

Uptake and Level of Utilization of Family Planning Services in HIV Care and Treatment Among Patients Attending the Haematology/Art Clinics in Lasuth

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Abstract

Background: Family planning (FP) services are vital for reproductive health, particularly for individuals living with HIV. Integrating FP into HIV care can increase contraceptive uptake, reduce unintended pregnancies, and prevent mother-to-child transmission of HIV. This study examined FP uptake and utilization among HIV-positive patients attending the Haematology/ART clinics at Lagos State University Teaching Hospital (LASUTH). **Materials and Methods:** A cross-sectional study was conducted among HIV-positive individuals receiving care at LASUTH. Data were collected using structured questionnaires covering socio-demographic information, FP awareness, service utilization, and barriers to uptake. Statistical analyses, including chi-square tests, were used to assess associations between demographic factors, awareness, and FP utilization. **Results:** The findings revealed a significant association between gender, marital status, employment status, ethnicity, and FP awareness. Married and employed respondents demonstrated higher awareness, and awareness was strongly associated with FP uptake. Respondents aware of FP services were significantly more likely to use contraceptives than those unaware. Despite this, several barriers were reported, including spousal opposition, religious objections, misconceptions about contraceptive side effects, and limited accessibility. These barriers influenced both awareness and actual uptake of services. **Conclusion:** This study underscores the importance of integrating FP into HIV care to enhance accessibility and utilization. Increasing awareness, promoting male involvement, and addressing cultural and religious misconceptions are key strategies to improve uptake. Integrating FP into ART clinics aligns with global recommendations for comprehensive HIV care and can improve reproductive health outcomes while reducing HIV transmission risks. Tailored interventions and evidence-based policies are needed to strengthen FP adoption among people living with HIV in Lagos State and similar settings.

Keywords: Family Planning, HIV-Positive Individuals, Antiretroviral Therapy (ART), Contraceptive Uptake, Reproductive Health, HIV Care Integration.

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CHAPTER ONE

INTRODUCTION

1.0 Background to the study

HIV continues to pose a major global public health challenge, with Sub-Saharan Africa carrying the greatest burden. [1] In Nigeria, the HIV epidemic has evolved over the past three decades, with substantial progress made in prevention, diagnosis, and treatment. [2] The 2019 Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS) estimated the national HIV prevalence among adults aged 15–49 years at 1.4% [3] with women disproportionately affected. Factors such as gender inequality, poverty, limited to healthcare, stigma, and

low education levels continue to shape the epidemiology of the disease in the country. [4] Despite this relatively low prevalence compared to previous estimates, Nigeria still has one of the largest absolute numbers of people living with HIV (PLHIV) globally due to its large population size.[5]

The widespread availability of antiretroviral therapy (ART) in Nigeria has significantly enhanced both life expectancy and quality of life for people living with HIV (PLHIV). With individuals living longer, greater attention is now required to meet their sexual and reproductive health (SRH) needs, particularly in relation

to family planning. [6] Family planning, a core component of SRH, enables individuals and couples to determine the number and spacing of their children. It is recognized globally as a cost-effective intervention that improves maternal and child health outcomes, reduces unintended pregnancies, and contributes to women's empowerment. In the context of HIV, family planning plays a pivotal role in preventing vertical (mother-to-child) transmission and reducing health risks for both mothers and infants.[7] Family planning services in Nigeria aim to provide individuals and couples with the information and means to decide freely and responsibly the number and spacing of their children. [8] Although efforts have been made to increase access to family planning, the uptake of contraceptives remains limited, with the modern contraceptive prevalence rate estimated at about 17%. [9] Barriers to Family Planning services include limited access, cultural and religious beliefs, and inadequate healthcare infrastructure.

In Nigeria, integration efforts have been reflected in national policies and guidelines, including the National HIV and AIDS Strategic Framework and the National Guidelines for the Integration of HIV and Sexual and Reproductive Health. [10] However, despite these efforts, gaps remain in the effective delivery of family planning services within HIV care settings. [11] In tertiary health facilities such as the Lagos State University Teaching Hospital (LASUTH), which provides specialized care to HIV patients, there is an urgent need to evaluate the extent to which family planning services are being utilized and the factors influencing their uptake. [12]

