PREDICTORS AND BARRIERS TO FAMILY PLANNING ACCESS THROUGH PHARMACIES AND DRUG SHOPS AMONG YOUNG WOMEN 15-24 YEARS IN NSANGI, WAKISO DISTRICT

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UGANDA CHRISTIAN UNIVERSITY

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DECLARATION

I **Damalie Bajunga Nabweteme** hereby declare that this proposal is my own original work and has never been presented for any degree award/ publication at any institution of higher learning.

Signature…  Date: 13th May 2025

APPROVAL

This research proposal titled: “Predictors and barriers to accessing family planning services through pharmacies and drug shops among adolescent girls and young women aged 15-24 years in Nsangi – Wakiso District” has been developed under my supervision. I therefore, give my approval for its submission for examination.

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LIST OF ABBREVIATIONS

AGYW	Adolescent girls and young women
SARA	Service Availability and Readiness Assessment
FP	Family planning
ICRW	International Center for Research on Women
LDCs	Low Developed Countries
MOH	Ministry of Health
SDGs	Sustainable Development Goals
UNICEF	United Nations International Children's Emergency Fund
WHO	World Health Organization

OPERATIONAL DEFINITIONS

Family planning (FP): is a responsible action by an individual or a couple to regulate or space the number of children they want by using contraceptive methods (Kriel, 2023).

Access: is the opportunity given to a person to receive healthcare services of adequate quality in the case of their own need for care (Levesque, 2013)

Barriers to access FP services: for this study, it refers to the obstacles that limit or prevent adolescent girls and young women aged 15-24 years in need of FP services from receiving them.

Pharmacy: for this study, it refers to a store or part of a store in which medicines are prepared and sold.

Drug shop: refers to a small 'walk-in' healthcare shop that sells over-the-counter drugs.

ABSTRACT

Background: Pharmacies and drug shops provide a unique opportunity for expanding FP access to adolescent girls and young women (Gonsalves et al., 2023), however there are still obstacles to access FP services through these outlets. The objective of the study was to understand the predictors and barriers to accessing FP services through pharmacies and drug shops among AGYW 15–24 years in Nsangi, Wakiso District.

Methods: This was a cross-sectional mixed methods study, where both quantitative and qualitative techniques were used to collect data to understand the level of access to FP, the predictors and barriers to accessing FP services through pharmacies and drug shops. AGYW aged 15 -24 years were selected using a simple random sampling technique and the key informants were purposively selected. Structured questionnaire was used to collect quantitative data while Key informant interview (KII) guide was used to collect qualitative data. Qualitative data was analyzed using STATA version 15 while the qualitative data was analyzed manually using thematic analysis.

Results: 384 AGYW participated in the study. The mean age was 20.74, about 41.7% were aged 22-24years while 17% were aged between 15-18 years. 65.4% had access to FP, however, those aged between 22–24 years were 5.6 times more likely to access FP services compared to those aged 15–18 years (AOR = 5.6, 95% CI: 1.79–17.38). AGYW who didn't find privacy at the point of access were 53% less likely to access the FP services as compared to those who found privacy [COR = 0.47] 95% CI (0.11, 1.83)]. Those whose culture did not accept the FP use were 44% less likely to access

the FP as compared to those whose culture accepted it [COR = 0.44] 95% CI (0.14, 1.87)]

Conclusion. Age and being sexually active were key predictors of access to FP, while cost of contraceptives, lack of privacy and cultural unacceptance were key barriers to accessing FP services through pharmacies and drug shops among young women.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Introduction

Family planning (FP) is the ability of couples and individuals to plan for the number, timing and spacing of their children, while access to family planning services is the ability of women or couples to reach and obtain FP services to plan the number, timing and spacing of their childbearing (WHO, 2008). Access to family planning services is important for reproductive health, gender equality, and economic empowerment. Different scholars have suggested definitions of access to family planning reflecting its multi-dimensional and multi-faceted nature. For example, access to FP was defined as the degree to which FP services and supplies were made available at a level of effort and cost that was acceptable and possible for a larger proportion of the population (Kriel, 2023). Aday and Andersen defined access as a complex concept that could be described as either potential or realized access, and emphasized how a particular population group came into contact with the healthcare delivery system (Aday and Andersen, 1974). These several definitions underline the need to consider how factors, such as cost, geographical location or geographical distance, cultural acceptability of services, and systemic barriers, could define access to family planning services (WHO, 2008). Pharmacies and drug shops are key components of FP (family planning) access worldwide, although their roles differ considerably from region to region, as noted by Aloo et al. (2023). For adolescents and young women aged 15-24, these outlets are essential sources of FP, as young women often gravitate towards these outlets than public clinic settings, due to factors such as privacy, affordability, and lower risk of stigma (Corroon et

al., 2016b). thus, the importance of the study to assess predictors and barriers to FP access through pharmacies and drug shops among young women.

1.2 Background

1.2.1 Historical background

Every year, an estimated 74 million women from low- and middle-income countries experience unintended pregnancies resulting into 25 million unsafe abortions and increasing the risk to morbidity and mortality for women and infants (WHO, 2019). In a recent report, WHO noted that in 2019, almost half of the 21 million adolescent pregnancies were unintended. This led to higher maternal and infant morbidity and mortality rates, increased school dropout rates among young women, economic strain on families and communities, and a perpetuation of poverty and limited opportunities for young women (Choonara, 2024). In Uganda, approximately 25% of girls between the ages of 15 and 19 are either pregnant or have already given birth. According to Uganda Bureau of Statistics, almost a quarter of Ugandan women have given birth by the age of 18 years UBOS (2018)

The global drive to make FP services available to young women, especially in low- and middle-income countries, may be the primary reason that some pharmacies and drug shops are emerging as potential major suppliers of contraceptives (Bradley and Shiras). The integration of pharmacies and drug shops into FP services was a pragmatic solution to the inequitable and insufficient delivery of healthcare services, particularly for marginalized population groups such as adolescent girls and young women. As early as the 1980's and 1990's, pharmacies and drug shops played an important role as providers of contraceptives and health information in settings with poor public health infrastructure and highest maternal deaths in the world to

support the health needs of populations (FP, 2020). By the 2000s, sufficient evidence revealed their role as one of the points of access for marginalized populations, especially young women who were often stigmatized by publicly available clinics or were logistically unable to access them (Aloo et al., 2023). In high-income countries like Canada and Austria, pharmacies have been integrated into formal healthcare systems for a long time, providing over-the-counter contraceptives, emergency contraception (EC), and hormonal methods prescribed by pharmacists. In Sub-Saharan Africa (SSA), around 25% of contraceptive users depend on pharmacies or drug shops, and this figure has risen to 40% in South Asia (FP, 2020).

Regulatory frameworks have been slowly adapted to incorporate pharmacies and drug shops into national health strategies, although the pace of progress differs across regions (FP, 2020). Like other countries, the Uganda's Ministry of Health in collaboration with National Drug authority approved the provision of FP services at drug shops and pharmacies and working in partnership with international organizations like USAID/Uganda Family Planning Activity and Pathfinder International, has improved family planning (FP) access through pharmacies and drug shops. This has been done through policy changes allowing accredited drug shops to offer injectable contraceptives, training and supporting drug shop operators, and facilitating public awareness campaigns to inform communities of their availability (UNFPA 2020). However, despite the above efforts, various challenges limit the reality of young women accessing Family planning services through pharmacies and drug shops. The delivery of services through pharmacies and drug shops faces multiple obstacles which include unsteady staff training and supply gaps as well as restrictive service policies which make these locations less reachable young women between 15 and 24 years old (Mayora et al, 2018). In view of the above gaps, the

study to explore predictors and barriers to family planning access through pharmacies and drug shops among young women 15-24 years would help identify some the challenges young women face when accessing FP services in those outlets.

1.2.2 Theoretical Perspective

The study was based upon Levesque's patient-centered theory of access and it is established that, to have services truly accessible for the public, those services need to be in existence, physically and socially accessible, culturally acceptable and of acceptable quality, while Andersen's Behavioral Model was utilized to explore the predisposing and enabling factors that lead to actual use of health care services available to clients (Mbalinda et al., 2020). In this study the dependent variable was family planning access, while the independent variables were; the predictors and obstacles to access. Levesque's model was used to examine the obstacles by understanding access as a changing relationship between the parts of the health system and the capacities of individuals in five categories (Cu et al., 2021) being accessibility, availability, affordability, accommodation and acceptability (Penchansky and Thomas, 1981). A number of barriers to family planning access were enumerated in this study, along with Levesque's model as the explanation; for instance; Socio-cultural barriers, health system barriers, Individual barriers.

Levesque's framework reveals how supply-side deficiencies e.g., stockouts and demand-side limitations e.g., fear of infertility interact to restrict access. Recent adaptations emphasize "human fit" the alignment between young women needs and providers' capacities(Voorhees et al., 2022). In Wakiso, this is disrupted by untrained pharmacy staff and rigid clinic hours incompatible with school schedules. Modified Levesque models emphasize relational continuity of care, critical for young women

who fear judgment (Voorhees et al., 2022). Wakiso's pharmacy and drug shop-centric FP delivery disrupts this, pushing youth toward inconsistent pharmacy use.

The Andersen's Behavioral Model examined the factors associated with the use of family planning services (Khatri & Assefa 2022; Shukla et al 2020). Specifically, these factors included: socio- economic factors, demographic factors and individual factors like knowledge, attitude, ever terminated any pregnancy, ever used FP, sexually active last 4 weeks, age at first sex). Social norms, such as parental opposition to FP, affect AGYW's base likelihood of seeking care (Khin et al., 2025). Early marriage created conflicting needs desire to space births vs. societal pressure to prove fertility. Health systems issues like pharmacy stockouts and provider bias directly limit access, even for motivated young women. Cultural norms reduce service acceptability, while provider biases (health systems factor) reinforce exclusion, creating recursive barriers(Voorhees et al., 2022).

1.2.3 Contextual Perspective

Uganda is facing challenges with family planning services that are unable to meet the needs of the population. Uganda has high total fertility rate (TFR) of 4.47 birth per woman and low contraceptive prevalence rate (CPR) of 39.9% (World Bank, 2022). Uganda's CPR remains substantially below the global total of 77.5% for women of reproductive age utilizing modern contraceptives. The family planning market in the country is heavily reliant on free or subsidized services which cause unequal access between the rich and poor as well as urban and rural (UNDP, 2022). Conversely, Wakiso District being the most urbanized area around Kampala is also facing challenges in providing affordable family planning services to young women. The district's composition of formal and informal settlements has led to disparity in

health care access and this is more pronounced in pharmacies and drug shops which are key contraceptive sources to the youth (UNFPA, 2020a). Key statistics underscore the seriousness of the situation: only 30% of women in Wakiso utilize short-acting reversible contraceptives (SARC), while 18% rely on long-term methods(Arunda et al., 2023a). Moreover, urban settings show a 40% lesser predisposition for modern contraceptive use compared to rural regions like Hoima, which clearly have also structural obstructions. Tetui et al (2020) illustrated that 84% of health facilities in Kira Municipality (an urban area) consist of small private clinics. Only 42% of these clinics have 3 or more method offerings(Arunda et al., 2023b). Long-acting methods, implants and IUD's have 2.3 less access in informal settlements than formal land areas. Significant vulnerabilities exist in adolescents, with 37.3% of Wakiso adolescents aged 17-19 being married but females and males who are unmarried experience systematic discrimination where 48% of facilities refuse service to unmarried adolescents.

Family planning facilities such as pharmacies and drug shops have their challenges with bolstering access. One challenge is service quality, only 56% of pharmacies provided family planning information materials, and less than 30% of pharmacies provided sufficient counseling (Mulubwa et al., 2021). Information gaps further complicate the situation, as 43% of young women express worries about infertility linked to contraceptives, especially long-acting methods. Although national initiatives like the Village Health Team (VHT) expansion aim to improve access, tailored policies are necessary to tackle the specific urban challenges in Wakiso(Kawuma et al., 2023). Suggested actions include establishing standardized accreditation for pharmacies that sell contraceptives, incorporating youth-friendly service standards into district health plans, and ensuring targeted distribution of commodities to drug

shops in informal settlements (AYSRH, 2018). These strategies could draw on successful models like; The challenge Initiative (TCI) Tanzania framework, which trains pharmacy staff in youth-friendly services and enhances referrals between clinics and pharmacies. The model though recommended for Wakiso, could only systematically adopted with guidance from identified gaps in family planning access through pharmacies and drug shops among the young women.

In Nsangi, Wakiso District, family planning services are accessed through pharmacies and drug shops, which matters for young women because of their accessibility and anonymity. Nonetheless, some barriers hinder access. Limited knowledge about existing family planning methods and services may deter some young women from seeking services(Nabirye, 2013). Social and cultural barriers such as stigma and societal norms inhibit unmarried adolescents from accessing family-planning services openly. Other barriers include the cost of services and products and distance to pharmacies and drug shops(UNFPA, 2020b). Finally, privacy issues arise because fear of being stigmatized and mistreatment by healthcare providers can keep many young women from these services. To overcome direct and indirect barriers, specific interventions, such as education campaigns, youth friendly services, and policies that encourage equitable access of family planning services for all adolescents and young women including adolescents in Nsangi, Wakiso District, are all viable options. Existing programs have shown some successes at improving access to family planning services, but much more still needs to be done to meet the specific needs of this population (Nabirye, 2013). The policies of Ugandan government are aimed at expanding the coverage of family planning services including to adolescents, however, there are challenges with implementation, and there are still societal

norms that are a major barrier to achieving these coverage goals at the local level (UNFPA, 2020).

1.2.4 Conceptual background

This study primarily centered on three variables: predictors, barriers and access to FP services. The dependent variable in this study, is access to FP services. Access to family planning has numerous definitions from different scholars, which reflects the complexity and multidimensionality of access. For instance, Bertrand et al. (1995) defined access as "the degree to which family planning services and supplies can be obtained as a level of effort and cost that is acceptable and affordable for a larger majority of the population." Penchansky and Thomas (1981) defined access as "a broad term that includes several specific instances of potential or realized alignment of a patient with the healthcare system, including accessibility, availability, affordability, accommodation, and acceptability" (Penchansky and Thomas, 1981). Aday and Andersen defined access as a complex concept that could be described as either potential or realized access, and emphasized how a particular population group came into contact with the healthcare delivery system (Aday and Andersen, 1974). WHO particularly acknowledges that family planning access is a fundamental human right, and this right has been the very basis for the promotion of other rights such as life and liberty. The above definitions thus clearly show limitation (i.e., cost, location, privacy, acceptability by the given culture, and systemic barriers) that should be taken into account when assessing access to family planning services (WHO, 2008). Family planning is the ability of couples and individuals to plan for the number, timing and spacing of their children, while access to family planning services is the ability of women or couples to reach and obtain FP services to plan the number, timing and spacing of their childbearing (WHO, 2008). The definition of

predictor of access, which is one of the independent variables in this study; is: a factor/variable that can be used to predict or estimate the probability of future event or outcome. Predictors can provide evidence to facilitate or assess what may happen given the available evidence or patterns of behavior. This study explores the predictors for individuals and/or couples to access family planning services, for instance: socio economic factors (income, level of education, employment status); demographic factors (age, marital status, parity); certain health systems factors; (distance to health facility, stock outs, quality of services), individual factors (knowledge, attitude, ever used FP, sexually active in the past 4 weeks, age at first sexual intercourse). These may help to predict AGYW likelihood of accessing FP services through pharmacies and drug shops.

Barriers associated with access to FP services is another key independent variable which is literally defined as the factors that prevent individuals and couples from acquiring access to FP services. These may include; Socio-cultural barriers (religious beliefs, cultural norms, partner support), health system barrier (access to services, cost, quality of services, regulatory policies, providers attitude and knowledge on family planning, lack of privacy, continuity of care), Individual barriers (lack of knowledge, myths and misconceptions, fear of side effects). For example, although not specifically measured in Wakiso, research indicated that 90% of Ugandan adolescents view cost as a significant barrier, which is intertwined with socio-demographic factors like poverty in informal settlements (Khin et al., 2021)

1.3 Statement of the problem

Access to family planning services among young women aged 15 – 24 years is a fundamental factor in reducing the high levels of maternal and perinatal morbidity and mortality due to unintended pregnancies. To accelerate the achievement of the Family Planning 2030 targets, Uganda like other countries explored the potential of private entities like pharmacies and drug shops in providing FP services. Though pharmacies and drug shops are located close to the communities in both urban and rural settings and can be easily accessed where public health facilities are inaccessible, their potential in providing family planning services to young women has not been fully explored. There are still significant gaps in; the proportion of the population of young women accessing FP through pharmacies and drug shops, there is insufficient information on the predictors and barriers young women face accessing family planning services through pharmacies and drug shops.

