait as they attend to the pregnant women and those in labor as their priority, this keeps us exposed and we leave the maternity unit and go home unattended to....." (FGD 2, participant)

"……the health workers always tell us in school outreaches that the facility offers adolescent youth friendly services but whenever we go to the facility, we face difficulties in accessing these services since the clinics are mixed up. We always meet people from our homes, neighbors, and community people whom we fear might report us to our parents……" (FGD 5, participant)

"…… My appeal to the facility management is to open special adolescents' clinics with specific working hours and assign an adolescent focal person to this clinic. Also, if possible, adolescent peer educators from different villages in the catchment areas should be trained to support in sensitization of the adolescents on reproductive health services." (Key Informant, 001).

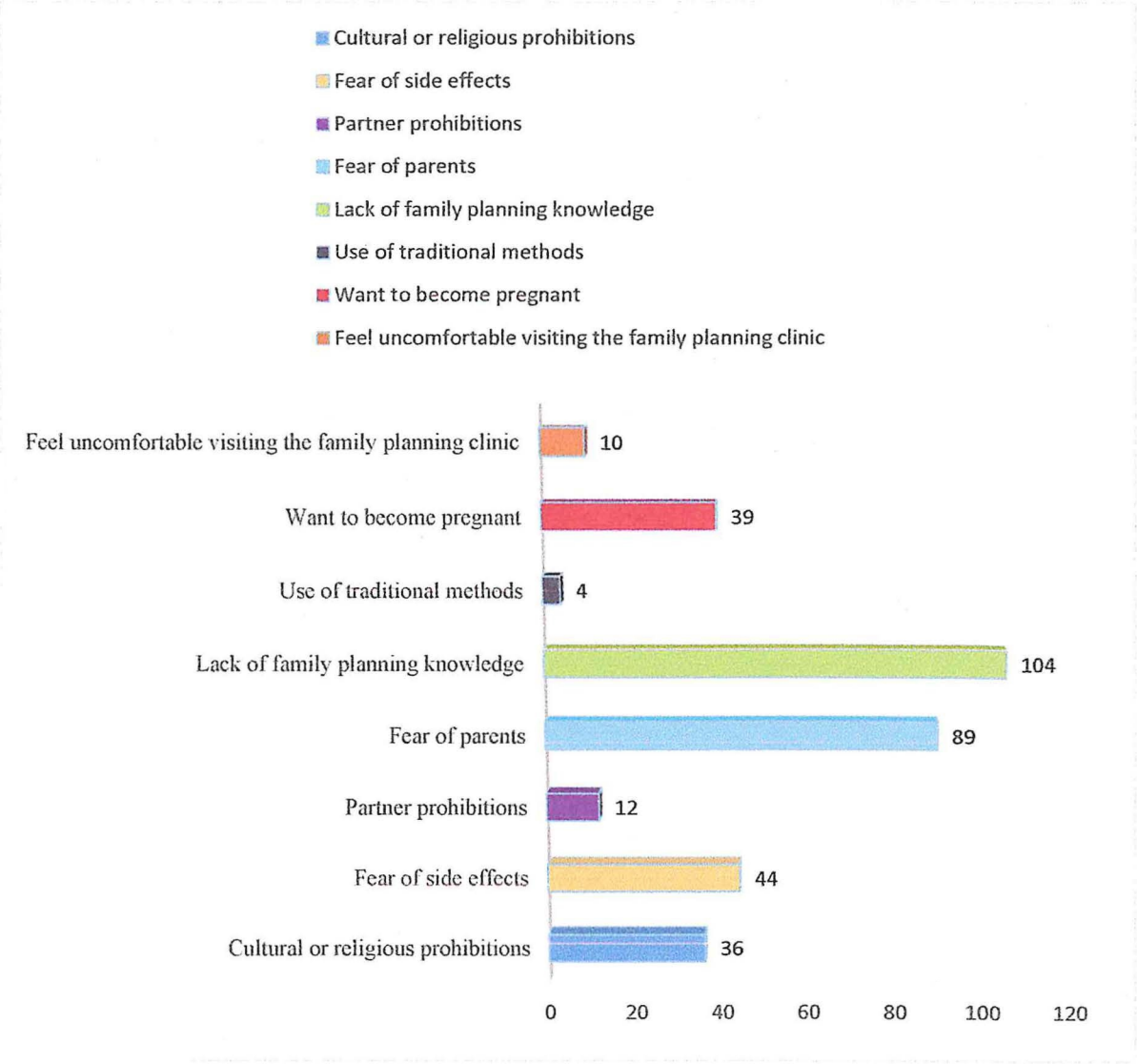


Figure 4.2: *Reasons for non-use of modern contraceptives among female refugee adolescents.*

4.3.4 Accessibility of modern contraceptives

Accessibility to family planning services is a crucial factor in promoting the uptake of such services among female refugee adolescents. It encompasses various dimensions, including physical proximity to health facilities, the range of services offered, transportation convenience, service quality, and cost considerations.

The findings from focus group discussions (FGDs) and key informant interviews (KIIs) conducted in Kyangwali refugee settlement revealed that all health services, including family planning services, are provided free of charge at NGO facilities. These services include screening for sexually transmitted infections (STIs) and HIV, pregnancy tests, counseling services, and the provision of modern contraceptives. The availability of these services at no cost ensures that they are accessible to everyone in the refugee settlement, removing financial barriers that might otherwise hinder access.

The following quotes from one participant of the FGDs and one KII support this observation.

"*.....this health centre operates 24/7 with 9 well trained midwives offering MCHN and ASRH services at all times, when a client comes for family planning services, counselling services are offered, a few tests done and the client is health educated on the different family planning methods available (such as Depo-Provera, sayana press, condoms both male and female, implants) , methods of administration and possible side effects then the client decides on which method he or she feels comfortable to use.....*" (Key Informant, 002)

The study participants revealed that the health workers were competent and had good attitude towards adolescents seeking family planning services.