The prevalence of HIV in Nigeria has declined from 4.4% in 2005 to 1.3% in 2018, according to the Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS). [13] Despite this significant progress, the HIV burden remains substantial, with an estimated 1.9 million people still living with the virus. [14] The number of people on antiretroviral treatment (ART) increased from 360,000 in 2010 to over 1 million by 2018. [15] Despite this, only about 42.3% of people living with HIV are virally suppressed, with a higher rate among women (45.3%) compared to men (34.5%). [16] The HIV epidemic in Nigeria is more pronounced in certain regions. The South-South zone has the highest prevalence at 3.1%, followed by the North-Central zone at 2.0% and the South-East zone at 1.9%. Other regions like the South-West, North-East, and North-West zones have lower prevalence rates ranging from 0.6% to 1.1%. [17] Nigeria has seen a reduction in new HIV infections, with a 39% decline since 2010. [18] However, young women aged 15-24 remain at higher risk, with a significant gender disparity in new infections. [19] Efforts to combat HIV in Nigeria include scaling up ART, expanding testing and prevention services, and addressing stigma and discrimination against people living with HIV. The country's vision is to achieve an end to AIDS as a public health threat by 2030, yet

persistent obstacles such as delayed HIV diagnosis, gender inequality, and poor access to care for disadvantaged groups hinder progress. As of 2022, approximately 29.8 million people globally were accessing antiretroviral therapy (ART). This represents about 76% of all people living with HIV worldwide. In Nigeria, about 1.8 million people were on ART in 2022. [20]

The use of modern contraceptives among HIV-positive individuals varies. Studies across different regions of Nigeria have reported varying levels of modern contraceptive use among people living with HIV (PLHIV). In Enugu, Southeast Nigeria, a cross-sectional study among sexually active HIV-positive women found that 73.1% reported using modern contraceptives, with male condoms being the most common method (78.1%), although nearly half (48.2%) reported inconsistent use. Approximately 25.1% practised dual method use, while 26.9% had an unmet need for contraception. [21] A study carried out in an HIV clinic in Abuja, North-Central Nigeria, found an overall contraceptive prevalence of 47%, which increased to 64.1% among sexually active respondents. Dual contraception, most commonly a condom plus an oral contraceptive pill, was reported by 25.4% of participants. [22] Similarly, in Ibadan, Oyo State, among 443 women living with HIV, 73.1% reported using some form of contraception, with 30.7% adopting dual methods, and 26.9% having an unmet need. [23] Findings from the MoMent study in rural North-Central Nigeria among postpartum HIV-positive women revealed that 49.9% did not use any modern contraceptive method. Among users, male condoms (29.1%), oral hormonal methods (17.8%), and intrauterine devices (3.2%) were the most common methods. Uptake was positively associated with family planning counselling and disclosure of HIV status. [24]

Broader studies suggest that the integration of family planning services with HIV care improves contraceptive use among this population. [25] A strong piece of experimental evidence comes from a cluster randomized trial and follow-up in Kenya. The "one-stop-shop" integration model where FP counselling and methods are provided in the HIV clinic rather than via referral produced a sustained increase in the use of more effective contraceptive methods (absolute increases of ~12–14% at delayed-integration sites) and a reduction in pregnancy incidence over 24 months. The effect was durable when the national Ministry of Health implemented the model, showing that integration can be both effective and scalable. [26] Systematic reviews that pooled and synthesized multiple evaluations consistently find that integration is associated with higher contraceptive uptake among women attending HIV services. Earlier comprehensive reviews reported that integrated FP-HIV programs were associated with higher modern contraceptive prevalence and improved knowledge. More recent systematic reviews (including studies from sub-Saharan Africa and other LMICs)

quantify typical gains of roughly an 8% absolute increase in modern or dual-method use in integrated versus non-integrated sites, although study quality and heterogeneity limit firm estimates. These reviews underline that integration often improves access and contraceptive use, but results vary by setting and by how comprehensively FP is offered. [27] Observational and programmatic analyses from national and subnational datasets support the trial and review findings. For instance, program data and impact assessments indicate that HIV-positive women enrolled in integrated services (e.g., on ART or seen in HIV clinics with routine FP screening/counselling) have higher modern contraceptive prevalence compared with HIV-positive women not enrolled in integrated care or those unaware of their status. Country analyses (e.g., Tanzania) found 10–13% higher prevalence of modern contraceptive use among HIV-positive women on integrated services compared to those not on integrated services. [28] Program surveys from Nigeria show that where FP services are integrated into HIV care the availability of counselling and methods is high, and that quality (provider counselling, method choice, commodity availability) strongly affects uptake. [29]