Wakiso District, which is rapidly urbanizing around Uganda's capital Kampala, struggles to meet the demand for family planning services among young women (UNFPA, 2021). Despite being closer to urban areas with supposedly better healthcare facilities, there are still large service gaps affecting young women access to the needed reproductive health care(Arunda et al., 2023b). There are disparities in healthcare access, especially through public health facilities leaving pharmacies and drug shops as critical sources for the youth to access contraceptive methods. This has led to rising rates of teenage pregnancy, unsafe abortions, school dropout rates, and maternal deaths. In 2020, Wakiso district reported 10,439 cases of teenage pregnancies. Between March 2020 and June 2021, the rate of unintended pregnancies among women and girls aged 10-24 years in Wakiso rose by 22.5%,while

a study conducted in 2020 in Wakiso alongside Kamuli and Mayuga districts revealed, 46% of those that received post abortion care were adolescents(UNFPA, 2021).

Uganda as country may not achieve a significant increase in young women accessing FP services through pharmacies and drug shops if deliberate effort to identify and address barriers to access through research to inform community and government interventions and strategies is not undertaken. Hence, the study to explore predictors and barriers to family planning access through pharmacies and drug shops among young women 15-24 years in Nsangi, Wakiso District.

1.4 Purpose of the study

The study sought to determine the proportion of young women 15-24 years accessing FP, the predictors and barriers to access through pharmacies and drug shops among young women in Nsangi, Wakiso District.

1.5 Research questions

1. What is the proportion of young women 15-24 years accessing family planning services through pharmacies and drug shops in Nsangi, Wakiso District.
2. What are the predictors to Family planning access through pharmacies and drug shops among young women 15-24years in Nsangi, Wakiso District.
3. What are the barriers associated with family planning access through pharmacies and drug shops among young women 15-24years in Nsangi, Wakiso District.

1.6 Specific objectives

1. To determine the proportion of young women 15 -24 years accessing family planning through pharmacies and drug shops in Nsangi, Wakiso District.

2. To determine the predictors to family planning access through pharmacies and drug shops among young women 15-24years in Nsangi, Wakiso District
3. To determine the barriers to family planning access through pharmacies and drug shops among young women 15-24years in Nsangi, Wakiso District.

1.7 Justification of the study

The study was done to establish the proportion of young women 15-24 years accessing FP through pharmacies and drug shops in Nsangi, Wakiso District, identify the predictors to access and barriers that young women face when accessing FP through pharmacies and drug shops. Ultimately, the findings support Uganda's commitment towards the Sustainable Development Goals generally, and health and well-being; gender equality; and education.

1.8 Significance of the study

This study identified predictors and barriers to family planning access through pharmacies and drug shops among young women and suggest some responsive approaches that would inform policymakers who wish to enable targeted interventions to eliminate unplanned pregnancies and improve reproductive health outcomes in adolescent girls and young women.

By conducting this study among young women 15-24 years, this could promote better coordination and effective collaboration between healthcare service providers, community leaders and educational institutions to enhahnce reproductive health services, through highlighting areas where collaboration is most needed. The information from the study could guide the formulation of evidence-based policies and programs that prioritize adolescent reproductive health, aligning with national

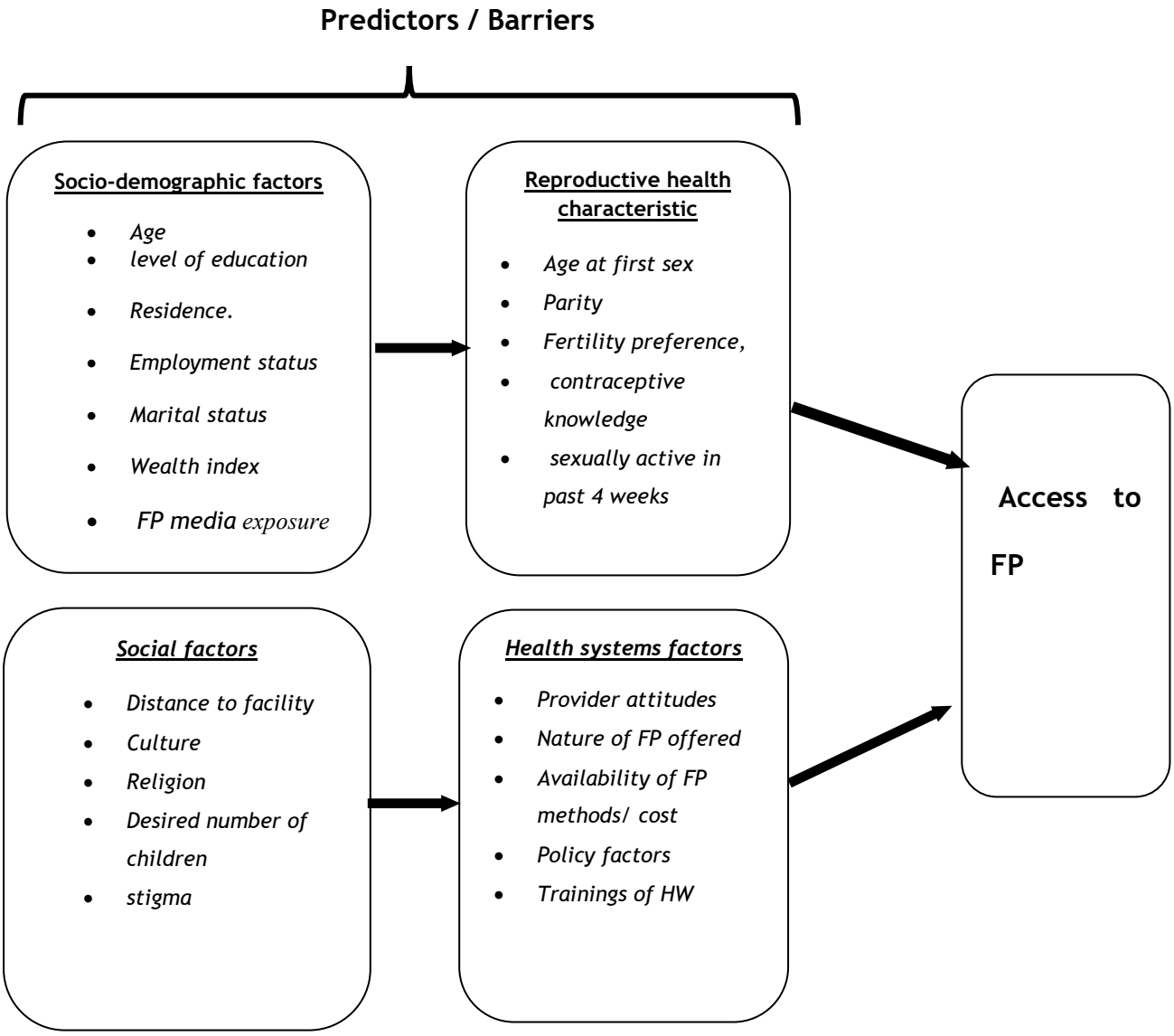
health agendas and international commitments, such as the Sustainable Development Goals (SDGs).

1.9 Scope of the study

The study was conducted between June 2025 to July 2025 through a cross-sectional study of young women aged 15-24 years, sampled from Nsangi, Wakiso District. The study focused on determining the proportion of young women accessing FP through pharmacies and drug shops, identifying specific challenges young women face when accessing family planning services through pharmacies and drug shops and predictors to FP access through pharmacies and drug shops. All young women below and above the specified age, and those not willing to participate in the study were excluded from the study. Data was collected by the researcher using questionnaires, and key informants' interviews.

1.10 Conceptual framework showing predictors and barriers to family planning access among young women

Figure 1: Conceptual Framework showing predictors and barriers to family planning access



Source: *Adopted from Framework for patient-centered access to healthcare (Levesque et al. 2013)*

The Conceptual Framework for this study was developed based on a synthesis of existing literature, highlighting predictors and barriers identified in previous studies as key factors influencing access to family planning among young women in Nsangi, Wakiso District.

Narrative

Access to family planning was shaped by a complex interplay between individual socio-demographic characteristics and reproductive health experiences. Understanding these interactions helps in designing targeted interventions to improve FP uptake, especially among underserved populations. (Levesque, 2013); (Celik, 2016). The conceptual framework illustrated how various socio-demographic and reproductive health characteristics; health systems factors and others interacted to influence the dependent variable which was; access to family planning services.

Socio-demographic Factors: These were background characteristics that shaped individual exposure, attitudes, and ability to utilize family planning services. They include:

Age – Influences reproductive maturity, fertility intentions, and risk perception.

Level of education – Higher education levels were associated with better knowledge of reproductive health and greater autonomy in decision-making.

Residence – Urban residents had better access to FP services compared to rural counterparts.

Employment status – Employment enhanced economic empowerment, facilitating service access.

Marital status – Being in a union influenced the demand for family planning services.

Wealth index – Financial stability often enabled access to quality healthcare services, including FP.

FP media exposure – Increased awareness and knowledge about available FP options and services.

Reproductive Health Characteristics: These were direct reproductive and sexual health experiences that affected contraceptive behaviour. These included:

Age at first sex; early sexual debut increased exposure to pregnancy risk and need for contraception.

Parity; the number of children influenced future fertility preferences and contraceptive use.

Fertility preference and modern contraceptive knowledge; guided individual choices on whether and when to use FP.

Sexual activity in the past 4 weeks; indicated current risk of pregnancy and immediate need for contraception.

Ever terminated any pregnancy; reflected prior unmet need for FP and future desire to avoid unplanned pregnancies.

Contact with FP health workers; enabled personalized counselling, service uptake, and informed decision-making.(Graves, 2022)

These independent variables did not operate in isolation but interacted dynamically. For example; A young, educated woman living in an urban area with regular media exposure and employment was more likely to have the knowledge, means, and opportunity to access family planning services. On the other hand, a rural, less-educated woman with limited exposure to FP messages and minimal interaction with FP health workers faced multiple barriers to access. Contact with FP health workers

acted as a key facilitator, especially when socio-demographic factors posed challenges. Fertility preference and parity determined personal need and motivation, while knowledge and sexual activity signaled immediate demand for services.

CHAPTER TWO:

2.0 LITERATURE REVIEW

2.1 Introduction

The chapter discussed research related to predictors and barriers to family planning (FP) access through pharmacies and drug shops among young women 15 -24 years. Emphasis was provided on the theory and model connected with the study, how they related to one another and how they assisted in identifying research gaps in access to FP services.

2.2 Theoretical Review

The study incorporated both Levesque's patient-centered access theory and Andersen's Behavioral Model, to study predictors and barriers to family planning (FP) access among young women

Levesque's Framework of Healthcare Access; In the scoping review through the four databases for studies citing Levesque's patient -centered access theory (Cu et al., 2021b), 1838 documents underwent title screening, followed by abstract screening by two independent reviewers. They conceptualized access as a dynamic interaction between health system dimensions and individual abilities across five domains; These domains included; approachability, acceptability, availability, affordability and appropriateness. They further stated the five corresponding abilities of how populations interacted with the dimensions of accessibility to generate access. These abilities include; ability to perceive, ability to seek, ability to reach, ability to pay and ability to engage.

Approachability (awareness of services): Socio-demographic factors like low education levels limited young women ability to identify FP needs, as 43% held misconceptions about contraceptive-induced infertility(Cu et al., 2021a). Health systems failed to bridge this gap, only 56% of pharmacies displayed FP information, perpetuating knowledge barriers(Jindal et al., 2023).

Acceptability (Cultural factors), included the stigma surrounding unmarried adolescents, leading to significant disparities. 48% of facilities refused to provide services to unmarried youth, highlighting a systemic bias that did not align with the needs of young women (Cu et al., 2021a). Additionally, religious beliefs imposed further limitations on the acceptability of contraceptives, especially long-acting methods(Khin et al., 2025).

*Availabilit**y*** (geographic/physical access), Urban-rural disparities in Wakiso were evident, with informal settlements having 2 to 3 times fewer long-acting methods available, a situation worsened by health system issues such as stockouts(Jindal et al., 2023). Pharmacies in these areas frequently lacked trained personnel, which diminishes the quality of health care service.

Affordability: Although not specifically measured in Wakiso, research indicated that 90% of Ugandan adolescents viewed cost as a significant barrier, which was intertwined with socio-demographic factors like poverty in informal settlements(Khin et al., 2025).

Appropriateness (quality of care): The skillsets of providers were critical. Only 30% of pharmacy staff provided family planning counseling cues, which didn't fulfill the need for confidential, youth-friendly services for adolescents. Levesque's model illustrated how supply-side deficits i.e. stock outs and demand-side constraints such

as fear of infertility interacted to limit access. In Uganda, implications from a cross-sectional qualitative study with 128 in-depth interviews, statements with AGYW, public and private health care providers, community leaders and policy makers focused on 'human fit.' This emphasized the need for alignment between AGYW's needs and providers' human and organization capacities (Voorhees et al., 2022).

Andersen's model complemented Levesque's theory by categorizing determinants into; predisposing factors, enabling factors and needs factors.

Predisposing factors: Socio-demographics e.g., 37.3% of 17–19-year-olds were married) and social norms e.g., parental opposition to FP shaped AGYW's baseline likelihood of seeking care(Khin et al., 2025). Early marriage created conflicting needs; desire to space births vs. societal pressure to prove fertility.

Enabling factors: Health systems issues like pharmacy stockouts and provider bias, directly limited access to family planning services, even for motivated AGYW. Wakiso District's reliance on private clinics (84% of facilities) exacerbated fragmentation of family planning services, as these often lacked youth-friendly protocols(Jindal et al., 2023).

Need factors: Reproductive health indicators such as pregnancy intentions interacted with access barriers: an unmet need appeared when preferred methods e.g., implants were not available or providers rejected adolescents' preferences (Khin et al., 2025).

It is essential to note the frameworks interacted in three main ways; Structural inequities: Levesque's "availability" aligned to Andersen's enabling factors. For example, Wakiso's urban informal settlements faced a double-shortage of FP

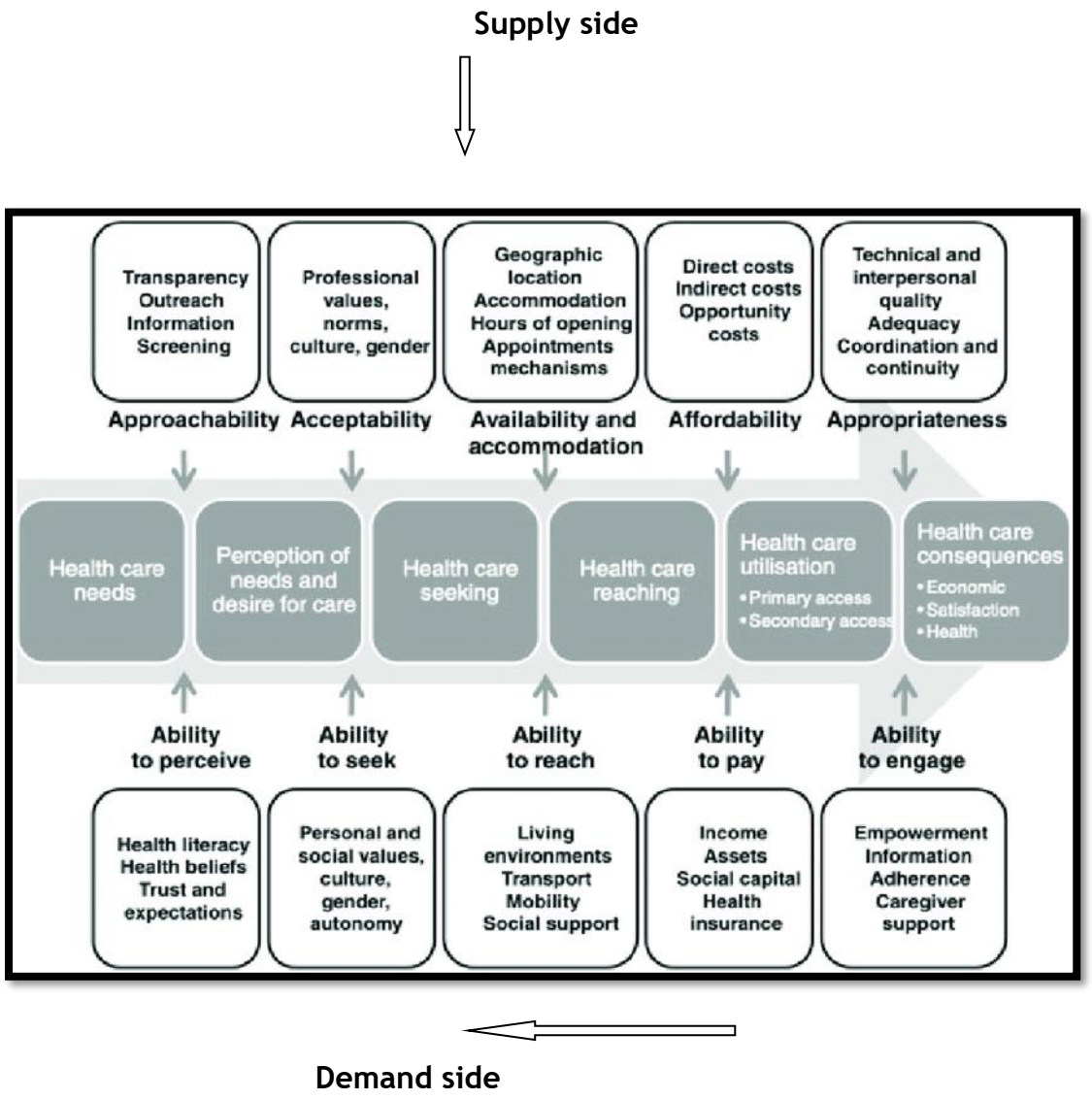
commodities and trained providers and further disadvantaged unmarried adolescents (Jindal et al., 2023).