"*..... when I escorted my friend for family planning, we were so fearful but when we reached the health facility, the midwife welcomed us and explained to us the types, advantages and side effects of family planning and gave my friend depo and told her to return to the health facility in case of any severe side effects....*" ((FGD 3, participant).

4.4 Proportion of adolescents using modern contraceptives

4.4.1 Multivariable analysis (Predictors of Modern contraceptive use)

The logistic regression model was used to estimate the relationships between modern contraceptive use and the predictor variables: accessibility utilization (X1), socio-demographic

characteristics (X2), and knowledge (X3). The model expression was Logit (P) = $\beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon$.

Model Estimation

The coefficients of the model were estimated using the sample of 399 respondents. The results of the regression analysis are presented in Table 4.4. The coefficient estimates (β) for each predictor variable, along with their standard errors, p-values, and confidence intervals, are provided.

Table 4.6: Multivariate logistic regression results

Model Summary:

- Nagelkerke R Square = 0.45
- Percentage of correct predictions = 78%

Variable	Coefficients	Standard Error	Wald Test	p-value	95% CI Lower	95% CI Upper
Intercept ($\beta 0$)	-1.324	0.236	30.702	0.000*	-1.786	-0.862
Accessibility ($\beta 1$)	0.932	0.155	36.212	0.000*	0.628	1.236
Socio-Demographic ($\beta 2$)	-0.278	0.184	2.282	0.131	-0.639	0.083
Knowledge ($\beta 3$)	1.158	0.172	45.517	0.000*	0.820	1.496

*Indicates statistical significance at the $p<0.05$ level.

The intercept coefficient ($\beta 0$) serves as the baseline, indicating that in the absence of other predictors, there is a negative log-odds of contraceptive use, although this is not statistically significant ($p = 0.000$). Moving forward, the accessibility coefficient ($\beta 1$) exhibits a significant positive relationship ($p = 0.000$), signifying that for every unit increase in accessibility utilization, the log-odds of modern contraceptive use increase by a substantial 0.932, underscoring the critical role of accessibility in influencing contraceptive behavior.

Next, the socio-demographic coefficient (β2) showcases a non-significant relationship (p = 0.131), suggesting that socio-demographic characteristics such as age, marital status, education, and school attendance had limited impact on contraceptive use. In contrast, the knowledge coefficient (β3) highlighted a remarkable positive and significant relationship (p = 0.000), revealing that a 1.158 increase in knowledge was associated with a higher log-odds of modern contraceptive use. This finding accentuates the pivotal role of knowledge in empowering adolescents to make informed reproductive health decisions.

Furthermore, the model's Nagelkerke R Square, standing at 0.45, indicated that approximately 45% of the variation in contraceptive use could be explained by the predictor variables incorporated in the model. This statistic underscores the model's ability to capture a significant portion of the complexity inherent in contraceptive behavior. Additionally, the model demonstrated an impressive 78% accuracy in correctly predicting contraceptive usage, further affirming the reliability of the model's predictive power.

Collectively, these results unveil the intricate interplay of accessibility and knowledge as pivotal drivers of modern contraceptive use among female refugee adolescents. This comprehensive understanding paves the way for targeted interventions that prioritize improved accessibility and knowledge dissemination, ultimately empowering adolescents to take charge of their reproductive health.

4.4.2 Hypothesis Testing

To test the study hypotheses, we examined the statistical significance of the coefficients for each predictor variable. The p-values associated with each coefficient were compared to a predetermined significance level ($\alpha = 0.05$).

Table 4.7: The outcomes of hypothesis testing

Coefficient	p-value	Hypothesis Outcome
Accessibility (β1)	0.000	Significant
Socio-Demographic (β2)	0.131	Not Significant
Knowledge (β3)	0.000	Significant

Socio-Demographic (β2): The p-value of 0.131 was greater than the significance level, suggesting that the association between socio-demographic characteristics and modern contraceptive use was not statistically significant.

Accessibility (β1): The p-value of 0.000 was less than the significance level (e.g., 0.05), indicating that the association between accessibility utilization and modern contraceptive use was statistically significant.

Knowledge (β3): Similar to accessibility, the p-value of 0.000 was less than the significance level, indicating that the association between knowledge and modern contraceptive use was statistically significant.

4.4.3 Relationship between accessibility and modern contraceptive use

Table 4.8: Association between accessibility and modern contraceptive use.

Variable	Contraceptive use Frequency (%)	Contraceptive non-use Frequency (%)	Statistical results using Chi-square tests
Accessibility			
Yes (36.6%)	52 (85.2%)	245 (72.5%)	X^2 (1, N = 399) = 74.445, P=0.000
No (63.7%)	9 (14.8 %)	93 (27.5%)	

Table 5 showed that more than half (n = 254; 63.7%) of the respondents found family planning services to be inaccessible. Using the Chi-square test (χ^2), the statistical association between accessibility to modern contraceptives and the use of modern contraceptives was found to be significant ($p = < 0.01$).

CHAPTER FIVE

DISCUSSION

5.0 Discussion

There are notable global disparities in the utilization of modern contraceptives, influenced by various socio-demographic, cultural, and reproductive health elements. This study conducted in the Kyangwali Refugee Settlement in Kikuube District, Uganda, aimed to investigate the prevalence, awareness, accessibility, and factors influencing modern contraceptive use among refugee adolescents aged 15-19.

Age was significantly associated with preference for various modern contraceptive methods, according to the study. Adolescents aged 18–19 years were significantly more likely to prefer condoms, pills and injections compared to those aged 15–17 years. This finding is consistent with a similar study in Rwanda, which highlighted that older adolescents often show more maturity and risk awareness, making them more inclined to use contraception. In addition, older adolescents usually have a higher level of education, which positively affects their use of contraception (Sserwanja *et al.,* 2021).

One of the main themes that emerged from the study was the fear of side effects associated with modern contraception. Many teenage women expressed concerns about side effects such as heavy bleeding, irregular menstrual cycles and dizziness, which discouraged them from using modern contraceptives. This fear of side effects was consistent with findings from studies conducted in Kenya and Ghana, which highlighted similar concerns among women regarding the negative impact of side effects on contraceptive use (Ochako *et al.,* 2021; Schrumpf *et al.,* 2021).