Social-stigma feedback loops: Cultural norms (predisposing factor) reduced service acceptability, while provider biases (health systems factor) reinforced exclusion, creating recursive barriers(Voorhees et al., 2022).

Continuity of care: Modified Levesque models emphasized relational continuity(Voorhees et al., 2022) which was critical for young women who fear judgment. Wakiso's clinic-centric FP delivery disrupted this, pushing young women towards inconsistent pharmacy use.

Figure 2: Conceptual framework of access to health care

A conceptual framework of access to health care adopted from Levesque framework of health care access



Source: Adopted from Framework for patient-centered access to healthcare (Levesque et al., 2013)

Narrative

To make it possible for users to identify unmet FP needs, two aspects should be considered. First, users themselves should be able to perceive unmet contraceptive needs. This ability depended on users' previous knowledge about contraceptives, health beliefs about contraceptives, trust in contraceptive efficacy, and expectations about contraceptive use. This ability was mediated by user characteristics such as illiteracy, language proficiency, and access to sources of information about contraceptives. Second, contraceptive providers, also referred to hereafter as "providers", should be approachable. Approachability was influenced by transparency, information, outreach activities, and screening for contraceptive use and needs. Information from providers should adequately, accurately, and comprehensively inform users of where, how, and which services could be obtained, and possible side-effects (Levesque, 2013); (Celik, 2016).While availability was a critical aspect of healthcare access, additional factors affecting access to care and health care inequities across the rural-urban spectrum included approachability, appropriateness, acceptability, and affordability (Graves, 2022)

To address approachability, health care systems should have the capacity to assess a community's needs and ensure that local populations were informed and could identify and access appropriate and effective medical services. This included providing access to timely health information, which was often delivered through posters and direct interaction with the health care provider.

To ensure appropriateness, health care must be physically or technologically accessible and patients should be provided sufficient information to obtain medical

services that suit their preferences for technical care, continuity of care, interpersonal relationships, and comfort.

The growing literature on patient preferences for primary care services cite the importance of quality of care, waiting times, and interpersonal interaction with the provider. When considering acceptability, it was important to note that rural residents might have preferred services based on factors other than physical distance, such as specialization, availability of specific services, and patient-centeredness. Finally, affordability and health care costs might also have played a significant role in patient's preferences for, and access to, health care services.

Through an examination of conceptual reviews and empirical studies, Cheraghi-Sohi developed a 'conceptual map' of the key attributes of primary care that were important to patients. They identified seven attribute categories which included: access (to care and to preferred services), technical care quality, interpersonal care (including communication and explanation), patient-centeredness, continuity (of information, care and provider), outcomes (including health status, quality of life and satisfaction) and hotel aspects (such as waiting room) (Kenny et al., 2016)

2.2.1 Access to family planning services through pharmacies and drug shops among young women aged 15-24years.

Access to family planning services is vital for adolescent girls and young women aged 15-24, since this influences their reproductive health as well as overall wellness. Because pharmacies and drug shops were the primary access points for contraceptive services especially in those instances where public health facilities did not exist and/or there was stigma around seeking services there, the review described several studies that had explored the contributions of pharmacies and drug shops in

providing family planning services to this population and identified some similarities and differences in findings.

Most post-2018 research employed observational designs or program evaluations rather than randomized controlled trials. For example, a 2021–2022 Ugandan intervention tracked service uptake across 16 drug shops, finding increased youth utilization but lacked control groups for comparative analysis. Similarly, a 2021 human-centered design (HCD) study in Tanzania conducted by (Hunter et al., 2021) used qualitative methods (18 interviews, 9 shadowing sessions, 6 focus groups) to tailor drug shops for young women's needs but did not measure long-term health outcomes.

Studies often aggregated adolescents (15–19 years) with young adults (20–24 years), obscuring nuanced needs. For instance, a 2020 analysis of Ugandan drug shops reported rising youth engagement but did not differentiate between ages or parity. Sample sizes for youth-specific interventions were frequently small: the Tanzanian HCD study included only 39 participants, while a 2020 injectables-focused project in Uganda examined 300 drug shops but lacked age-disaggregated data(Oluwasanu et al., 2021). Married vs. unmarried youth disparities were understudied, though unmarried women were more likely to use pharmacies for contraception(Gonsalves, 2020).

Design gaps included; a reliance on cross-sectional data and insufficient mixed-methods approaches. For example, a 2019 Tanzanian study cited private-sector contraceptive uptake (37%) but provided no longitudinal analysis of discontinuation rates. Training and policy impacts were poorly quantified: while 57% of Kenyan pharmacy staff received family planning training, no studies evaluated how this

affected youth service quality (Oluwasanu et al., 2021). Additionally, self-injection programs (for example, DMPA-SC in Uganda) showed promise but lacked evidence on adolescent-specific adherence or safety.

A survey conducted by Ahissou et al. in 2022 assessed the family planning usage of adolescent girls and young women in Benin and revealed that only 8.5% of those aged 15-24 were using modern family planning. This demonstrates there exists a substantial family planning gap for this age group. The study revealed young women generally accessed male condoms from for-profit outlets, pharmacies, and clinics, indicating pharmacies were implicated in the access to family planning. Another cross sectional, mixed methods study by Meredith et al., (2020) on; adolescent perceptions of pharmacist prescribing in Indiana carried out among 60 young women (14 -24 years) showed that the majority of young women were eager to receive contraceptives from pharmacists. The study raised issues of concern regarding improving confidentiality and education of pharmacists to further enhance youth-focused services.

2.2.2 The role of pharmacies and drug shops

Several studies suggested pharmacies and drug stores were major sources of contraceptives for young women and adolescents. For example, a study that performed a systematic review using Preferred Reporting Items using Systematic Reviews and Meta Analysis (PRISMA) analyzed 138 publications about young people under 25 years old who obtained sexual reproductive health products from pharmacies. The study showed that 37% of current contraceptive users obtained their FP methods at private sector locations which included pharmacies (Gonsalves

and Hindin, 2017). However, most articles in this review were written by authors from high-income countries which includes the USA and the UK.

Similarly, research in urban Nigeria and Kenya showed that such outlets were primary sources of short-term contraceptives like pills and condoms, with young women (<25 years) being more likely to use them than public facilities(Corroon et al., 2016a). The trend was even more pronounced among unmarried women who face societal barriers when trying to access services in traditional health facilities.

Although numerous studies had confirmed the beneficial role played by pharmacies, some discrepancies had been observed in their efficiency. For example, even though pharmacies had been recognized as key points of access, some doubts regarding the quality of counseling provided did exist. A significant number of pharmacy staff did not receive training in family planning methods; only 57% of the providers in Kenya had received the proper training(Corroon et al., 2016a). Such deficit might have led to inaccurate information or poor services, and this was likely to dissuade certain teens from benefiting from these tools. In addition, research indicated differing levels of contraceptive use across different groups. For example, whereas younger, unmarried women preferred pharmacies, married women preferred long-acting methods that were mostly accessible through clinics(Corroon et al., 2016a). This disparity questioned the availability of full family planning services across different ages and marital status groups in pharmacies and drug shops.

The majority of studies agreed that pharmacies and drug shops were vital points of entry for contraceptives, particularly in low-resource settings. They promoted the involvement of pharmacists in order to provide important services and information adolescents need to avoid an unintended pregnancy (Meredith et al., 2020, Ahissou

et al., 2022). However, other studies presented contradictory evidence for whether or not pharmacist prescribing would be a viable option as a mechanism to improve access. While some studies suggested a positive inclination among adolescents toward pharmacist services, others argued that legal and system barriers limited actual access among younger adolescents(Meredith et al., 2020). Further, the degree of social stigma and cultural resistance also varied significantly geographically, with varying conclusions concerning the feasibility of access through pharmacy in conservative vs. more liberal environments. There was a consensus that improved training of the pharmacists qualified them to counsel and guide young clients appropriately, which would make the overall pharmacy-based contraceptive services more efficient (Meredith et al., 2020). The possible explanation for the observed differences could be attributed to the social and cultural environment which strongly influenced adolescents' acceptance of receiving contraceptive services. In conservative communities, stigma and parental consent conditions deterred young women from using pharmacies for contraceptives.

Synthesis of the literature

The reviewed literature demonstrates that pharmacies along with drug shops possess significant opportunities to promote family planning service accessibility to young women yet multiple obstacles hinder access. The main obstacles to accessing services include social stigma, legal restrictions and untrained health workers who provide services to patients. To achieve maximum access, it was essential to implement multifaceted strategies that addressed these barriers, including community mobilization, policy advocacy for youth-friendly services, and adolescent-specific education campaigns. By fostering an environment that

promoted open discussion on reproductive health and allowed young women to access contraceptive services, the overall effect of pharmacy-based family planning could be significantly enhanced.

2.3 The barriers to accessing family planning services through pharmacies and drug shops among young women aged 15-24years in Nsangi, Wakiso District.

Pharmacies and drug shops provided impactful family planning services that were important to adolescent girls and women aged 15-24 years. There were barriers that limited the effective use of services. Research indicated that barriers to using contraceptive services were; social stigma, lack of knowledge about available services, and laws regarding age and marriage affecting access to contraceptives. A qualitative research evaluation in Guinea included 60 in-depth interviews and 10 focused group discussions which targeted adolescents together with young women aged 15-24 and their healthcare providers and their parents. The study revealed multiple barriers to family planning access which stemmed from individual aspects and interpersonal relationships and socio-cultural elements as well as health systems issues (Meredith et al., 2020). Literature further showed that lack of knowledge and awareness, cost and financial constraints, limited location and limited mobility, inconvenient operating hours, provider attitude, lack of confidentiality, socio-cultural and religious barriers, legal restrictions and age-related barriers hindered access to FP services.

Knowledge gaps and insufficient awareness represented major challenges; Most young women and adolescent girls maintained minimal understanding about family planning services which drug shops and pharmacies provided. The lack of knowledge among these girls stemmed from insufficient health education exposure and false

information regarding contraceptive methods (Chandra-Mouli and Akwara, 2020b). Research from the International Center for Research on Women (ICRW) evaluated adolescent childbearing reduction and contraceptive requirements for young women from 1995 to 2020 and demonstrated that awareness-based programs needed to be implemented for enhancing family planning service accessibility (Chandra-Mouli and Akwara, 2020b, Glinski et al., 2017).

Costs and financial constraints. The expense of family planning services and products could be a substantial hindrance to adolescents and young mothers, who generally have little financial autonomy or resources. The research conducted by Brittain et al. (2018) examined the published literature from 2011 to identify suitable methods for systematic and narrative reviews of youth-friendly family planning services and their effects on reproductive health outcomes and family planning access. This research showed that financial constraints consistently appeared as a major obstacle which prevented adolescents and youth from accessing contraceptive methods.

Inconvenient location and limited mobility. Pharmacies and drugs shops were not always close by, and this created challenges for youth who had mobility restriction. This was an added social restriction for young women (McCleary-Sills et al., 2014). A research study conducted by Chandra-Mouli and Akwara (2020b) determined that multiple research studies had identified limited transportation options and inconvenient locations as major barriers to contraception access for adolescents

Inconvenient Operating hours, Pharmacies and drug shops could not be operated within convenient hours for adolescents, as they would have to attend school or carry out other tasks during working hours(Brittain et al., 2018). The research

demonstrated that restricted or poorly timed clinic hours served as a frequent obstacle which prevented people from using family planning services. The fixed daily routine of adolescents which included school and other obligations coincided with the operating hours of drug shops, clinics and pharmacies. Since the majority of health centers and pharmacies had regular opening hours, adolescents could not find it feasible to spare time to access family planning services without compromising their school or personal timings. This limited access was a barrier to service utilization, leading to unmet demand for contraception and reduced family planning use among young people. In addition, even when services were available, teens could face social stigma or privacy issues in seeking contraception during late evening hours when they were likely to be noticed by peers or members of the surrounding community. Expanded clinic hours, youth-friendly services, and use of digital technology for consultation and prescription could counteract these problems.

The providers attitude. Pharmacy and drug shop health service providers might possess prejudices against distributing contraceptives to unmarried teens. These prejudices could be evident as hesitance to provide services or information (Aguilar and Cortez, 2015). Qualitative research conducted by Dioubaté et al. (2021a) identified provider attitudes and biases as obstacles to modern contraceptive use among Urban Adolescents and Youth (15–24 years) in Conakry. The biases and attitudes of providers affected both the quality and accessibility of adolescent services.

Lack of privacy and confidentiality. Young people require private and confidential areas to access family planning services. The conditions required for young women

to seek assistance from pharmacies and drug shops were sometimes unavailable which prevented them from accessing these services (Aguilar and Cortez, 2015). Researchers showed that access was limited by perceived lack of privacy and confidentiality, as adolescents did not want be judged or punished by family and community members (Brittain et al., 2018)

Social-cultural and religious barriers. Religious values and sociocultural beliefs could discourage adolescents from utilizing family planning services. Sociocultural values usually stigmatized pre-marital sex and the use of condoms, which discouraged young women from seeking the services openly(Dioubaté et al., 2021a). Findings from this study indicated that religious and sociocultural controls directly influenced teenager decisions regarding family planning. The probable explanation was that religious and sociocultural values affected the expectations of society about sexuality, morality, and reproductive health, particularly in adolescents. Most communities disapproved of premarital sex and viewed contraceptive use by unmarried and young people as an encouragement of sexual activity which opposed religious and conventional norms. Stigma bred fear of judgment, shame, or even social punishment, which discouraged adolescents from openly seeking family planning services. Moreover, religious teachings that called for abstinence before marriage and against the use of contraceptives enforced the perception that it is ethically wrong to seek family planning services. Thus, adolescents, especially young females, refrained from going to clinics or buying contraceptives because they did not want to be stigmatized as sexually active or rejected by their family, religious figures, and community. This constrictive environment led to limited access to reproductive healthcare, which increased the likelihood of unintended pregnancies and unsafe sex for teenagers.

Legal restrictions and age-related policies, in some places, laws and regulations restricted the availability of contraceptives to adolescents based on age or marital status. This discouraged them from accessing services at pharmacies and drug shops(Chandra-Mouli and Akwara, 2020b). Legal restrictions and age-based policies were noted as barriers that prevented adolescents from accessing necessary family planning services. Most cultures had conservative views on teen sexuality, and this led policymakers to implement age or marital status restrictions to regulate access to contraceptives. The aim of such policies is were to avoid premarital sex, promote abstinence, or adhere to conventional values where parental or marital participation in reproductive decisions was paramount. However, there are consequences related to these interventions. Sexually active adolescents who were unable to access contraceptive services, were at a greater risk of unintended pregnancy and sexually transmitted infections (STIs). Fear of judgment, legal repercussions, or discrimination from healthcare providers also dissuaded them further from using services. Limiting policies also compelled teens to seek out unsafe and untrustworthy sources, leading to additional health risks.

Evidence existed to indicate that where young people were offered unfettered access to contraceptive services, they used them correctly and consistently more often, leading to enhanced reproductive well-being. Legal restriction, withdrawal and adolescent-accessible policy implementations, such as confidentiality assurances, youth-accessible service provision, and sexuality education, improved adolescent health and contraceptive use(Chandra-Mouli and Akwara, 2020b).