Another important topic was the spread of myths and misconceptions about family planning among teenage refugee women. Participants mentioned a variety of myths, including concerns about infertility, increased risk of cancer, and damage to the uterus associated with the use of modern contraception. These misconceptions can be attributed to lack of knowledge about available contraceptive methods, as reported in a study conducted in Kenya (Ochako *et al.*, 2021).

In addition, privacy concerns and dysfunctional youth-friendly services were identified as barriers to contraceptive uptake among refugee adolescents. Adolescents reported that family planning services were often offered at general birthing units and were thus exposed to people

from their homes and communities. This lack of privacy and specialized family planning clinics, along with long waiting times, discouraged adolescents from seeking contraceptive services. Similar findings were noted in a study conducted in Guinea, highlighting the preference for private health facilities among adolescents due to increased privacy (Dioubate *et al.,* 2020).

Findings revealed that only 15.4% of young women reported regular use of modern contraceptives across all types. Contributing factors included negative perceptions regarding modern contraceptives, insufficient awareness, misconceptions surrounding contraceptive use, limited privacy, and dysfunction within the designated teen-friendly services. This highlights the necessity for tailored interventions that address these barriers to improve contraceptive uptake among this vulnerable population.

Consistent with previous research in Ghana, the likelihood of using modern contraception was higher among those with secondary and higher education. This can be attributed to better access to information and affordability among the educated, highlighting the importance of education in creating awareness. Using audio-visual aids instead of leaflet distribution could enable individuals to make informed decisions (Zegeye *et al.*, 2021; Asiimwe, 2014).

Overall, 55.2% of 15- to 19-year-olds in the multi-country study reported being familiar with at least one modern contraceptive method, while only 34.6% of adolescents in this study had knowledge of modern contraceptives. When choosing modern contraceptive methods, marital status proved to be an important predictor. Married adolescents were more likely to choose oral pills compared to unmarried ones, possibly because of better affordability with partner support. This finding is consistent with a study conducted in Ghana (Nketiah *et al.,* 2022).

Although participants mentioned various contraceptive methods, they lacked knowledge about the benefits, administration methods, duration, and side effects of each method (Yusuf et al., 2021). According to Yusuf *et al.* (2021), women who have a good understanding of family planning are more likely to support contraception because lack of understanding contributes to negative attitudes towards family planning practices. This could explain the low prevalence of modern contraceptives among adolescent refugee women, as knowledge of contraception is a prerequisite for family planning use.

The study also revealed a lack of knowledge about modern contraception among adolescents, with 65.4% lacking knowledge. This lack of knowledge has led to low demand for family

planning services, which has contributed to an increase in teenage pregnancy in the refugee settlement. Similar findings were observed in a study in Ghana that indicated inadequate sensitization of adolescents regarding sexual and reproductive health services and non-comprehensive family planning packages offered by health professionals (Ofosu *et al.,* 2020).

The prevalence rate of modern contraception in Kyangwali refugee settlement was higher than in a similar study conducted in Palabek refugee settlement at 8.7% (Bakesiima *et al* 2020). The difference can be explained by the fact that Kyangwali refugee settlement had better access to family planning services as evidenced by more (10) health facilities providing free family planning services compared to Palabek refugee settlement which had only four health facilities providing free family planning services.

This result is in contrast to research conducted by the Multi-Country Commission for Refugees and the Office of the United Nations High Commissioner for Refugees, which looked at six nations: Bangladesh, Djibouti, Kenya, Malaysia, and Uganda. Just 10.1% of the teenagers in this research said they had ever used a modern form of birth control. Tanabe *et al.* (2017) found that the Nakivale refugee settlement in Uganda had a higher prevalence of modern contraception use at the national level, at 15.7%, compared to the study's findings. This discrepancy might result from participant variations in the current study compared to the second study in terms of socio-demographic, cultural, sexual, and reproductive traits.

For example, a study in the Nakivale refugee settlement included participants aged 15 to 49 years, while this study focused only on adolescents aged 15 to 19 years. In addition, the prevalence of modern contraceptive use was higher among those aged 20 to 49 years in a multi-country study (Mastin *et al.,* 2020).

This finding contrasts with a study conducted in the Kyaka refugee settlement, where the prevalence of modern contraceptive use was higher at 18.2%. The difference may be attributed to differences in availability, as family planning services in Kyaka were perceived to be of higher quality than in Kyangwali refugee settlement (Were *et al.,* 2007). Additionally, 91.9% of refugees in Kyaka were aware of modern contraceptives, indicating their ability to make informed decisions about contraceptive methods.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS OF THE STUDY FINDINGS

6.1 Conclusions

In this study, the factors associated with low prevalence were side effects of modern contraception, lack of knowledge about modern contraception, myths and misconceptions regarding the use of contraception, the lack of privacy and the non-functioning of the teen-friendly corner. The level of knowledge and attitude towards family planning was relatively low, while the most known method was injection (35.0%). The prevalence of using modern contraception (for all methods) was relatively very low (15.4%). Our study shows that there is an urgent need for action to improve adolescents' access to and utilization of high-quality sexual and reproductive health care in refugee settings.

6.2 Recommendations

Future interventions should focus on empowering adolescent girls in refugee settings to make decisions about their own health, including initiating a contraceptive method, addressing their fear of side effects, widespread myths and misconceptions, and knowledge gaps.

Community dialogues and integrated information programs and health promotion activities in schools should target adolescents through family planning services such as STI/HIV screening, pregnancy tests, counseling services. Health professionals providing these services should explain possible side effects, methods of administration, shelf life, advantages and disadvantages of each method, and the choice of method should be left up to the adolescent.

There is an urgent need to functionalize Adolescent Friendly Corners and Adolescent Contact Person who are assigned comprehensive packages of Adolescent Sexual and Reproductive Health Services. Adolescent peer educators should be trained to cascade family planning messages through health education talks and community sensitization exercises.

The management of the health facility should set aside a separate room for family planning services as this can ensure privacy and possibly improve the implementation of family planning in Kyangwali refugee settlement.

REFERENCES

Abena, S. O., & Napoleon, B. S. K. (2020). And awareness level of contraceptive usage among adolescents in Mankranso of Ahafo-Ano South District, Ghana: descriptive cross-sectional study. *Biomedical Journal of Scientific & Technical Research, 31*(4), 24317–24324.

Achola, R., et al. (2019). **Barriers to Contraceptive Use among Refugees in Uganda: A Qualitative Study**. *International Journal of Public Health.*

Adolescent, W. H. O. (n.d.). *Pregnancy 2020 [cited 2020 4 September]*. https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy

Asiimwe, J. B., Ndugga, P., Mushomi, J., & others. (2014). Factors associated with modern contraceptive use among young and older women in Uganda; a comparative analysis. *BMC Public Health, 14*, 926. https://doi.org/10.1186/1471-2458-14-926

Bakesiima, R., Cleeve, A., Larsson, E., & others. (2020). Modern contraceptive use among female refugee adolescents in northern Uganda: prevalence and associated factors. *Reprod Health, 17*, 67.

Comprehensive, U. (2017). *Refugee response framework Uganda.* The way forward.

Darroch, J., Woog, V., Bankole, A., & it up: Costs, A. L. A. (2016). *And benefits of meeting the contraceptive needs of adolescents*. Guttmacher Institute.

Dombola, B. (2021). **Debunking Myths: The Role of Policies in Promoting Adolescent Contraceptive Use in Malawi**. *Journal of Adolescent Health*, 68(3), 423-431.

Ganchimeg, T., et al. (2014). **Pregnancy and Childbirth Outcomes among Adolescent Mothers: A World Health Organization Multicountry Study**. *The Lancet*, 383(9925), 1540-1549.

Ganle, J. K., Amoako, D., Baatiema, L., & Ibrahim, M. (2019). Risky sexual behaviour and contraceptive use in contexts of displacement: insights from a cross-sectional survey of female adolescent refugees in Ghana. *Int J Equity Health, 18*, 1.

Ibisomi, L. (2014). Is age difference between partners associated with contraceptive use among married couples in Nigeria? *Int Perspect Sex Reprod Health, 40*, 1.

Kawuki, J., Gatasi, G., Sserwanja, Q., Mukunya, D., & MW. M. (n.d.). Utilisation of modern contraceptives by sexually active adolescent girls in Rwanda: a nationwide cross-sectional study. BMC Womens Health. 2022 Sep 6; 22(1):369. *PMID: 3606.* https://doi.org/10.1186/s12905-022-01956-y

Kgesten, F. (2017). **Barriers to Contraceptive Use among Somali Girls in Kobe Refugee Camp: A Qualitative Study**. *BMC Public Health*, 17(1), 687.

Mwaka, A. D., et al. (2019). **Effectiveness of Community Education Programs on Contraceptive Use in Uganda**. *Health Education Research*, 34(2), 146-155.

Nara, R., Banura, A., & AM., F. (2019). Exploring Congolese refugees? Experiences with abortion care in Uganda: a multi-methods qualitative study. *Sexual and Reproductive Health Matters*, *27*, 1.

Nketiah-Amponsah, E., Ampaw, S., & Twumasi Baffour, P. (2022). Socioeconomic determinants of use and choice of modern contraceptive methods in Ghana. *Trop Med Health*, *50*, 33. https://doi.org/10.1186/s41182-022-00424-5

Nyarko, S. H. (2015). **Demographic Factors Influencing Contraceptive Use among Adolescent Girls in Ghana**. *International Journal of Family Medicine*, 2015, 1-7.

Ochako, R., Mbondo, M., Aloo, S., & others. (2015). Barriers to modern contraceptive methods uptake among young women in Kenya: a qualitative study. *BMC Public Health*, *15*, 118. https://doi.org/10.1186/s12889-015-1483-1

Okanlawon, K., Reeves, M., & use: knowledge, O. F. A. C. (2010). Perceptions and attitudes of refugee youths in Oru refugee camp, Nigeria. *Afr J Reprod Health*, *14*, 4.

Rahman, M., et al. (2019). **Knowledge and Accessibility of Modern Contraceptives: A Mixed-Methods Approach**. *International Journal of Women's Health*, 11, 147-158.

Okumu M, Logie CH, Mwima SP, Kyambadde P, Hakiza R, Kibathi IP, et al. Exploring associations between adolescent sexual and reproductive health stigma and HIV testing awareness and uptake among urban refugee and displaced youth in Kampala, Uganda. Sex Reprod Health Matters. 2019;27(3):86-106.

Schrumpf, L. A., Stephens, M. J., Nsarko, N. E., & others. (2020). Side effect concerns and their impact on women?s uptake of modern family planning methods in rural Ghana: a mixed methods study. *BMC Women's Health*, *20*, 57. https://doi.org/10.1186/s12905-020-0885-0

screening tool?Identifying, U. V. (n.d.). *And addressing vulnerability: a tool for asylum and migration systems 2016 [cited 2020 4 May]*. https://www.refworld.org/pdfid/57f21f6b4.pdf

Slovin, E. (1960). Siovin?s formula for sampling technïque. *Retrieved on February*, *13*, 2013.

Slovin, L. P. (1960). **A Complete Equation for the Determination of Sample Size**. *Sampling Techniques*.

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

Tanabe, M., Myers, A., Bhandari, P., Cornier, N., Doraiswamy, S., & Krause, S. (2017). Family planning in refugee settings: findings and actions from a multi-country study. *Confl Heal*, *11*, 1.

the facts: Adolescent girls, U. F. (n.d.). *and contraception 2016 [cited 2020 4 May]*. https://www.unfpa.org/sites/default/files/resourcepdf/UNFPA_Adolescent_brochure.pdf

Uganda Bureau of Statistics (UBOS). (2020). **Uganda Demographic and Health Survey 2016**. Kampala, Uganda: UBOS and ICF International.