These barriers highlighted the different challenges that adolescent girls and young women must navigate to access family planning services through pharmacies and

drug shops. To overcome these barriers a multifaceted approach was required including; education, policy level changes, and improvements in the delivery of services.

2.4 Predictors of access to family planning services young women

Both demographic and socioeconomic factors play a key role in determining access to health services across sub-Saharan Africa, especially when it comes to sexual and reproductive health. Most studies emphasize marital status as a major factor influencing whether people can access these services. Unmarried adolescents often encounter considerably more obstacles in getting the care they need compared to their married counterparts. The difference could be explained by several factors.

Marital Status and Access to Services. In general, married adolescent girls demonstrated greater utilization of healthcare services, including enhanced access to reproductive health services. This increased utilization can likely be attributed to the social acceptance of married adolescents within their communities, as well as the support provided by their partners. For instance, a community-focused cross-sectional study examining Demographic Health Survey data from 23 Sub-Saharan African countries spanning 2014 to 2020 revealed that young married girls were generally perceived as having legitimate healthcare needs, which consequently facilitated their access to care (Zegeye et al., 2022). In contrast, unmarried adolescents frequently encountered stigma and discrimination when seeking reproductive health services. They could be viewed as engaging in inappropriate behavior, leading to reluctance from healthcare providers to offer them necessary services. This stigma could deter them from accessing essential health information and services (Sanyang et al., 2025).

Socioeconomic Status: Access to private healthcare services was heavily influenced by socioeconomic status. In most cases, adolescents from lower socioeconomic backgrounds simply could not afford the costs associated with private healthcare, such as consultations and drug prices. The financial burden could restrict their capacity to access appropriate and timely care (Ahinkorah et al., 2021) and could also cause the adolescent to delay seeking care or avoid health services altogether, possibly worsening their health status over time (Pujolar et al., 2022).

Education and Health Literacy: Studies consistently showed that traditional literacy and education were major components of health literacy. For instance, research indicated that higher reading scores were positively correlated with better health literacy among adolescents, suggesting that educational attainment played a significant role in enhancing health literacy skills(Jordan et al., 2019, Manganello, 2007). Moreover, e-health literacy had been identified as an important component shaping health promotion behaviors for adolescents and there was a greater likelihood of a positive health outcome when e-health literacy levels were increased (Gürkan and Ayar, 2020). Even with a more established relationship between education and health literacy, it was still necessary to develop more targeted interventions to increase health literacy on a lower education scale for adolescents. School-based health education programs were recommended as effective strategies to enhance health literacy, particularly in regions with limited access to formal education. A study also highlighted a need for better health information tailored for at-risk groups, like refugees and people with disabilities (Sarhan et al., 2023). To empower adolescents to effectively utilize healthcare services, including family planning, it was essential to develop and implement comprehensive health literacy programs that considered the diverse educational backgrounds of adolescents. These

programs should leverage both traditional and digital platforms to reach more people and focus on the unique requirements of disadvantaged communities.

Addressing Disparities: To reduce the variation in health care knowledge and utilization, state and local policymakers, and educators need to make a difference through multilayered, effective approaches that included sustained literacy instruction, health education, and digital literacy. These strategies could help bridge the gap between adolescents with varying levels of educational attainment, guaranteeing that everyone has the chance to make well-informed choices regarding their reproductive health.

Privacy and convenience: Studies carried out among adolescents in Ethiopia, Kenya, and Nepal valued pharmacies for contraceptive access due to their convenience, privacy, speed, and reliable stock availability, though this preference for over-the-counter purchases without counseling could compromise informed choice and proper method adherence(Gonsalves et al., 2023). Pharmacies were often situated in easily accessible areas, making it simple for adolescents to visit them without significant travel time. Many young people valued the discretion that pharmacies offered, allowing them to purchase health-related products without fear of judgment or exposure. While privacy was valued, it might have led to incomplete counseling, potentially affecting informed choice and method adherence.

Cost and affordability; Cost and affordability helped shape significantly influenced how easily teenagers could obtain medical services, particularly in poorer nations. High costs could create barriers to health care needs, including contraceptives and other health care services. In fact, in urban areas of low-income countries, cost was described as a major barrier to access for adolescents, especially those from poor

households. For example, in their urban low-income countries study, Saade et al. (2023) found cost to be a significant barrier for adolescents, especially poor households. Urban young women were more likely to seek out private sources of contraceptives, but cost prevented many from doing so. To address these affordability issues, there was a pressing need for subsidized or free contraceptive programs, similar to successful models implemented in France and New Zealand. This approach could help enhance access to essential FP services for adolescents facing economic challenges.

Availability also played a vital role in accessibility. Factors such as the location of services, stock levels, and the presence of qualified personnel would significantly impact whether adolescents could obtain the care they needed. Inadequate availability of FP services was reported, with many adolescents not receiving the help they require due to systemic barriers(Mubeen et al., 2024).

Method availability and range: In a recent study of method availability and range within global contexts, including Europe and Africa, it was established that pharmacies in many areas provided short-acting contraceptive methods e.g. pills and condoms, but rarely had long-acting methods. In some areas, even emergency contraception, was provided only with prescriptions, creating barriers to access the service (Runyan et al., 2021). There was a big difference in the availability of short-acting and long-acting reversible contraceptives that would completely solve the issue of contraception services coverage. Increasing access to such services could greatly expand (Khan et al., 2022).

Urban-rural disparities; Different studies indicate that, particularly with regard to reproductive health and the availability of contraceptives, urban-rural disparity has

largely determined some form of access to health care services. Research in East African countries, such as Tanzania and Kenya, indicated that in general, urban settings have better access to pharmacies and drug shops that offer a wide range of contraceptive options and health services (Mujinja et al., 2014; Akwara et al., 2023). Rural adolescents, on the other hand, faced important barriers, including long distances to health facilities, sparsely distributed drug shops, and shortages of trained providers (Kaiser et al., 2022). Due to these barriers, some young people could have unmet contraceptive needs and experienced difficulty in making informed choices regarding their reproductive health. While there was some recognition of a need to address these disparities, there were few policies and strategies to improve access in rural areas—such as mobile clinics or community distributors. There was a need to provide more innovative solutions to increase access to healthcare services for adolescents living in rural, underserved locations.

Training and Competency of Pharmacy Personnel were essential aspects to further advance health service, especially in areas where health services were accessed predominantly via pharmacies. In a study regarding a public-private partnership (PPP) initiative in Kenya, Mohamoud and Mash (2022) found that employing trained pharmacists improved quality of service and referral system back to the public health facility. By training pharmacy personnel, they learned to provide more appropriate guidance and support to patients to improve their health outcomes (Wafula et al., 2014). Nonetheless, there was little evidence in regards to youth training or competency assessments for pharmacy personnel. The evidence of general training had benefits, but there were gaps in the literature with regards to examining training directed specifically to adolescent focused services. Adolescents have special health needs and could benefit more from pharmacists specifically

trained to respond to their health concerns and provide an adequate referral. Further research in this area could ultimately improve health outcome for young people who access health services through pharmacies (Mugo et al., 2021)

Regulatory frameworks served an important function in shaping contraceptive method access because they established the legal framework for healthcare providers. That was in many global contexts, there were legal prohibitions on providing some contraceptives without prescriptions, which had caused major access barriers, especially for youth and adolescents, who faced additional barriers to accessing reproductive health services (Curtis, 2024). Innovations such as self-injectable depot medroxyprogesterone acetate (DMPA-SC) expanded contraceptive options, allowing for greater autonomy and convenience in family planning(Akinyemi et al., 2022). However, the successful implementation of such innovations required supportive policies that facilitated access and ensured that adolescents could utilize these methods without unnecessary hurdles. There was a major need for policy shifts to find the right policies tailored to the needs of adolescents and made constantly available across jurisdictions (Katz et al., 2020). Bridging these gaps was imperative to improving reproductive health outcomes and empowering youth to make healthy choices for their own lives.

The influence of social and stigma barriers was demonstrated in the manner in which adolescents were unable to access healthcare services, especially those with sexual and reproductive health issues. When exploring qualitative studies from Uganda and Nigeria, several of the adolescents showed a preference for seeking health service from pharmacies instead of public clinics (Nuwamanya et al., 2020). This preference was largely driven by the desire to avoid stigma associated with visiting public health

facilities, where they feared judgment or discrimination from healthcare providers and peers. Despite the perceived anonymity and privacy that pharmacies offered, adolescents still encountered challenges such as provider bias and misinformation regarding contraceptive options and sexual health. The findings highlighted the importance of addressing stigma through the implementation of youth-friendly services that created a welcoming and non-judgmental environment for young people. Training healthcare providers to be more sensitive to the needs of adolescents was crucial in mitigating biases that could deter young people from seeking necessary care. Additionally, enhancing the accuracy of information provided by pharmacists and other healthcare workers was essential in combating misinformation that could lead to poor health outcomes(Chipako et al., 2024). In conclusion, it was essential to create an inclusive healthcare environment that departed from conventional modes of addressing adolescent populations and focused on their particular needs to promote accessibility to sexual reproductive health services. This majorly involved eliminating stigma and ensuring that providers were trained, knowledgeable, and ready to provide adequate care.

Research Gaps Summary: The literature highlighted several critical gaps in understanding what accessing family planning services through pharmacies and drug shops means for adolescents and young women. These key gaps consisted of methodological gaps (e.g., no Random Control Trials), contextual gaps (urban bias, limited data from West and Central Africa), population-wide gaps (e.g., presenting results by age aggregates and not addressing rural, unmarried adolescents), empirical gaps (scarcity of data on long-acting methods and training on youth-specific topics), and policy gaps. Addressing these gaps required more nuanced,

regionally diverse, and methodologically robust research geared towards equitable access to family planning services.

2.5 Mitigation strategies to counter barriers to family planning access through pharmacies and drug shops

Family planning was an important component of health. Pharmacies and drug stops held potential for family planning, especially in resource-constrained environments. Nevertheless, there are challenges for healthcare providers in addressing family planning needs. This summarized the literature on mitigation strategies to overcome the barriers to access, noted the key insights from studies, and presented a comprehensive strategy to improve access to family planning through pharmacies and drug stops.

Training and support, Training pharmacy and drug shop staff was key to improving family planning services. For example, studies from Nigeria and Kenya showed that many providers lacked proper training. This showed a real need for more support to use these outlets better(Corroon et al., 2016a). Training could offer more types of contraceptives, like injectables which were becoming easier to find in some places(Bradley and Shiras).

Regulatory and policy support, Rules and policies were important for pharmacies and drug stores. They gave guidance to these places providing family planning services better and promoted grow at the same time. Good laws and guidelines made it easier for people to get family planning products. They also ensured the services were of good quality. Governments and agencies made it easier for pharmacies and drug stores to get licenses for family planning services. This cut down on red tape. Also, if trained pharmacy staff like pharmacists and pharmacy technicians could

offer more family planning services, like injections and implants, it would make family planning services more accessible and at the same time lead to business growth.(Bradley and Shiras),.

Task sharing and healthcare service integration, Task sharing means delegating some clinical tasks from health professionals to those less trained like community healthcare workers to improve access to healthcare and reduce work over load. This promoted best use of the staff available and collaboration between pharmacies, drug shops and public health clinics. This facilitated linkage and referrals to health facilities that offered a full range of family planning services. It also promoted easy access to family planning services, especially in areas that needed it most and during health crises. Additionally, through task sharing pharmacy staff and drug shop workers were authorized to provide some family planning services after training. Task shifting led to a reduction in work load especially at busy public health centers. It worked well in places with few healthcare providers. That way, more people could get contraception faster(Family-Planning, 2013). Engaging drug shops in community health initiatives, such as Uganda's Village Health Team strategy, further enhanced access to family planning services(Akol et al., 2014).

Addressing Accessibility Barriers through geographical accessibility: Drug shops were often more accessible in rural areas, reducing travel barriers for underserved populations. They provided essential services where public facilities were scarce(Gonsalves, 2020). Additionally, cultural and social acceptability where Pharmacies and drug shops offered a more private setting, which particularly appealed to vulnerable groups like adolescents and unmarried women(Corroon et al., 2016a).

Market Segmentation and Pricing Strategies, exploring market segments, this might involve completing a detailed assessments to determine who accesses the services, where and why, which can be used to develop targeted strategies to reach underserviced populations (USAID, 2017). Additionally, implementing pricing strategies and incentives for private providers could increase access to high-quality services and products. Market segmentation through analyzing different groups within the population to tailor FP services based on their unique needs. This could be done through; Identifying age, gender, income levels, education, and marital status of FP users, differentiating urban, peri-urban, and rural populations to determine variations in FP access. understand factors influencing FP choices, such as cultural beliefs, convenience, privacy concerns, and trust in service providers. Identifying where different groups preferred to access FP services whether through public health facilities, pharmacies, drug shops, private clinics, or community-based distributors(Mozumdar et al., 2019).

Maintaining Access to Contraceptives; Pharmacies and drug shops were more accessible and prevalent than hospitals or clinics, thus they were an essential means of access to FP commodities when health facilities were unavailable or not reachable. Having key FP methods such as oral contraceptives, condoms, injectables and emergency contraceptives accessible meant that young people were able to continue using their favored methods even in the case of disruptions. Supply chain network cooperation can assist in maintaining consistent inventories of FP during emergencies. Additionally, Mobile and Telehealth Support especially in restricted-mobility situations (such as COVID-19 lockdowns), pharmacies could collaborate with telehealth platforms to provide FP counseling and prescriptions through phone calls, SMS, or online platforms(Bradley and Shiras). Home delivery services for

contraceptives could ensure that individuals continued to access their preferred methods without visiting physical location.

Synthesis of Literature

The literature showed that pharmacies and drug shops could play a big role in family planning services, especially for groups that needed help the most. Some ways this could be achieved included; improving quality of services through training. Linkage and coordination of pharmacies, drug shops with public health systems and addressing linkage gaps identified. However, the above proposed intervention may not address the challenges to family planning access through pharmacies and drug shops in the Ugandan context. Hence the need for the study to determine the predictors and barriers to family planning access through pharmacies among young women in Nsangi, Wakiso District. The information obtained would guide the formulation of evidence-based policies and programs that prioritize adolescent reproductive health, aligning with national health agendas and international commitments, such as the Sustainable Development Goals (SDGs)

CHAPTER THREE:

3.0 METHODOLOGY

3.1 Introduction

The chapter gives an extensive description of the process followed to attain the study's goals. This includes; research design, sampling procedure, tools as well as data analysis. It outlines in detail what was done and how it was done.

3.2 Study design

A mixed-methods study design was employed. The quantitative component used a cross-sectional design, while the qualitative component adopted a qualitative descriptive approach through interviews to establish the proportion of young women accessing FP and determine the predictors and barriers to accessing FP services through pharmacies and drug shops by young women 15-24 years in Nsangi. The qualitative technique provided in depth, contextual insights while the quantitative technique offered broader generalizable perspectives on the predictors and barriers to FP access through pharmacies and drug shops.

3.3 Study site

The study was conducted in Nsangi Town, Wakiso District. Wakiso District is a highly urbanized and populous region surrounding Kampala, facing significant challenges in providing healthcare to its large, mobile population, with a substantial number of adolescents and youth (Wakiso District Local Government, 2020) (WDLG, 2020). Nsangi was specifically selected for the study due to its demographic profile and

health service landscape. Data from the Uganda Bureau of Statistics (2024) indicates that Nsangi has a high density of young people, with majority of its population aged 15-24(UBOS, 2024). Concurrently, the area has a high concentration of private pharmacies and drug shops, which are often the first point of contact for health services. Given the documented high adolescent fertility rate in the district (Wakiso District Local Government, 2020), investigating the role of these easily accessible outlets in providing family planning to young women 15-24 years in Nsangi is both timely and critical for informing local public health interventions

3.4 Study Population

The target population included all the young women aged 15-24years in Nsangi, Wakiso district. According to the report from National housing and population census 2024, the number of young women 15 – 24years in Nsangi is approximately 2,684 which is 21.29% of the total females in the area (NHPC, 2024).

3.5 Eligibility criteria

3.5.1 Inclusion criteria

All young women aged 15 - 24 years, residing in Nsangi, Wakiso District regardless of sexual history. This was done to capture a wide spectrum of knowledge and perceptions on family planning access through pharmacies and drug shops among young women 15-24 years .

3.5.2 Exclusion criteria

Any young woman who fulfilled the above inclusion criteria but was sick/unwell, or presented with symptoms of mental illness or unwilling to be part of the study, was excluded from the study.