United Nations High Commissioner for Refugees (UNHCR). (2017). **Global Trends: Forced Displacement in 2016**. Geneva: UNHCR.

United Nations High Commissioner for Refugees (UNHCR). (2022). **Uganda Fact Sheet**. Kampala, Uganda: UNHCR.

United Nations High Commissioner for Refugees (UNHCR). (2022). **Global Trends: Forced Displacement in 2021**. Geneva: UNHCR.

Unmet, W. H. O. (n.d.). *Need for family planning 2020 [cited 2020 23 September]*. https://www.who.int/reproductivehealth/topics/family_planning/unmet_need_fp/en/

World Health Organization (WHO). (2020). **Global Health Estimates: Leading Causes of Death**. Geneva: WHO.

World Health Organization (WHO). (2021). **Family Planning: A Global Handbook for Providers**. Geneva: WHO.

Yakubu I, Salisu WJ. Determinants of adolescent pregnancy in sub-Saharan Africa: a systematic review. Reprod Health. 2018;15(1):15. doi:

Zegeye, B., Ahinkorah, B. O., Idriss-Wheeler, D., Olorunsaiye, C. Z., Adjei, N. K., & Yaya, S. (n.d.). Modern contraceptive utilization and its?associated factors among married women in Senegal: a multilevel analysis. BMC Public Health. 2021 Jan 28; 21(1):231. *PMID: 3350*. https://doi.org/10.1186/s12889-021-10252-7

APPENDICES

APPENDIX I: INFORMED CONSENT

UPTAKE OF MODERN CONTRACEPTIVES AMONG FEMALE REFUGEE ADOLESCENTS AT KYANGWALI REFUGEE SETTLEMENT, KIKUUBE DISTRICT, SOUTH-WESTERN UGANDA

Investigators: NABUKEERA MARIAM

REG NO: 20/U/GMSPH/13247

0700243550/0785873231

Email: mariamnabukeera5@gmail.com

KYAMBOGO UNIVERSITY

Background and rationale for the study:

The background and rationale for the study are rooted in the global context of refugee populations and their unique challenges, particularly concerning adolescent reproductive health. Globally, the number of refugees has been steadily increasing, with millions of people forced to flee their homes due to conflict, persecution, and other life-threatening circumstances. Uganda stands out as a significant host nation, accommodating a substantial refugee population, particularly from countries like South Sudan, Burundi, and the Democratic Republic of Congo.

One of the critical issues faced by refugee populations, especially adolescents, is the high prevalence of unintended pregnancies. Reports indicate that adolescent pregnancies are more prevalent among refugees compared to non-displaced populations. Factors contributing to this include forced marriages, sexual and gender-based abuse, and limited access to reproductive health services, including family planning and safe abortion. The situation is exacerbated by the heightened vulnerability of refugee adolescents, leading to a disproportionately higher number of unintended pregnancies among this group.

Given the alarming statistics and the urgent need to address the reproductive health needs of refugee adolescents, there is a compelling rationale for conducting research in this area. Understanding the factors influencing contraceptive use among refugee adolescents is crucial for developing targeted interventions and policies to improve their reproductive health outcomes and

overall well-being. By shedding light on the unique challenges faced by this vulnerable population, the study aims to inform evidence-based strategies that can empower refugee adolescents to make informed decisions about their reproductive health and prevent unintended pregnancies.

In 2020, Kyangwali refugee settlement recorded 3% of the adolescent girls under 18 becoming pregnant, which increased to 4% in 2021. These adolescents survive on the monthly WFP (World Food Programme) monthly ratios for refugees (18000) per individual per month, and others engage in commercial sex to earn a living. Therefore, this study seeks to identify the challenges and opportunities in the uptake of modern contraceptives among this adolescent group.

Sponsor of the research project:

The research is self-sponsored

Purpose:

The purpose of this research is for academic purposes, and it is partial fulfilment for the award of Master of Science in Public health degree of Kyambogo, therefore, any information given by the participants will only be used for study purposes.

The estimated duration the research participant will take to in the research project:

It will take between 30-45 minutes per participant for the Focus Group Discussion, answering questionnaires as well as the interviews.

Procedures:

A thorough explanation of study procedures and implications of the study participation will be provided to participants with appropriate comprehension level. Before opting to voluntarily engage in the study, participants will have enough opportunity to review the information presented about it and ask further questions.

Who will participate in the study?

The primary participants will be the female adolescents living in kyangwali refugee camp and the service providers.

Risks/Discomforts:

The participant will not have any risk or discomfort during the project since it will take few minutes to participate. Adolescents may not be open about their sexual behaviour.

Benefit:

There will not be any monetary benefits or individual benefits to the participants mainly because the research is for study purposes.

Confidentiality:

To ensure confidentiality, names of participants will not be written on any questionnaire or any other document, and participants below 18 years, consent will be sought from their parents or guardians. Consent will be provided after basic eligibility has been established. The privacy of all respondents will be ensured through identifying venues that have maximum privacy. The hard copies of all study documentation, including the informed consent forms, will be filed and kept in a secure filing cabinet that is under lock and key. Programs for computer input and networking will only recognize coded identification numbers.

TASO Research Ethics Committee (REC) and Uganda National Council for Science and Technology (UNCST) which may have access to private information.

Cost:

There will be no cost incurred on the participants. Any costs relating to the study will be met by the investigator.

Compensation for participation in the study:

The only benefit the volunteers will receive from taking part in this study is the free refreshments that will be provided (a soft drink and snack).

Reimbursement:

There won't be any transportation fees incurred by the participants because the study will take place at the refugee camp where all of them live.

However, there will be complimentary refreshments available (a soft drink and snack).

Questions about the study:

The investigator's contact information will be given to participants in case they have any questions about the study.