3.6 Sample size

3.6.1 Quantitative component

3.6.1.1 Sample Size Determination

The sample size was calculated using the Kish Leslie formula in cross-sectional studies (Leslie Kish, 1965); it was utilized as it guaranteed the sample size would be big enough to provide valid and reliable estimates but avoid over-sampling. It was suitable for cross-sectional design since it was meant to estimate the prevalence of family planning use among AGYW.

$$n = \frac{z^2 P (1-P).}{d^2}$$

Where:

n= Sample Size

Z= 1.96 (z-statistic at 95% Confidence interval for a 2-tailed test)

P= is the proportion of access among AYGW, it was assumed at 50 % =0.5

d = Maximum error (5%)

$$n = \frac{1.96^2 * 0.5(1-0.5)}{0.05^2}$$

n= 384

Sample size=**384**

3.6.2 Qualitative component

Research shows that qualitative studies don't have a set sample size (Mason 2010, Fusch and Ness, 2015), and other studies have used samples of 10–25 participants

(Francis et al. 2010). Hence, I presumed 15 healthcare workers (nurses, clinic officers, pharmacists, pharmacy technicians) would be reasonable for the study to generate rich and meaningful insights and these were purposively selected based on their knowledge about Family planning services provision.

3.7 Sampling procedures for quantitative

Nsangi parish, in Wakiso District was purposively selected because of its strategic location along the Masaka-Mbarara highway, with both semi-urban and rural setting. 10 villages in Nsangi were selected randomly to be included in the study for representativeness. The first village was selected randomly by ballot with the help of a village health team member. The Centre of the village was located. The first household was chosen by tossing a coin to decide which direction to take.

After identifying the first household, with the guidance of the area defense representative of the local council, the next household was chosen by selecting the nearest household to the first with young women aged 15 – 24 years. Only one person was interviewed from each household. This process was continued until the required sample was interviewed from each village.

3.7.1 Sampling technique for qualitative

For the qualitative part, purposive sampling was employed to select KII participants. KII participants were people in the study areas who were willing to share their views and perspectives on FP.

3.8 Study Variables

3.8.1 Dependent variable

The dependent variable was the level of access to family planning among young women. The outcome was measured using the service availability and readiness

assessment (SARA)by (WHO, 2015), key indicators such as accessibility and availability, quality and acceptability were explored to determine the level of access. Questions such as on; Number of facilities that are there per 10,000 people, Where are the facilities located, and how far apart are they, Travel time: How long does it take to travel to a facility , Capacity: How many people can be treated at a facility, Quality , Affordability: How much does it cost to use the service, Acceptability: how culturally acceptable is the service, information: How easy is it to find information about the service, client satisfaction: How satisfied are people with the service.

Table 1: Dependent Variable access to family planning services among young women measured using SARA indicators (WHO, 2015)

Component	Description / Indicator	Measurement
Accessibility	Refers to the ease of reaching services	How long does it take to travel to a facility? Where are the facilities located?
Availability	Availability of services and infrastructure	How many facilities are there per 10,000 people? /How far apart are the facilities?
Capacity	Facility capacity to provide services	How many people can be treated at a facility?
Quality	Adherence to standards of care	Are services delivered with adequate staff, supplies, and infrastructure?
Affordability	Financial barriers to accessing services	How much does it cost to use the service
Acceptability	Cultural and social acceptability of services	How culturally acceptable is the service to young women in the community?
Information	Availability and accessibility of information	How easy is it to find information about the service?

Client Satisfaction	Perceived satisfaction with the services	How satisfied are people with the service?

3.8.2 Independent variables (Predictors and Barriers)

- Socio-demographic factors such as age, sex, education level,
- Reproductive health, e.g., Age at first sex, Parity, Fertility preference, modern contraceptive knowledge, sexually active in past 4 weeks, ever terminated any pregnancy, ever been in contact with FP HW
- Health system factors, providers attitudes, availability of FP modalities
- Social factors such as culture, desired number of children, religion

3.8.3 Measurement of variables

3.8.3.1 Dependent variable

The dependent variable was the level of access to family planning service, it was measured by looking at the availability, accessibility, and quality of family planning services

3.8.3.2 Measurement of key independent variables

Socio-demographic factors were identified from the respondents in the Nsangi which included sex, age, employment status, education, and family planning use. The variable sex included male and female, Age was divided into groups, income into categories, education, religion all categorical. These were all assessed quantitatively. However, to gain deeper understanding of ways mitigating barriers to access family planning services among young women, KIIs was used to assess this independent variable.

3.9 Data collection procedures and tools

Of the 4 trained research assistants, 2 collected quantitative data, one collected qualitative data and one helped was the note taker. The note taker captured key observations such as participants' nonverbal cues, gestures, and expressions, which could not be captured through audio alone. The notes captured were used to complement the recordings to provide richer context during the data analysis. Quantitative data was gathered through structured questionnaires from the young women aged 15-24 years in study areas identified while qualitative data was gathered through guides for Key informant interviews (KII).

Potential participants for quantitative data collection were identified by the research assistants with support from Village Health Teams (VHTs), who also helped introduce the study to community members. The research assistants, who had been trained on the study's eligibility criteria, were responsible for screening potential participants. They remained in close communication with the Principal Investigator (PI) for any clarifications. Once eligibility was confirmed, the research assistants conducted the informed consent process, and those who agreed to participate were then enrolled and interviewed.

Interviews were conducted away from interruptions, with only the participant and research team present. This was either at the respondent's home or any place convenient for them. Before interviews, all the respondents received information on the study objective, procedures, risks involved in participation, privacy and confidentiality. All the structured interviews lasted about 30 minutes while the qualitative interviews lasted around 45 minutes to 1 hour. Although the data collection tool was developed in English, the data were collected in Luganda. The research assistants recruited for the study were fluent in both English and Luganda.

They conducted the interviews in Luganda and translated the questions from English to Luganda during the interviews to ensure participants clearly understood them.

3.9.1 Data quality control and assurance

The enumerators were trained for 2 days to understand the goal of the study as well as to acquaint themselves with the instruments. After the training of research assistants, pre-testing was conducted in Nabbingo not covered under the sites of the study. This assisted in further refining the instruments to rephrase questions that did not get the desired response. Nabbingo was selected as a pretest site because it shared the same characteristics as the study site. The study tool was also designed with checks for data quality assurance. Checks of data quality and completeness were verified by the principal investigator on a daily basis. There was a debriefing meeting at the end of each field day to allow data collectors to exchange stories while in the field so challenges could be shared and addressed where possible to enable better improvement on data collected.

3.10 Data Management and analysis

3.10.1 Quantitative data

Data were collected using Kobo collect mobile application. All completed tools were uploaded to the server daily. Data were downloaded into Microsoft Excel and analyzed using STATA version 15. Descriptive statistics such as mean, median and proportions were utilized to report participant background characteristics and participant knowledge. Bivariable logistic regression analysis was used at the bivariable analysis while multiple logistic regression analysis was used at multivariable analysis to test for association between levels of knowledge and independent variables. The associations were tested at a 95% confidence level. Any

variable at the bivariable analysis with a p-value of <0.2 qualified for entry into the multivariable analysis model. Multivariable logistic regression analysis was employed to identify factors associated with knowledge. Model fitting was done by stepwise elimination. Crude odds ratios, adjusted odds ratios and their 95% confidence intervals and p-values were reported.

3.10.2 Qualitative data

The Principal Investigator (PI) conducted the qualitative data analysis using manual thematic analysis. However, to strengthen the rigor and clarity of the findings, colleagues were consulted during the process, particularly to review and improve the write-up.

For KIIs, data were transcribed word for word. KIIs' transcripts were read initially to familiarize myself with content. Manual thematic content analysis using a deductive approach was used in data analysis. A sample of transcripts was picked and re-read to obtain the key issues articulated from the interviews in order to code data in a better way. From the codes that came out of data, the similar codes were merged to form sub-themes. Associated sub-themes were collapsed and aligned with the pre-developed theme as guided by the study objectives and the conceptual framework. A master sheet of the themes, subthemes, frequency and issues raised was developed and used to come up with the frequently mentioned items. Descriptive statistics was used to summarize items raised under every theme. The most outstanding quotes that were more representative of the responses were given. The views of various individuals were highlighted.

3.11 Ethical Considerations

3.11.1 Ethical review and approval process

The study was submitted to the Uganda Christian University Research and Ethics committee for ethical approval. Administrative clearance was also obtained from Nsangi, Wakiso district.

3.11.2 Informed consent

Permission to conduct the study in the selected study areas was sought and received from Wakiso District. Written informed consent was sought from the participants prior to the interview/focus group/surveys. A consent form was administered and read to the participant in his/her language of choice, and a copy of the signed form was left with them. Research teams received training in research ethics prior to data collection.

For participants below the age of legal consent (15–17 years), an additional recruitment procedure was followed. Assent was first obtained from the minors themselves after providing age-appropriate information about the study. In addition, written informed consent was obtained from their parent or legal guardian prior to the minor's participation. This procedure was reviewed and approved by the ethics committee to ensure compliance with ethical standards for research involving minors.

3.11.3 Confidentiality

Privacy and confidentiality issues concerning recruitment were anticipated to be minimal. Efforts were, however, made to minimize any breach of confidentiality. Participants were guaranteed that they were at liberty not to answer any question they did not feel at ease with. I guarded participants' confidentiality as far as possible by keeping all research forms and tape recordings in locked filing cabinets and password-encrypted computer files accessible only to research staff. At the end

of the study, all the audio tapes were destroyed. No names or any identifying features were given in the dissertation and manuscripts of this research, but just pseudonyms for person, workplace and district/implementing agency. The research staff were trained on confidentiality and human subject's research. Data was used for the study purpose alone and shared with the study team alone.

3.11.4 Potential risks and benefits

There were no major risks involved in this study and all participants were informed about any risk that might happen. There were no benefits to this study and all participants were informed beforehand before consenting to participate in this study.

3.12 Dissemination of the findings

The findings of this study would be presented to Uganda Christian University for the award of a Master's Degree in Public health and later disseminated to the community where the study would have been conducted. Copies of the final report would be kept in the Uganda Christian University library for reference. After graduation, a manuscript would be submitted to a peer-reviewed scientific journal for public utilization.

CHAPTER FOUR:

4.0 RESULTS

The study explored the predictors and barriers to family planning access through pharmacies and drug shops among young women 15-24 years in Nsangi Wakiso District. The study sought to answer the following questions; what the proportion of family planning access through pharmacies and drug shops among young women 15-24 years in Nsangi is and what the predictors and barriers to family planning access through drug shops and pharmacies among young women are.

4.1 Socio-demographic and reproductive related characteristics of study participants

Table 2: showing socio-demographic and reproductive related characteristics of study participants:

VARABLE	FREQUENCY	PERCENTGE (%)
Age groups (mean (SD))	20.74 (2.41)	
15 to 18 years	65	16.93
19 to 21 years	159	41.41
22 to 24 years	160	41.67
Residence		
Rural	121	31.51
Urban	263	68.49
Education level		
No education	15	3.91
Primary	39	10.16
Some Secondary	145	37.76
Completed Secondary	94	24.48
Tertiary/University	91	23.70

Marital status		
Single	217	56.51
Married	49	12.76
Cohabiting/Living with partner	118	30.73
Religion		
Anglican	94	24.48
Catholic	103	26.82
Muslim	73	19.01
Pentecost/Born again	72	18.75
SDA	42	10.94
Employment		
Employed	143	37.24
Unemployed	104	27.08
Student	137	35.68
Reproductive characteristics		
Had sex before		
No	140	36.46
Yes	244	63.54
Had sex in the past 4 weeks		
No	100	40.98
Yes	144	59.02
Given Birth Before		
No	141	57.79
Yes	103	42.21
Number of Children		
One child	73	70.87
Two children	25	24.27
Three children	5	4.85

Age at Sex Debut (mean (SD))	18.73 (1.96)	
15 to 18 years	103	42.39
19 to 21 years	109	44.86
22 to 24 years	31	12.76
Perceived Access to		
No/Poor access	133	34.64
Yes/Good access	251	65.36

The study had 384 participants and the mean age was 20.74. More than half of the participants [65.4% (251/384)] had access to family planning services and about 41.7% were aged between 22-24years (160/384) while 17% were aged between 15-18 years (65/384). 37.8% (145/384) of the participants had secondary education while 3.9% had no primary education (15/384). Catholics and Anglican formed the largest group (24.5%), (26.8%) respectively. Regarding employment, 37.2% were employed while 35.7% were students. A significant portion of study participants (63.5%) had had sex before and of these 59.2% had had sex in the past 4 weeks. 44.8% of participants had sex debut between 19-21years,13% had it between 22-24years, while more than half (57.7%) had never given birth. About 42.2% had ever given birth before, as indicated in Table1

4.2 Level of access to family planning services through pharmacies and drug shops among young women aged 15-24years in Nsangi, Wakiso District.

Out of 384 study participants, more than half of the 65.4% had accessed family planning services either from drug shops or pharmacies.

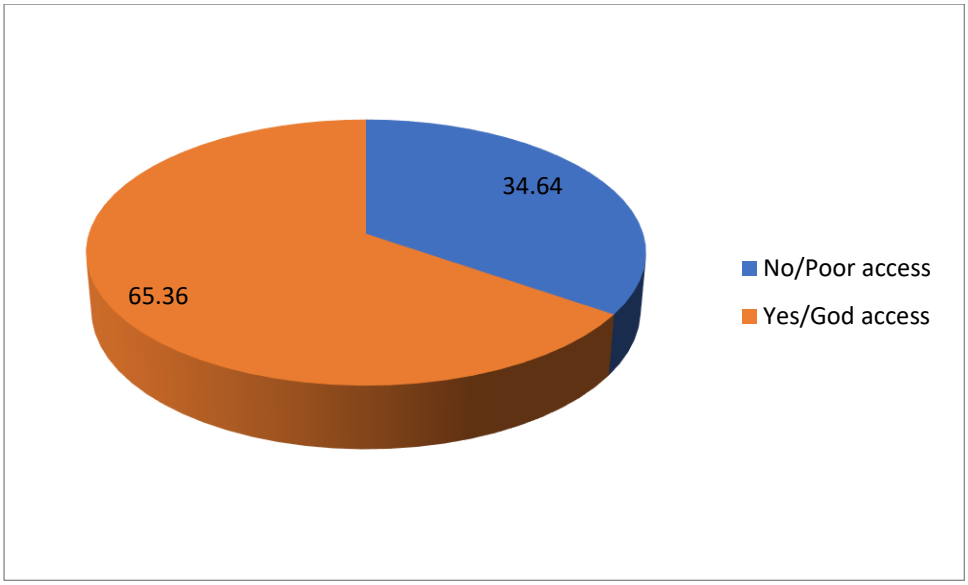


Figure 3:Access to family planning services through pharmacies and drug shops

4.2.1 Point of access to family planning

About 65.4% of the study participants who had accessed family planning, it was through drug shops while 33.3% was through the pharmacy and only 16.7% was through health facility as indicated in the figure below

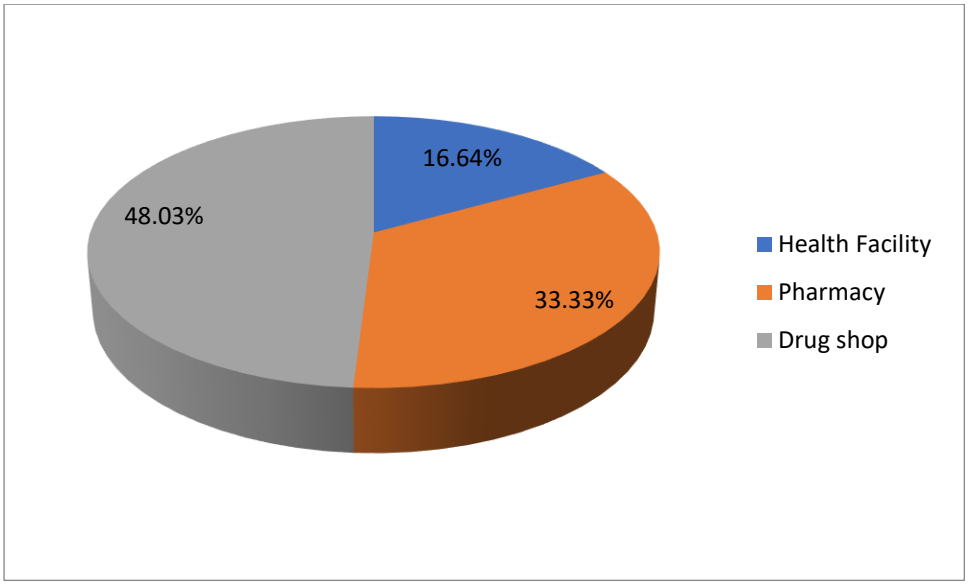


Figure 4:Point of access for family planning

4.2.2 Methods of Family planning used

Majority of the study participants used oral contraceptive, followed by male condoms, and Natural method, Sterilizater for both male and female were less accessed by young women in Nsangi subcounty Wakiso District

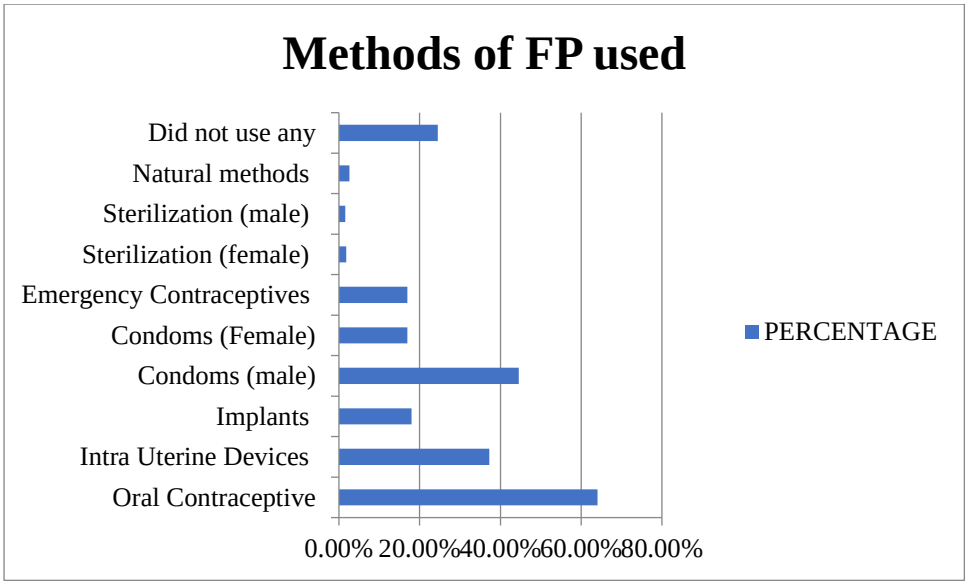


Figure 5: Methods of Family planning used:

4.2.3 Sources of information regarding access to FP services

Health care providers, friends, Radio, TV, Social media were the mainly used sources of information by young women to access family planning services while News papers and religious leaders were the least used sources as shown below.