Questions about participants' rights:

Before participating in this study, participants will be made aware of their rights and they can choose whether or not to take part in the study, and to withdraw in case they feel uncomfortable. In case of any queries, the contact details of the interviewer as well as the TASO REC chairperson Dr. Adrian Jjuuko: Tel: 0782169505; Email: jjuukoa@gmail.com will be provided.

Statement of voluntariness:

Study participants and service providers will be requested to consent after thorough explanation of the purpose of the study and will purely be voluntarily, allowed to withdraw at any moment and free to decline to respond to any of the survey's questions. Participants will be informed that refusal to take part in this study won't contain any detrimental effects on their relatives or them.

Dissemination of results:

The study's results will be presented to Kyambogo University graduate school in order to fulfill the requirements for a Master of Public Health degree and to be kept in the library as a reference for other researchers, as well as to Kyangwali refugee settlement camp main health facility in order for the service providers to understand the impact of the use of modern contraceptives among refugee adolescents at Kyangwali refugee settlement camp.

Ethical approval:

The study has been approved by TASO RESEARCH ETHICS COMIITTEE.

STATEMENT OF CONSENT/ASSENT

My rights in relation to this study have been explained to me, together with what will be done, the risks and rewards associated, and what will be done. I am aware that taking part in this study won't change the way I receive my regular medical care. I am conscious of my right to withdraw at any time. I am aware that signing this form just signifies that I have been told about the research project in which I voluntarily accept to participate. I do not, therefore, surrender any of my legal rights in doing so.

Name .....Signature/thumb print of participant ..... Date .....

Name .....Signature of parent/guardian for minors (If applicable) Date .....

Name ..... Signature of interviewer .....Date .....

APPENDIX II: QUESTIONNAIRE

My name is Nabukeera Mariam; I am a Kyambogo University student pursuing a Master's degree in Public health from Kyambogo University.

Socio-demographic characteristics of the respondent

Age of the respondent

.....

Marital status

Married

Cohabiting

Never been married

Divorced/separated

Widowed

Are you in school?

Yes

No

If no, give reasons why.....

.....

.....

What is the highest qualificationyou've earned?

Primary

Secondary

Tertiary

None

Do you stay with both parents?

Yes

No

If no, why?.....

.....

.....

SECTION 2: KNOWLEDGE AND COMMUNICATION

Do you have any knowledge of family planning methods?

Yes

No

If yes, which family planning methods are you familiar with?

.....

.....

.....

.....

Which available family planning method do you use?

.....

If no, would you like to know about family planning methods?

Yes

No

Do you talk to your peers about family planning methods?

Yes

No

Do you talk to a health worker about family planning services?

Yes

No

If yes, what was the health worker's attitude like?

.....

.....

.....

.....

If no, give reasons why

.....

.....

.....

.....

SECTION 3: ACCESSIBILITY AND BARRIERS

What challenges do you face in accessing family planning services?

.....

.....

.....

.....

.....

How do these challenges affect your ability to access services?

.....

.....

SECTION 4: DEPENDENT VARIABLE: CONTRACEPTIVE USE

Have you ever used any modern contraceptive method?

Yes

No

If yes, which modern contraceptive method(s) have you used?

.....

.....

If no, please specify reasons for not using modern contraceptives:

.....

.....

THANK YOU

APPENDIX III: INTERVIEW GUIDE

Thank you for agreeing to speak with me.

My name is Nabukeera Mariam, a student of Kyambogo University and I'll be doing my research in your community over the next few weeks. I'd like to talk to you about the access to family planning services you provide in your community for adolescents. I only use the information I learn about you in a private, educational manner.

- Name of the health facility.
- Age of respondent.
- What are the opening hours for the health facilities?
- How many service providers that offer family planning services?
- Does this facility provide family planning services to adolescents?
- Could you elaborate on the facility's experience providing adolescent clients with family planning services?
- Have you had any difficulties in accessing family planning services?
- Are the family planning services utilized by adolescents?
- How many adolescents utilize family planning services on average?
- Are the adolescents in favor of the provided family planning services?
- What would you say about the young people in this community's demand for adolescent family planning services?
- Has anyone objected to the facility's choice to provide assistance for adolescent family planning services, what about the employees here?
- How does the health facility advertise that it provides services for adolescent family planning?
- What are some of the opportunities to increase access and use of family planning services by adolescents?

Thank you for your participation, and as stated earlier, this conversation is confidential

APPENDIX IV: FGD GUIDE FOR ADOLESCENTS

My name is Nabukeera Mariam, a student of Kyambogo University and I'll be doing my research in your community over the next few weeks. I'd like you to share with me your experience on family planning methods and services. The information I gather from you is confidential and is for education purposes.

1. What do you understand by family planning methods?

2. What services are provided for family planning?

3. What are the common family planning methods that female refugee adolescents seek from the health care providers?

4. What are some of the factors that influence the young people or make it difficult in seeking services?

5. What are some of the myths and beliefs that influence the use of family planning services by female refugee adolescents?

6. How do female refugee adolescents make decisions on family planning issues?

7. Do female refugee adolescents receive the same treatment when they access services at the health facility?

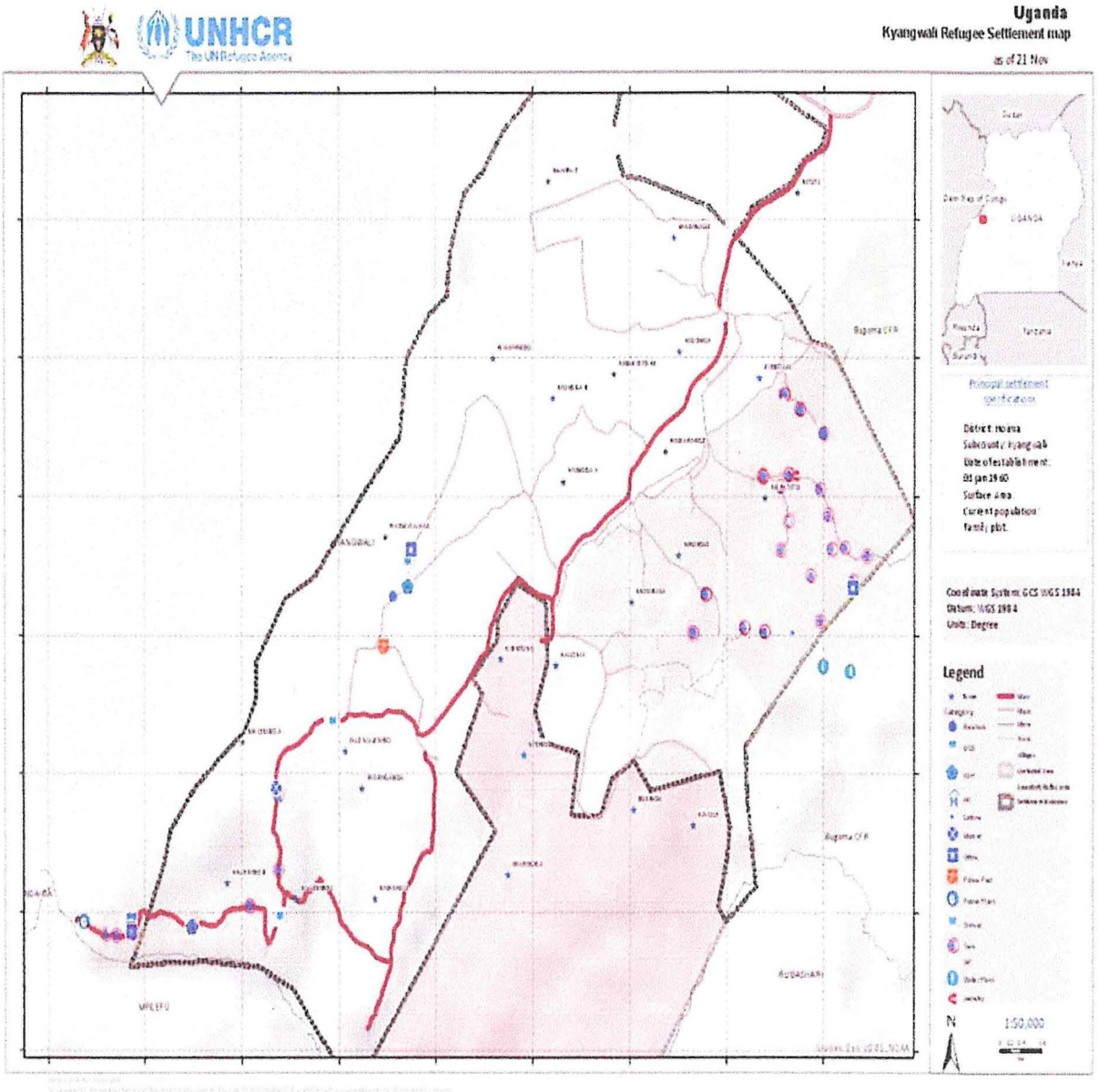
8. What difficulties do people of your age face when seeking for family planning services?

9. Which family planning services are offered, which are the most crucial, and which are easiest to obtain from the health facility?

10. What are your recommendations to strengthen family planning services for female refugee adolescents in your community?