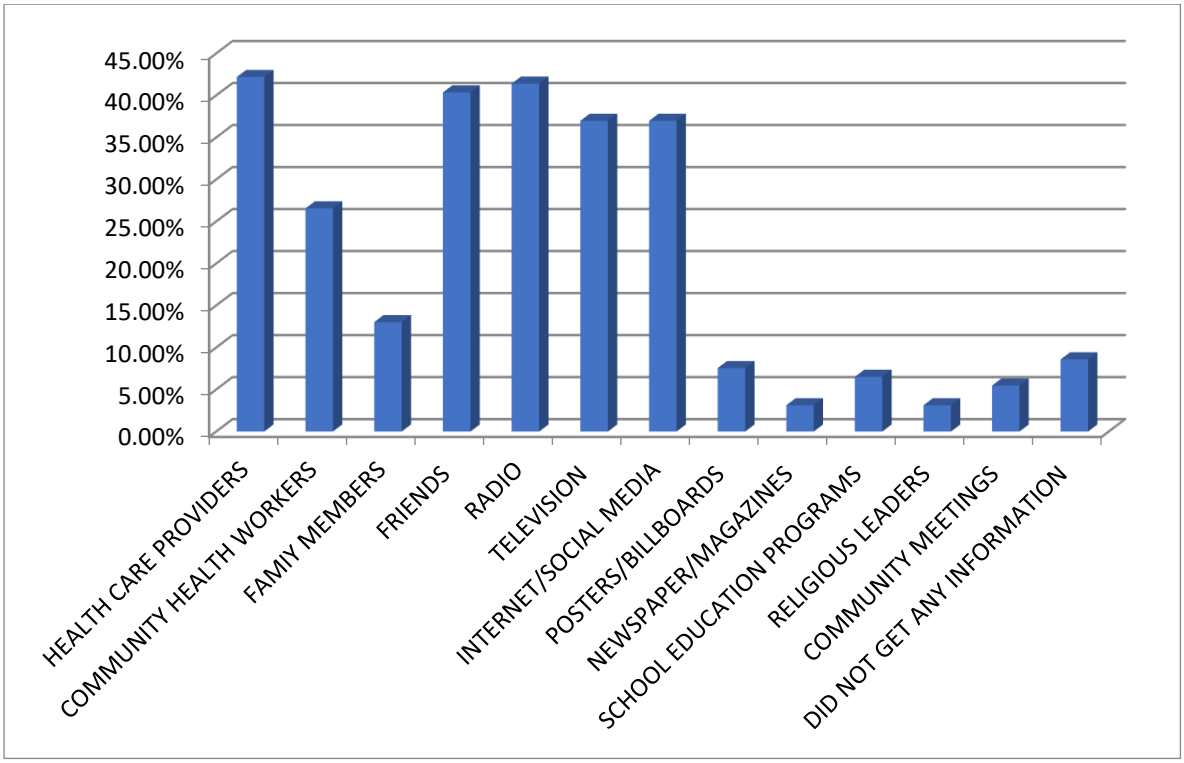


Figure 6: Sources of information regarding access to FP services

4.3 Predictors to accessing family planning services through pharmacies and drug shops among young women aged 15-24years in Nsangi, Wakiso District

Table 3: Predictors to accessing family planning services through pharmacies and drug shops among young women aged 15-24years in Nsangi, Wakiso District.

To assess the relationship between key demographic factors and the likelihood of accessing FP through pharmacies, a series of chi-square tests of independence were conducted. The results revealed a statistically significant association between age

group, cohabiting or living with a a partner, those had sex before or in the past 4 weeks and access to family planning services

Variable	Crude Odds Ratio, COR (95%, CI)	P-Value	Adjusted Odds Ratio, AOR (95%, CI)	P-Value
Age groups				
15 to 18 years	1		1	
19 to 21 years	3.11 (1.69 - 5.72)	0.000	1.94 (0.69 – 5.42)	0.206
22 to 24 years	11.31 (5.77 – 22.17)	0.000	5.57 (1.79 – 17.38)	0.003**
Residence				
Rural	1		1	
Urban	1.88 (1.20 – 2.93)	0.238	1.57 (0.82 – 3.01)	0.176
Education level				
No education Primary	1 1.19 (0.35 – 4.04)	0.780	1 1.74 (0.42 – 7.20)	0.443
Some Secondary	1.12 (0.38 – 3.33)	0.834	2.45 (0.65 – 9.18)	0.185
Completed Secondary	0.76 (0.25 – 2.30)	0.624	1.24 (0.32 – 4.86)	0.757
Tertiary/University	3.38 (1.05 – 10.91)	0.042	12.73 (2.84 – 56.97)	0.001
Marital status				
Single	1		1	
Married	2.55 (1.28 – 5.07)	0.008	1.39 (0.61 – 3.15)	0.428
Cohabiting/Living with partner	5.87 (3.25 – 10.59)	0.000	3.46 (1.74 – 6.87)	0.000***
Religion				
Anglican	1		1	1
Catholic	1.19 (0.65 – 2.19)	0.559	0.63 (0.31 – 1.25)	0.185
Muslim	0.41 (0.22 – 0.76)	0.005	0.23 (0.11 – 0.49)	0.000
Pentecost/Born again	1.87 (0.92 – 3.81)	0.085	1.18 (0.53 – 2.62)	0.678

SDA	0.72 (0.34 – 1.53)	0.399	0.53 (0.23 – 1.22)	0.135
Employment				
Employed	1		1	
Unemployed	0.43 (0.23 – 0.79)	0.007	0.53 (0.27 – 1.03)	0.061
Student	0.14 (0.08 – 0.25)	0.000	0.20 (0.11 – 0.39)	0.000
Had Sex Before				
No	1		1	
Yes	14.91 (8.92 – 24.93)	0.000	24.20 (13.00 – 45.05)	0.000***
Had sex in the past 4 weeks				
No	1		1	
Yes	3.10 (1.46 – 6.61)	0.003	4.71 (1.51 – 14.68)	0.007**
Given Birth Before				
No Yes	1 3.25 (1.35 – 7.79)	0.008	1 2.06 (0.77 – 5.50)	0.149
Number of Children				
One child	1			
Two children	0.14 (0.03 – 0.86)	0.034	0.38 (0.04 –3.41)	0.391
Three children	0.11 (0.01 – 1.52)	0.100	0.78 (0.03 – 20.36)	0.882
Age at Sex Debut				
15 to 18 years	1		1	
19 to 21 years	1.42 (0.68 – 2.97)	0.354	0.55 (0.21 – 1.43)	0.223

The factors that were positively associated with access to family planning use among young women aged 15-24years in Nsangi, Wakiso District include, age, religion,

education, marital status, had sex before, had sex in the past 4 weeks as explained below.

At bivariate level of analysis.

The results showed that young women between 19-21 years of age were 3.11 times more likely to utilize family planning services compared to their counterparts aged 15-18 years [COR = 3.1] 95% CI (1.69, 5.72)], and those between 22-24 years of age were 11.31 times more likely to utilize family planning services compared to their counterparts aged 15-18 years [COR = 11.31] 95% CI (5.77, 22.17)]. Participants who had university or tertiary education were [COR = 3.38] 95% CI (1.05,10.91)] more likely to use family planning services compared to those who had no primary education. Additionally, participants who previously had sex were [COR = 14.91] 95% CI (8.92,24.93)] more likely to use family planning services compared to the never had sex previously. Besides, respondents who reported to have had sex in the past 4 weeks preceding the survey were 3.10 times more likely to use FP as compared to those who reported that they had not [COR = 3.10] 95% CI (1.46 6.61)]. As still apparent at the bivariate level of analysis, FP use was positively associated with having given birth before [COR = 3.25] 95% CI (8.92, 24.93)]

Multivariate level of analysis

The factors that were positively associated with access to family planning among young women aged 15-24years in Nsangi, Wakiso District include, age, marital status, had sex before, had sex in the past 4 weeks as explained in table 2 below

While controlling for other factors, the quantitative analysis revealed that young women aged between 22–24 years were 5.6 times more likely to access family

planning than those aged 15–18 years (AOR = 5.6, 95% CI: 1.79–17.38). The strong association could be explained by insights from key informants, who noted that young women in their early twenties were often more sexually active, independent, and had a clearer understanding of their reproductive health needs. At this age, many are either planning families or seeking to delay childbirth, and therefore proactively seek out contraception. They were also more confident navigating the health system or approaching private providers like drug shops.

"Girls in their early twenties come to us more than the very young ones. They usually know what they want either pills or injectables. Some even ask about implants." KII08, Drug Shop Manager, Female, 34, Wakiso District

Keeping other factors constant, the odds of family planning access among AGYW who had ever had sex were 24.2 times higher compared to those who had never had sex (AOR = 24.2, 95% CI: 13.0–45.1). This strong association reflected the natural increase in demand for contraceptive methods once a young woman became sexually active. The relationship was clearly supported by qualitative evidence from drug shop attendants, who emphasized that AGYW with prior sexual experience were not only more likely to seek family planning services but also tended to prefer discreet and non-judgmental environments such as pharmacies and drug shops where they could access services quickly and privately.

"Most girls who come for family planning have already started having sex. They say they want to avoid pregnancy but don't want to be seen at clinics where people might know them. That's why they come here." KII01, Male, Drug Shop Attendant, 32 years, Nsangi sub-county, Wakiso

The odds of family planning access among AGYW who were cohabiting were 46% higher compared to the singles while other factors remain constant [A0R =3.46, 95% CI: 1.74–6.87]. This relationship was clearly supported by qualitative evidence from pharmacist who emphasized that cohabiting young women often experienced greater autonomy and consistent partner support, making it easier for them to seek and use FP services, she was quoted saying

"Most of the young women I attend to who live with their partners come with a clear intention to get a method. It's like once they start staying with someone, they begin to think long-term. Their partners even encourage them to use something to avoid unplanned babies." KII03, Female, Pharmacist, 34 years, Nsangi, Wakiso"

This was further explained by another key informant who attributed it to the fact that cohabiting women were often engaged in regular sexual activity and were more motivated to prevent unplanned pregnancies. Additionally, they might feel a greater sense of reproductive responsibility or were under pressure from their partners to prevent childbirth. He supported this, highlighting that cohabiting young women were more proactive in seeking contraceptives, often choosing private outlets that guarantee discretion.

"You see them come as couples or alone, mostly those living with their boyfriends. They don't want to be seen at big clinics. They just walk here, get what they need, and go." KII04, Male Pharmacist, 41Years, Nsangi, Wakiso"

While controlling for other factors, the odds of family planning access among young women who had sex in the past 4 weeks was 71% higher compared to those who had

not [A0R=4.71, 95% CI: 1.51–14.68]. This relationship was clearly supported by qualitative evidence from health service providers who emphasized that recent sexual activity often acts as a trigger for young women to seek contraceptive protection. A pharmacist explained that:

"You see, when a girl has just had sex especially if it was unprotected, she becomes anxious and wants to get a method immediately. Most of the young women who come in asking for pills or injectables usually tell me they were recently with their boyfriends." KIIO10, Male Pharmacist, 29 years, Nsangi,Wa kiso

Similarly, a drug shop manager highlighted the urgency that often follows recent sexual encounters:

"Many young girls don't think about family planning until they've already done it. After sex, they come in panicking, asking for emergency pills or a method they can start quickly. That's when they realize the risk. KII06, Female Drug Shop Manager, 33 years, Nsangi, Wakiso.

4.4 Barriers to accessing family planning services through pharmacies and drug shops among young women aged 15-24years in Nsangi, Wakiso District.

Table 4: Barriers to accessing family planning services through pharmacies and drug shops among young women aged 15-24years in Nsangi, Wakiso District

A binary logistic regression was performed to ascertain the effects of age, education level, and distance to the nearest health center on the likelihood that participants accessed FP through pharmacies and drug shops

Variable	Crude Odds Ratio, COR (95%, CI)	P-Value	Adjusted Odds Ratio, AOR (95%, CI)	P-Value
Affordability of FP				
Yes	1		1	
No	0.33 (0.10 – 1.11)	0.011	0.42 (0.13 – 1.23)	0.039
Distance to the Nearest FP service provider.				
Less than 1Km	1		1	
1 to 5 Km	0.89 (0.17 – 4.62)	0.886	1.07 (0.19 – 5.88)	0.942
6 to 10 Km	0.39 (0.14 – 1.05)	0.062	0.42 (0.15 – 1.20)	0.107
11 to 20 Km	1.71 (0.88 – 3.33)	0.116	1.81 (0.91 – 3.58)	0.090
There is Privacy when you go for FP.				
Yes	1		1	
No	0.41 (0.08 – 1.74)	0.000	0.47 (0.11 – 1.83)	0.001
Culturally acceptable.				
Yes	1		1	
No	0.49 (0.12 – 1.46)	0.003	0.56 (0.14 – 1.87)	0.034
Where you sought FP from.				
Health facility	1		1	
Pharmacy	2.77 (0.73 – 8.64)	0.102	2.89 (0.85 – 9.01)	0.089
Drug shop	3.14 (1.39 – 10.73)	0.007	3.34 (1.42 – 11.20)	0.011

At bivariate level of analysis, the factors that were negatively associated with family planning services access were; cost, lack of privacy, cultural norms, as explained below.

The findings indicated that young women who were unable to afford family planning services were 67% less likely to access family planning services compared to those who could afford [COR = 0.33] 95% CI (0.10, 1.11)], Moreso, those who didn't find privacy at the point of access were 59% less likely to access the FP service as compared to those who found privacy [COR = 0.41] 95% CI (0.08, 1.74)]. Additionally, those whose culture did not accept the family planning use were 51% less likely to access the FP as compared to those whose culture accepted it [COR = 0.49] 95% CI (0.12, 1.46)].

At Multivariate level of analysis,

While adjusting for other variables, the level of family planning access among young women aged 15-24 years who couldn't afford FP services was 58% less compared to those who could afford it *[AOR = 0.42] 95% CI (0.13, 1.23)].* This finding is supported by qualitative data from service providers who emphasized that cost remains a major barrier for many young women to access FP services.

A 36-year-old male pharmacist explained:

"Most of the young girls come asking for family planning, but when they hear the price, you see them pause. Some quietly walk away, others say they would come back but many never do. It's not that they don't want the service, they simply can't afford it."