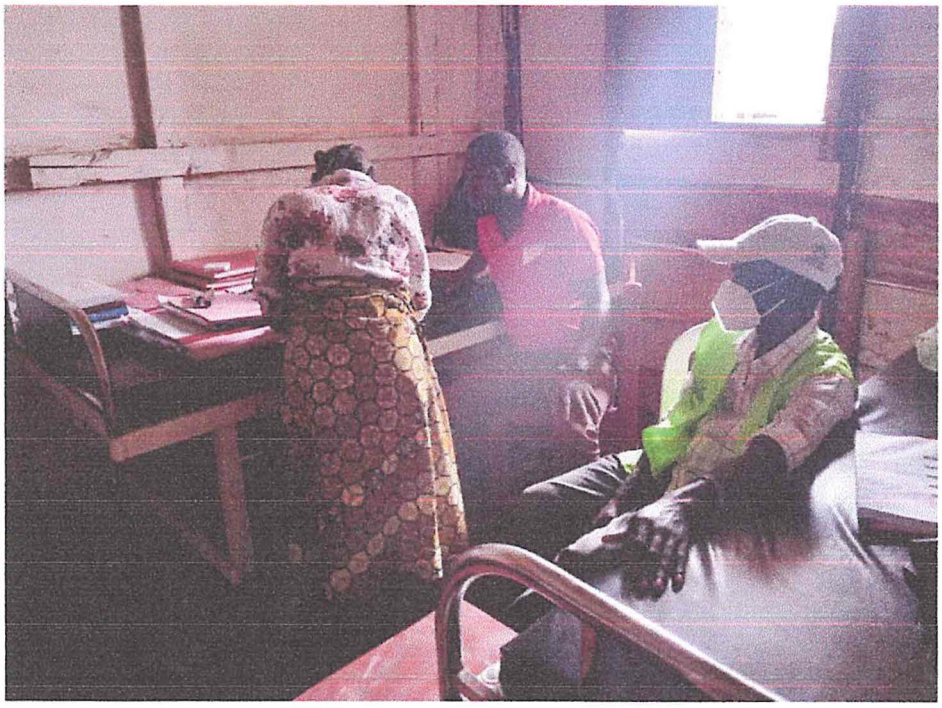
Thank you for your participation

APPENDIX V: Sketch map

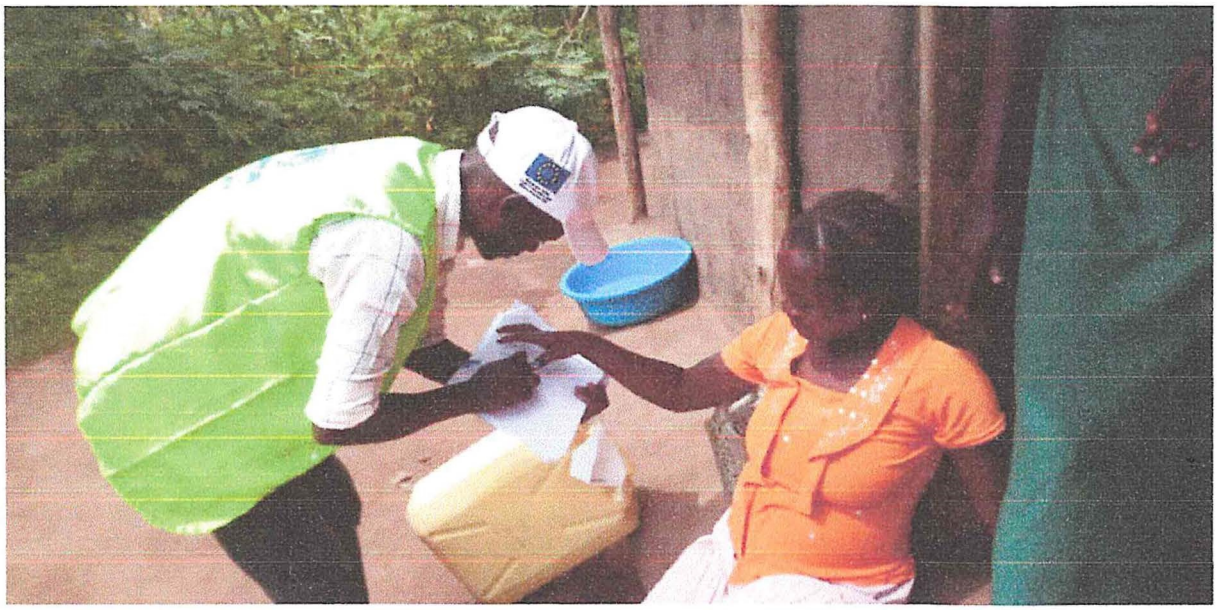


APPENDIX VI: Field Data Collection Photos

Creating awareness of the study



Participant consenting



Research assistant showing the participant where to sign

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BIOLOGICAL SCIENCES DEPARTMENT

22nd July 2022

To: Kyangwali Refugee Settlement
Kibuube District

Dear Sir/Madam,

RE: INTRODUCTORY LETTER FOR CONDUCTING A FINAL YEAR RESEARCH

This is to introduce to you **MS. NABUKEERA MARIAM** with Registration Number **20/U/GMSPH/13247/PD** a second-year student of Kyambogo University pursuing a Master's of Public Health in the Department of Biological Sciences, Kyambogo University.

As part of the requirements for the award of the Master's degree, she's required to conduct a research project. The title of the research is **"Uptake of modern contraceptives among female refugee adolescents in Kyagwali refugee settlement"** supervised Dr. Nakigozi Harriet and Dr. Kaddumukasa.

Please accord her the necessary assistance to enable her carry out the research.

Thanks

Yours faithfully,

Asio Santa Maria (PhD)
Ag. HEAD OF DEPARTMENT

KYAMBOGO UNIVERSITY
BIOLOGICAL SCIENCE DEPT.
☆ 22 JUL 2022 ☆
P. O. BOX 1, KYAMBOGO

The AIDS Support Organisation
(TASO) Uganda Ltd.

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28/10/2022

To: MARIAM NABUKEERA

KYAMBOGO UNIVERSITY
+256785873231

Type: Initial Review

Re: TASO-2022-164: UPTAKE OF MODERN CONTRACEPTIVES AMONG FEMALE REFUGEE ADOLESCENTS AT KYANGWALI REFUGEE SETTLEMENT, KIKUUBE DISTRICT, SOUTH-WESTERN UGANDA, 3, 2022-10-27

I am pleased to inform you that at the **98th** convened meeting on **28/10/2022**, the The AIDS Support Organization (TASO) REC, committee meeting, etc voted to approve the above referenced application.
Approval of the research is for the period of **28/10/2022** to **28/10/2023.**

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 addenda 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.
3. Reports of unanticipated problems involving risks to participants or any new information which could change the risk benefit: ratio must be submitted to the REC.
4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by participants 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. Continuing review application must be submitted to the REC **eight weeks** prior to the expiration date of **28/10/2023** 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.
6. The REC application number assigned to the research should be cited in any correspondence with the REC of record.
7. You are required to register the research protocol with the Uganda National Council for Science and Technology (UNCST) for final clearance to undertake the study in Uganda.

The following is the list of all documents approved in this application by The AIDS Support Organization (TASO) REC:

No.	Document Title	Language	Version Number	Version Date
1	Informed Consent forms	English	3	2022-10-28
2	Informed Consent forms	English	3	2022-10-28
3	Protocol	English	3	2022-10-27
4	Data collection tools	English	1	2022-09-22

Yours Sincerely

Dr.Adrian Jjuuko
For: The AIDS Support Organization (TASO) REC

THE REPUBLIC OF UGANDA

OFFICE OF THE PRIME MINISTER

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Uganda Vision 2040

In any correspondence on this subject, please quote No: **OPM/R/163**

18th November 2022

Ms. Nabukeera Mariam,
Kyambogo University.

PERMISSION TO CONDUCT RESEARCH IN KYANGWALI REFUGEE SETTLEMENT

Reference is made to your letter, dated 16th November 2022, in regard to the above subject matter.

Permission is hereby granted to you to conduct research on ***"Uptake of Modern Contraceptives Among Female Refugee Adolescents in Kyangwali Refugee Settlement"***, from 21st November to 10th December 2022.

You are requested to observe the rules and regulations governing the settlement.

Office of the Prime Minister Authorities in the Settlement are hereby requested to accord you the necessary assistance as you observe the Ministry of Health guidelines on Ebola and COVID 19.

DEPARTMENT OF REFUGEES * OFFICE OF THE PRIME MINISTER * 21 Nov 2022 OPM/DOR (CC)

Bafaki Charles
FOR: PERMANENT SECRETARY.

c.c.: The Refugee Desk Officer, Hoima

c.c.: The Settlement Commandant, Kyangwali RS

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AUTHOR

NABUKEERA MARIAM

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