Those who didn't find privacy at the point of access were 53% less likely to access the FP service as compared to those who found privacy [COR = 0.47] 95% CI (0.11, 1.83)]. This finding was reinforced by insights from service providers such as the key informants who highlighted that lack of privacy significantly discouraged young women from seeking FP services due to fear of judgment and stigma.

A 34-year-old female pharmacist shared:

"Privacy is everything for these girls. If other people are around, especially men or older women, they get scared. Some just stand at the door and leave without saying anything. They don't want to be seen."

Likewise, a 30-year-old male drug shop manager remarked:

"There are times when the drug shop is full and you see a girl come in, look around, and then pretend to ask for something else or just leave. When I later follow up, they say they couldn't talk freely because others were listening."

Additionally, those whose culture did not accept the family planning use were 44% less likely to access the FP as compared to those whose culture accepted it [COR = 0.44] 95% CI (0.14, 1.87)]. This association was supported by qualitative insights from drug shop managers who reported that cultural norms and expectations heavily influenced young women's decisions around family planning.

A 33-year-old male drug shop manager explained:

"Some girls tell you directly, 'At home, if they find out I'm using family planning, I'll be chased away.' In some cultures, it's like a taboo for unmarried girls to use FP, so they either hide or avoid it completely."

Similarly, a 28-year-old female drug shop manager noted:

“There are places where even married women fear coming for FP without their husband's or in-laws’ approval. For young girls, it’s worse. They grow up being told it’s wrong or it encourages bad behavior, so they stay away.”

CHAPTER FIVE:

5.0 DISCUSSION OF RESULTS.

This study sought to address research questions of; what is the proportion of young women 15 – 24 years in Nsangi, Wakiso accessing FP through pharmacies and drug shops and what are the predictors and barriers to family planning access through pharmacies and drug shops among young women 15 – 24 years of age. The results highlighted that a significant proportion of young women (65.4%) had access to family planning through pharmacies and drug shops. Age, marital status, had sex before, had sex in the past 4 weeks were key predictors to family planning access and cost, lack of privacy, cultural norms were key barriers to family planning access through pharmacies and drug shops.

5.1 Access to family planning services through pharmacies and drug shops among young women aged 15-24years in Nsangi, Wakiso District.

These findings of 65.4% access align with evidence from studies conducted in both urban Nigeria and Kenya, found that these outlets are the dominant source for such methods, especially among younger, unmarried, and harder-to-reach women(Corroon et al., 2016a, Chandra-Mouli and Akwara, 2020a). Additionally, these outlets were preferred due to their convenience, privacy, and accessibility compared to public health facilities.

However, the reported proportion of young women accessing FP (65.4%) is substantially higher than national family planning average use for women of reproductive age in some East African countries, such as Uganda, where modern contraceptive use was reported at 26.6% in 2020(Ochen and Primus, 2023). This

suggests that pharmacies and drug shops were especially effective in reaching young women, a group that often faces unique barriers in public sector settings.

The high proportion of young women accessing FP through pharmacies and drug shops demonstrated the pivotal role these outlets play in reproductive health service delivery for young women. While they offered significant advantages in terms of convenience, anonymity, and accessibility, ongoing efforts were needed to address concerns about affordability, privacy, and quality of counseling to maximize their effectiveness and equity(Vera et al., 2023)

5.2 Predictors to accessing family planning services through pharmacies and drug shops among young women aged 15-24years in Nsangi, Wakiso District

The findings of this study indicated that older young women aged 22–24 years were more likely to use family planning services than the 15-18 years. This is because they were more likely to be sexually active, had greater autonomy, and possessed increased awareness of reproductive health needs compared to their younger peers. This aligns with the findings of studies conducted in Kenya and Nigeria which revealed that younger women, especially those under 25, were more likely to use pharmacies and drug shops for family planning, as these outlets offered privacy and convenience, which were particularly valued by this age group(Corroon et al., 2016a). The increased likelihood among 22–24-year-olds might also reflect greater confidence in navigating health systems and less fear of stigma compared to adolescents. Similarly, a study by Le and Braunack-Mayer., (2019) showed that socio-demographic and behavioral factors such as age, marital status, and sexual activity were strong predictors of contraceptive use among young women. Interventions tailored to these characteristics were more effective in increasing access and uptake

This study revealed that cohabiting young women were more likely to be sexually active and thus had a higher demand for contraception compared to their unmarried or non-cohabiting counterparts. This observation was well-supported by existing literature and aligns with study by Hellwig et al. (2023), (Bhushan et al., 2021). For example, a recent cross-national analysis by Ewerling et al. (2018) found that married young women had a much higher rate of contraceptive use (46%) compared to unmarried young women (20%), reflecting both higher sexual activity and greater perceived need for contraception. Similarly, research indicated that the demand for family planning satisfied by modern methods (mDFPS) was closely linked to marital status and sexual activity, with women in unions reporting higher contraceptive use due to their increased risk of pregnancy. While the general trend holds in many settings, there were notable exceptions. In some contexts, such as parts of West and Central Africa, unmarried sexually active young women might have higher Demand for Family Planning Satisfied with Modern Methods (mDFPS) than their married counterparts, often due to social pressures for married women to prove fertility soon after marriage, discouraging contraceptive use. For instance, in Uganda, studies found married adolescents were more likely to use modern contraceptives, but in the Democratic Republic of Congo, the opposite was true, with married young women being less likely to use modern contraception(Ojanduru et al., 2025)

In this study, findings revealed that young women who had ever had sex or who were sexually active in the past four weeks were more likely to seek out family planning services, as their immediate risk of unintended pregnancy was higher. It was important to note that Pharmacies and drug shops were often the preferred source for these women because they could obtain contraceptives quickly and privately, without the bureaucratic hurdles or potential judgment encountered at public

health facilities**.** Research from urban Nigeria and Kenya demonstrates that Pharmacies and drug shops were major sources for short-acting contraceptive methods, especially among harder-to-reach populations such as younger, unmarried, and childless women. These groups, who were often more sexually active or at higher risk of unintended pregnancy, were significantly more likely to obtain contraception from pharmacies and drug shops than from public health facilities(Corroon et al., 2016a). Similarly, A mixed-methods study in Kenya by Gonsalves et al. (2020)further supported this, showing that young people especially those using condoms and emergency contraception were much more likely to source these methods from pharmacies. The study highlighted that pharmacies were valued for their convenience, privacy, speed, and non-judgmental service, making them particularly appealing to sexually active youth seeking discreet and accessible contraception.

5.3 Barriers to accessing family planning services through pharmacies and drug shops among young women aged 15-24years in Nsangi, Wakiso District.

In this study, results revealed that affordability was a major barrier to access to family planning services among the young women. This aligned with findings from several studies where financial barriers were consistently cited as a major obstacle for young women accessing contraception through pharmacies and drug shops. Many young women lacked independent income and paid out-of-pocket for contraceptives at private outlets, making cost prohibitive, especially for those from low-income (Gonsalves et al., 2023, Dioubaté et al., 2021b). Similarly, a study conducted by Wambete et al. (2022) showed that even when public health facilities offered free or subsidized methods, adolescents might still prefer pharmacies for convenience and privacy, but the lack of free options at these outlets limits access for the poorest

youth. The possible explanation was that, This was primarily because many young women, especially adolescents, lacked a stable or independent source of income and were often reliant on others for financial support. Consequently, out-of-pocket costs associated with purchasing contraceptives at private outlets become prohibitive, although public health facilities might offer free or subsidized family planning services, studies such as Wambete et al. (2022) showed that young women often prefered private pharmacies due to greater convenience, shorter waiting times, and perceived privacy. However, these advantages were undermined by the lack of affordable or free options in the private sector, which further marginalized those who were financially constrained. Therefore, the combination of economic dependency, high out-of-pocket costs, and the absence of subsidized options in preferred service points like pharmacies contributes to limited access to family planning services among young women.

Privacy, The findings revealed that privacy was a major barrier to family planning access for young women. Privacy and confidentiality were especially important to young women due to the fear of being judged, stigmatized, or having their intentions exposed to family or community members. In many cultural contexts, young women particularly those who were unmarried face intense scrutiny around issues of sexuality and reproductive health. As a result, any breach or perceived risk of confidentiality could discourage them from seeking contraception altogether. Studies showed that, While pharmacies and drug shops were often preferred over public health facilities for their perceived discretion and shorter waiting times, this privacy was not always guaranteed. Environmental and operational factors within these outlets such as lack of private consultation rooms, open counters, or hurried interactions due to high client volumes could make young women feel exposed or

uncomfortable(Patterson et al., 2022, Le and Braunack-Mayer, 2019). In some instances, the layout of the pharmacy might allow other customers or staff to overhear conversations, further eroding a sense of confidentiality.

In this study, we found that young women living in communities where cultural norms did not accept family planning were significantly less likely to access contraceptive services. This finding underscored the powerful role that cultural and societal norms played in shaping not just individual attitudes but also the enabling environment for family planning services access. In many of these settings, discussions around sexuality and contraceptive use remained taboo, particularly for unmarried girls. This resulted in stigma, internalized shame, and fear of social repercussions, all of which discouraged young women from seeking servicesn even from relatively discreet sources like pharmacies or drug shops. The findings were consistent with existing literature. For example A study by Lahiri et al., (2023) similarly noted that adolescents frequently experienced judgment from community members, health workers, or even their own.

families when they attempted to access family planning, leading to service avoidance. Additionally, similar qualitative studies in Nepal found that negative judgments from family members and community, as well as cultural and religious beliefs, discouraged adolescents from accessing or using family planning methods(Bhatt et al., 2021)

CHAPTER SIX:

6.0 CONCLUSIONS AND RECOMMENDATIONS.

- The study found a high level of access (65.4%) to family planning services through pharmacies and drug shops among young women aged 15–24 years. This demonstrates the pivotal role these outlets play in reproductive health service delivery for young women.

- The study identified key factors that significantly influenced access to family planning services among young women aged 15–24 years in Nsangi, Wakiso District. Notably, age, marital status, history of sexual activity, and recent sexual engagement (within the past four weeks) were positively associated with contraceptive access.

- The study revealed that affordability, lack of privacy, and cultural unacceptability were significant barriers negatively associated with access to family planning services through pharmacies and drug shops among young women in Nsangi, Wakiso District.

6.1 RECOMMENDATIONS;

1. The Wakiso District Health Office, in collaboration with the Ministry of Health, should pilot a voucher scheme within the next 12 months that subsidizes the cost of specific contraceptive methods (e.g., oral pills, injectables) for young women (aged 15-24) at accredited pharmacies and drug shops in Nsangi. This recommendation is made directly in response to the finding that cost is a significant barrier, and it aims to increase equitable access for low-income young women.

2. The District Health Office should develop and disseminate targeted Information, Education, and Communication (IEC) materials in local languages (e.g., Luganda) within the next fiscal year. These materials should address common misconceptions, emphasize the health benefits of family planning for spacing births, and normalize FP use among unmarried, sexually active AGYW. This is based on the finding that cultural norms negatively influence access.
3. Associations like the Pharmaceutical Society of Uganda and the National Drug Authority should mandate and enforce privacy standards as part of their accreditation process. This should include providing a private consultation area within all drug shops and pharmacies offering family planning services. This recommendation directly addresses the finding that young women avoid these outlets due to fears of being overheard or judged
4. Future research should conduct a qualitative inquiry to deeply explore the contextual reasons behind the cultural unacceptability of FP use among young women in the Wakiso region. This will help develop more nuanced social and behavior change communication strategies. This is recommended because our quantitative study identified the barrier but could not fully explain its underlying social dynamics
5. Future research should also focus on understanding the role of male partners in influencing contraceptive access and decision-making among AGYW can inform more inclusive and effective programming.

6.2 STUDY STRENGTHS AND LIMITATIONS

1. This study has several limitations that should be considered when interpreting the findings. Firstly, the use of self-reported data on sensitive topics like

sexual activity and family planning use is susceptible to social desirability bias, where participants may have underreported behaviors perceived as socially unacceptable. This may have led to an underestimation of true FP access and use.

2. The study focused on young women 15 -24 years, this included even women who were abstaining but met the inclusion criteria. Those who were abstaining were included in the study because abstinence can be a conscious decision or a result of barriers to family planning access. Abstinent women do not have a current "need for Family planning," even if they might need it in the future, so their inclusion could distort the assessment of genuine demand for and barriers to FP services.
3. Secondly, the cross-sectional study design allows for the identification of associations but cannot establish causality between the identified factors (e.g., marital status) and the outcome (FP access). It is not possible to determine if these factors directly caused the access patterns observed.
4. Finally, the study was conducted solely in Nsangi, Wakiso District, which, while providing rich context-specific data, limits the generalizability of the findings to other regions of Uganda with different cultural and socio-economic contexts. The findings are most applicable to similar peri-urban settings."

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APPENDICES

7.1 Appendix I: Informed consent form to participate in the study

Study title: Predictors and barriers to accessing family planning services through pharmacies and drug shops among adolescent girls and young women in Nsangi, Wakiso District**,** Uganda

Introduction: Hello, my name is ……, I am a student of Uganda Christian University conducting a study with in your areas. You are being requested to take part in this study.

Background of the study

The need for AGYW in Uganda to have access to family planning services has been well documented. However, there are numerous obstacles placed before them when trying to get family planning services from pharmacies and drug shops. Nsangi in the Wakiso district is no exception. Pharmacies and drug shops are usually the first young women feeling stigmatized not to use them.

Furthermore, ignorance regarding contraception also limits their usage. This misinformation clash with how contraception is thought to be affects the willingness of the AGYW to use them. In some instances, due to a lack of financial resources,

many AGWY are unable to contract as they are unable to purchase contraceptives from the private pharmacy.

Purpose of the study: To determine the level of access, predictors and barriers to accessing family planning services through pharmacies and drug shops and mitigation strategies to barriers to access in the Nsangi Wakiso district.

Your participation in the study: Your decision to participate in this study is voluntary. You may refuse to take part in the study or stop at any time without affecting your relationship with the investigator of this study or Uganda Christian University. Once you accept to take part in this study, you will be asked questions about the access to family planning, related barriers, and Mitigation strategies in the Nsangi Wakiso district.

What are the risks involved in participating in this study: There are no anticipated risks arising from participating in this study. However, if for any reason, you feel uncomfortable with some questions asked during the interview, you are free to stop at any time.

Your confidentiality: Your name will not be written on this form and therefore you will not be identified in any way. The data collected will be stored in a password protected computer.

Benefits of being in this study: There are no direct benefits to you when you participate in this study. However, your responses will help us in learning more about the predictors and barriers to accessing to family planning through pharmacies and drug shops among adolescent girls and young women aged 15-24 years in Nsangi, Wakiso District.

What does your signature mean: Your signature on this document indicates that you have decided to take part in this study, and that you have read and understood the information provided. You have been given a copy of the consent form.

Questions/Who to contact: If you have questions about the study, you can contact the Principal Investigator, Damalie on Telephone; 0754340920. This study was reviewed and approved by the Uganda Christian University (UCU) Research and Ethics Committee.

Consent statement: I have read and understood the provided information and I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I am given a copy of this consent form. I voluntarily agree to take part in this study.

Participant's name	Signature / Thumb print	Date
Name of the consenting person	Signature	Date

Quantitative questionnaire target *Target: AGYW (15-24 years*

Questionnaire on Access to Family Planning Services

Section A: Demographic Information

1. Age:

2. Gender:

3. Education Level:

4. Marital Status**:** Single/Married/Other

5. Residence: Urban/ rural

6. Employment Status**:** Employed/Student/Unemployed

Section B: Availability of Family Planning Services

7. Are there health facilities in your area that offer family planning services?

   a. Yes
   b. No
   c. I don't know

8. How many health facilities provide family planning services within a 10 km radius of your home?

   a. None
   b. 1-2 facilities
   c. 3-5 facilities
   d. More than 5 facilities

e. I don't know

9. What types of family planning methods are available at the health facilities near you? (Check all that apply)

a. Oral contraceptive pills
b. Injectable contraceptives
c. Intrauterine devices (IUDs)
d. Implants
e. Condoms (male)
f. Condoms (female)
g. Emergency contraception
h. Sterilization (female)
i. Sterilization (male)
j. Natural family planning methods
k. Other (please specify): _____
l. I don't know

Section C: Accessibility of Family Planning Services

10. Are family planning services accessible? Yes/No

11.Have you ever sought family planning services from a pharmacy or drug shop? *Yes/No*

12. If yes, which method did you seek?

1.Pills, 2. Injectables, 3. Implants, 4. Emergency contraception, 5. Other**)**

13. Were you able to obtain the method of your choice?

Yes/No

(If no, why not?) ……

14. What challenges did you face?

1. Cost 2. Stigma 3. Lack of knowledge 4. Provider attitude 5. Other)

15. Do you think pharmacies and drug shops provide enough privacy for AGYW seeking contraception? Yes/No

16. How far is the nearest health facility providing family planning services?

a. Less than 1 km
b. 1-5 km
c. 6-10 km
d. 11-20 km
e. More than 20 km
f. I don't know

17. How long does it take you to reach the nearest facility providing family planning services?

a. Less than 15 minutes
b. 15-30 minutes
c. 31-60 minutes
d. 1-2 hours
e. More than 2 hours
f. I don't know

18. What is your primary means of transportation to the pharmacy or drug shop?

a. Walking
b. Bicycle
c. Motorcycle
d. Public transportation (bus, train, etc.)
e. Private car
f. Taxi/ride-sharing service
g. Other (please specify): _____

19. Have you ever been unable to access family planning services due to distance or lack of transportation?

a. Yes, frequently
b. Yes, occasionally
c. Yes, rarely
d. No, never
e. Not applicable

Section D: Quality of Family Planning Services

20. How much do you typically pay for family planning services?

a. Free/No cost
b. Less than 20kUGx (or local equivalent)
c. 20k-40k UGX
d. 40-60 UGX
e. More than 60 UGX
f. Varies depending on service
g. I don't know

21. Are family planning services affordable to you?

a. Very affordable
b. Somewhat affordable
c. Somewhat unaffordable
d. Very unaffordable
e. I don't know/Not applicable

22. Are the family planning services culturally acceptable to you and your community?

a. Yes, completely acceptable
b. Somewhat acceptable
c. Somewhat unacceptable
d. No, completely unacceptable
e. I don't know

23. How easy is it to find information about family planning services?

a. Very easy
b. Somewhat easy
c. Somewhat difficult
d. Very difficult
e. I don't know

24. Where do you usually get information about family planning? (Check all that apply)

a. Health facilities/healthcare providers
b. Community health workers

c. Family members
d. Friends
e. Radio
f. Television
g. Internet/social media
h. Posters/billboards
i. Newspapers/magazines
j. School/educational programs
k. Religious leaders
l. Community meetings
m. Other (please specify): _____
n. I don't get information about family planning

25. How satisfied are you with the family planning services you receive?

a. Very satisfied
b. Somewhat satisfied
c. Neutral
d. Somewhat dissatisfied
e. Very dissatisfied
f. I have not received family planning services

26. What challenges have you faced in accessing family planning services through pharmacies / drug shops? (Check all that apply)

a. Long waiting times
b. Limited operating hours
c. Lack of privacy

d. Lack of preferred method
e. Stock-outs of contraceptives
f. Negative attitude of healthcare providers
g. Lack of trained providers
h. High cost of services
i. Lack of transportation
j. Distance to facility
k. Lack of information
l. Cultural/religious barriers
m. Partner opposition
n. Family opposition
o. Community stigma
p. None
q. Other (please specify): _____

7.2 Appendix II: Key Informant Interview (KII) Guide

Target: Pharmacists, drug shop attendants, policymakers if you can get some

Introduction: Thank you for agreeing to participate in this study. We are assessing predictors and barriers to accessing family planning services through pharmacies and drug shops among adolescent girls and young women (AGYW) in Nsangi, Wakiso District. Your insights would help us understand the challenges and possible solutions.

Ice -breaker: Before we begin, let's start with a quick warm-up question: Can you share a little about your daily experience serving customers who come for reproductive health services?

Demographics characteristics

Name (Optional): _____

Gender: _____

Position/Role: _____

Years of experience: _____

Type of facility (Pharmacy/Drug shop/Other**): _____**

Barriers to Access

1. What types of family planning services and products do you offer?

Probe: Do you offer both short-term and long-term methods?

Probe: Are all products consistently in stock**?**

2. What are the most commonly sought contraceptives by AGYW?

Probe: Are there differences in preference by age or marital status**?**

Probe: Do you observe any trends in contraceptive demand?

3. What challenges do AGYW face when accessing family planning from your facility?

Probe: Are there financial barriers that limit access?

Probe: Do AGYW express concerns about privacy or stigma?

Probe: How do service provider attitudes influence their access**?**

1. Are there any legal or regulatory restrictions that impact service provision?

Probe: if there any age-related restrictions on contraceptive access?

Probe: Do regulations limit the range of services you can offer?

Probe: How do these regulations affect your ability to serve AGYW**?**

2. How do societal or cultural beliefs affect AGYW's ability to access these services?

Probe: Are there common myths or misconceptions that discourage use?

Probe: Do family or community influences play a role?

Probe: How do AGYW perceive contraceptive use in their communities?

Predictors to access to family planning services

Awareness and Knowledge

3. What do you think influences how much AGYW know about family planning services available in pharmacies and drug shops?

Probe: for Where do they typically get this information (e.g., peers, media, school, health workers)? Do they know which methods are offered at these outlets?

. Accessibility and Availability

4. What factors make it easier or harder for AGYW to access family planning services from pharmacies or drug shops in this community*?*

Probes: for Distance, cost, opening hours, privacy, Availability of methods or supplies

Socio-Cultural and Economic Predictors

5. How do social norms, family or religious beliefs, and financial ability affect AGYW's use of FP services at pharmacies and drug shops?

Probes: for Community attitudes, Fear of stigma or judgment, Role of decision-makers (e.g., parents, partners)

Trust and Perceived Quality

9. How do AGYW perceive the quality and confidentiality of family planning services provided at pharmacies and drug shops?

Probes: Do they trust the providers? Do they feel comfortable asking questions or seeking help?

Mitigation Strategies

6. What measures have been put in place to make family planning services more accessible to AGYW?

7. How can pharmacies and drug shops improve service delivery for AGYW?

8. What role can policymakers play in enhancing access?

9. Are there any successful interventions that have worked in similar settings

Anything else that we have left out which you feel is very important for this work**?**

END

7.3 Appendix III: University Research Committee Approval

UGANDA CHRISTIAN UNIVERSITY
A Centre of Excellence in the Heart of Africa

Office of the Vice Chancellor
Research Ethics Committee UG-026

22nd May 2025

DAMALIE BAJUNGA NABWETEME
Uganda Christian University
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UG-REC-026 APPROVAL NOTICE

To: Damalie Bajunga Nabweteme; Principal Investigator

Re: UCU-REC Application titled: *Predictors and Barriers to Accessing Family Planning Services through Pharmacies and Drug Shops among Adolescent Girls and Young Women Aged 15-24 Years In Nsangi, Wakiso District*

UGANDA CHRISTIAN UNIVERSITY APPROVED (INTI) 22 MAY 2026 RESEARCH ETHICS COMMITTEE

Application Number: UCUREC-2025-1720

Version: 4.1

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

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

Approval of the research is for the period from **22nd May, 2025, to 22nd May 2026**
This research is considered minimal risk category.
As Principal Investigator of the research, you are responsible for fulfilling the following requirements of approval:

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

4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by subjects and/or witnesses should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits.
5. Regulations require review of an approved study not less than once per 12-month period. **Therefore, a continuing review application must be submitted to the REC eight weeks prior to the above expiration date of 22nd May, 2026 in order to continue the study beyond the approved period.** Failure to submit a continuing review application in a timely fashion may result in suspension or termination of the study, at which point new participants may not be enrolled and currently enrolled participants must be taken off the study.
6. The REC application number assigned to the research should be cited in any correspondence with the REC of record.
7. Your research details have been shared with the Executive secretary of Uganda National Council for Science and Technology (UNCST) and you are **not** required to get clearance since you are a Master's Degree research. Refer to UNCST Research registration and clearance Policy and guidelines (July 2016) in Uganda section 6(e).

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

	Document Title	Language	Version	Version Date
1.	Protocol	English	1.0	2025-05-14
2.	Budget	English	1.0	2025-05-14
3.	Study work plan	English	1.0	2025-05-14
4.	Questionnaire	English	1.0	2025-05-14
5.	Informed Consent form	English	1.0	2025-05-14
6.	Assent form for minors	English	1.0	2025-05-14

Signed and Stamped

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

UGANDA CHRISTIAN UNIVERSITY
APPROVED
UNTIL
22 MAY 2026
RESEARCH ETHICS COMMITTEE

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SCHOOL OF RESEARCH & POSTGRADUATE STUDIES

DISSERTATION CORRECTION COMPLIANCE REPORT BY THE CANDIDATE (POST VIVA FORM)

Date: 17/09/2025

Name of Candidate: **DAMALIE BAJUNGA NABWETEME**

Reg. No: RJ23M21/007

Title of Dissertation: **PREDICTORS AND BARRIERS TO FAMILY PLANNING ACCESS THROUGH PHARMACIES AND DRUG SHOPS AMONG YOUNG WOMEN 15 – 24 YEARS IN NSANGI, WAKISO**

COMMENTS BY EXTERNAL EXAMINER

SN	COMMENTS BY EXTERNAL EXAMINER	page	ACTION TAKEN	INDICATOR
1	Use of several fonts throughout the dissertation		Uniform font size used throughout the document	Make font size uniform
2	Recommendations should be deleted from the abstract	4	Recommendations removed from the abstract	Exclude recommendation from abstract
3	The candidate should improve the methods section. This is a mixed method study and not just cross sectional	7	Relevant literature on national and regional policies promoting male involvement in family planning has been added under section 2.1 Individual Factors.	Enriched literature review

4	This is a mixed method study and not just cross sectional.	47 - 55	The methods section improved to	Improve the methodology section
5	the design for the qualitative component is not described	46	Design for the qualitative component described	Describe the design for the qualitative component
6	What was the study population for the qualitative component?	48	The study population for the qualitative component included	Include the study population for the qualitative component
7	Who carried out the data collection? How many people interviewed?	51	Qualitative data collection section revised to clearly state who carried out the collection and how many people were interviewed.	Clarify on who carried out data collection and how many people interviewed
8	Where did the data collection take place ensuring that there in privacy and confidentiality?	52	Data collection section revised to clarify where data collection took place to ensure privacy and confidentiality.	Clarify where data collection took place to ensure privacy and confidentiality
9	Much as the interviews were audio recorded was there a note taker to take notes of the nonverbal responses?	51	Data collection section revised to clarify availability of note taker and the role they played in data capture.	Clarify whether there was a note taker to capture nonverbal response
10	What was the role of the candidate in this work?	52	Data collection section revised to include the role of the candidate	Clearly state the role of the candidate
11	In which language was the data collected in? Was there need for translation of the interviews and who did this?		Section revised to include language used during data collection.	Clearly state the language in which the data was collected, whether there was need for translation and who did it
12	Who carried out the qualitative data analysis? Did the candidate seek the help of a social scientist?	54	Qualitative data analysis section revised to include the role of the candidate.	State who carried out the qualitative data analysis.
13	How were potential participants identified, By who? How were they approached and introduced to the study? Who assessed the potential study participants for eligibility	49 and 52	Clarified how potential participants were identified, approached and enrolled into the study	Clarify how potential participants were identified, approached and enrolled into the study

	and consented and enrolled them into the study?			
14	The candidate does make important conclusions a raising from this study but should bullet them	79	Bulleted important conclusions arising from the study	Bullet important conclusions arising from the study
15	Some of the recommendations (2 and 5) do not arise from the findings of the study	79 and 80	The recommendations that did not arise from the findings of the study were removed	Remove recommendations not arising from the study

COMMENTS BY INTERNAL EXAMINER

SN	COMMENTS BY INTERNAL EXAMINER	Page	ACTION TAKEN	INDICATOR
1	The writing format of APA not used in the document	81-87	Document reviewed and corrected to APA writing format	Use the APA format
2	The problem statement not derived from the background information.	11-12	Problem statement revised and derived from background information	Derive problem statement from background information
3	The scope of the study is not clearly defined	14	Scope of the study clearly defined	Clearly scope of the study
4	The research question and hypothesis need to come before the objectives	12	The research placed before the objectives	The research question to come before the objectives
5	The statement of the problem is too long and need to be tweaked, to culminate into the need for the study to be done.	11-12	Problem statement revised to culminate into the need for the study to be done.	Revise the problem statement
6	The first objective about "level" is ambiguous. Clarify what "level" is and why study it and must be included in the statement of purpose.	12	The first objective has been revised to determining the proportion of young women 15 -24 years accessing family planning and this has been included in the	Clarify the first objective.

			statement of purpose.	
7	The literature review is comprehensive, however, it would have been best not to repeat what is already in the background.	18-43	I have stated actual facts of literature reviewed from specific studies, Repeated literature in the background has been excluded	Synthesize the reviewed literature and state the actual facts
8	In addition, some of the articles reviewed, the researcher does not extract the actual findings but writes generally. The review can be strengthened by mentioning actual facts.	18-43	Literature review section revised to state actual findings in the research reviewed	State actual findings in the literature review
9	The end product of the literature review here is obscure. Please clarify this by adding a clear gap statement and justification of the study.	18-43	The literature review has been rewritten to show the gap statement and justification of the study	Clarify the literature review section to show the gap statement and justification of the study
10	The study used a mixed method design, however, this is not clearly reflected. In what context, especially the qualitative method, was the used in the study?	46 - 53	The methodology section has been revised to reflect the context of the qualitative method used.	Rewrite the methodology section to clearly include the qualitative context used in the study
	There is also need to describe the quantitative part of the study and the qualitative part clearly and the quality control procedures to enhance the readers understanding and acceptability of the findings.	51 -52	The quantitative and qualitative quality control procedures of the study clearly described	Rewrite the quantitative and qualitative quality control procedure of the study
	Justification for the study site is based on 35-year-old evidence (1991). What is the	45-46	Justification of the study site rewritten to include recent data from the Uganda	Rewrite justification of study side to exclude outdated

	current?		Bureau of Statistics (UBOS) 2024 report and the Wakiso District Local Government Plan 2020-2025	information
	Clarify on how participants below the consenting age were recruited into the study.	54	Revised section to include detailed ethical consideration paragraph explaining how participants aged 15-17, assent was obtained	Clarify on how participants below the consenting age were recruited into the study
	Some findings are compared with variables outside the scope of the study such as not having had sexual intercourse (see inclusion criteria).	46	Inclusion criteria has been revised to include all women 15-24 years in Nsangi regardless of sexual history.	Findings to be generated within the inclusion scope of the study
	The tables presenting the data need to be presented first before writing the summaries and include only key findings for each variable.	62-69	Results section has been revised to present data table before the data summaries. And only key findings have been included	Data tables to be presented before the summaries
	Results presented as per objectives and qualitative data integrated to support quantitative. However, those presented in tables and figures however, have no summaries attached to them. Table 3&4 in particular have no summary.	62 and 68	Results section revised to include summaries for tables 3 and 4	Include summaries for results tables 3 and 4
	The statistical tests conducted are not mentioned therefore, it's not clear how the results presented came to be.	62 and 68	Results section revised and statistical tests conducted were mentioned to show how the results presented came about	Mention statistical tests conducted
	Discussion of Results	73	Added an	Add an

	No introduction		introduction for the discussion of results section	introduction for the discussion of results
	Repetition of statistics in the results instead of summary of findings	73 -78	Results were removed from the discussion of results section to avoid repetition	Do not repeat statistic in the discussion of results section
	The recommendations statements are incomplete and therefore need to be stated appropriately. Some recommendations are not based on the research findings and need to be clarified as to why they are made.	78-79	Recommendations stated appropriately and clarified why they are made	state recommendations appropriately. based on the research findings and clarify why they are made
	Need to explore the meaning of study limitations and present actual ones.	79 - 80	Revised study limitations to actual ones	Revise study limitations and present the actual ones
	Label appendices appropriately	89-101	Appendices labelled appropriately	Label appendices appropriately

COMMENTS BY VIVA VOCE PANEL

SN	COMMENTS BY VIVA VOCE PANEL	Page	ACTION TAKEN	INDICATOR
1	Title is too long and should be improved		Title improved to: Predictors and barriers to Family planning access through pharmacies and drug shops among young women 15-24 years in Nsagi, Wakiso	shortened Title
2	Those that are abstaining would best be left out	80	I have acknowledged this in the study limitations.	Explanation for inclusion of that are abstaining.
3	Clearly differentiate between the pharmacy and the		**Pharmacy**: for this study, it refers to a store or part of a store in which	Differentiate between pharmacies

	drug shop		medicines are prepared and sold. **Drug shop:** refers to a small 'walk-in' healthcare shop that sells over-the-counter drugs. These have been clearly defined	and drug shops
4	Focus your study to access in the problem statement		Study focused on the access in the problem statement	Focus study on access definition

DAMALIE BAJUNGA NABWETEME DR. SHALLON ATUHAIRE 

Candidate's Name & Signature **Supervisor's Name &Signature**