However, the literature also shows limits and caveats. In many settings the increase is driven partly by increased condom provision (which may show up as ‘contraceptive use’ but does not necessarily reflect increased use of more effective, long-acting reversible methods). Several studies and reviews emphasize health systems barriers stock-outs, staff shortages, weak policy/guidelines, and poor provider training that can blunt the effect of integration. Thus, integration is promising and generally associated with higher contraceptive use among PLHIV, but its success depends on how it’s implemented and on addressing quality, commodity and systems constraints. [30] These findings suggest that while contraceptive use among HIV-positive individuals in Nigeria is variable, the integration of family planning services into HIV care can enhance contraceptive uptake and address reproductive health needs effectively. [31]

The integration of family planning services into HIV care and treatment has emerged as a crucial strategy for improving health outcomes among individuals living with HIV. [32] This approach aligns with global health priorities and aims to address the reproductive health needs of HIV positive individuals while simultaneously managing HIV treatment and prevention efforts.[33] The integration and use of family planning services among people living with HIV depend on determinants such as awareness, access to services, sociocultural contexts, and the responsiveness of the healthcare system.[34]

Nigeria, with the second-largest HIV epidemic globally, faces significant challenges in integrating HIV care and family planning (FP) services.[35] Integrating family planning into HIV care is essential for enhancing

the health of women living with HIV, [36] preventing mother-to-child transmission (PMTCT), and lowering the rate of unintended pregnancies among HIV-positive women.[37]

1.1. Statement of the problem

Globally, about 35% of HIV-positive women use modern contraceptive methods, indicating that a significant proportion, approximately 65%, are not using modern family planning methods.[38] This statistic highlights a substantial unmet need for family planning among HIV-positive women worldwide. In Nigeria, the rate of modern contraceptive use among women living with HIV is estimated at about 34%, which is marginally below the global average. This implies that nearly two-thirds (66%) of HIV-positive women in Nigeria do not make use of modern contraceptive methods.[39] Cultural and religious beliefs can negatively influence attitudes toward both Family Planning and HIV services. For instance, a study found that only 20% of women living with HIV used modern contraceptives due to cultural opposition and fear of stigma.[40] Despite the proven benefits of integrating Family Planning services into HIV care, there remains a significant gap in service uptake and utilization. Many individuals living with HIV, particularly in low- and middle-income countries, face barriers to accessing integrated services. These barriers include a lack of awareness, stigma, inadequate healthcare infrastructure, and insufficient policy support. Recognizing and addressing these barriers is essential to improving health outcomes for people living with HIV and safeguarding their reproductive rights.[41]

Integrating family planning services into HIV care can provide multiple benefits which include improved health outcomes, reduced unintended pregnancies and comprehensive care. However, the prevalence of women experiencing stigmatization and other challenges in integrating HIV and family planning services is a significant issue in many countries, including Nigeria.[42] The stigma and discrimination surrounding HIV can act as barriers, preventing women from utilizing HIV care and family planning services, thereby worsening health outcomes.[43] Evidence from multiple studies indicates that HIV-related stigma often results in fear of disclosure, social isolation, and limited access to healthcare, thereby hindering the effective integration of family planning services for women living with HIV. [44] A study conducted in Tanzania found that the integration of family planning services into HIV care improved contraceptive prevalence among HIV positive women. However, the challenges include inadequate funding, limited access to contraceptives, and cultural barriers that prevent women from seeking integrated services. [45] In Nigeria, similar barriers exist. Stigma connected to HIV frequently prevents women from accessing essential family planning services. Additionally, healthcare providers may lack the training or resources to offer integrated services effectively. [46] These challenges highlight the need for comprehensive

strategies that address stigma, ensure adequate funding, and provide proper training for healthcare providers to improve the integration of family planning and HIV services. [47] Service providers' attitudes towards Family Planning integration is equally important for a successful integration. Research from Kenya shows that inadequate pre-service and in-service training on service integration among health workers contributes to negative attitudes, particularly among nurses. [48] Provider ownership of the integration process and understanding what needs to be integrated and how to integrate is also important. This underscores the importance of continuous follow-up initiatives, including supportive supervision and mentorship after training. This is also important for examining not only the effectiveness of the project in changing knowledge, attitudes and behaviors of service providers, but also the durability of its impact. [49] Service providers in facilities with no integration reported lack of family planning supplies/ commodities and inappropriate facility infrastructure for privacy and confidentiality as the main barriers to provision of family planning services. [50] In contrast, service providers in facilities at category 2 of integration reported heavy workload as the main barrier to provision of Family Planning services. Some studies highlight that gaps in knowledge, coupled with personal biases, contribute to providers' reluctance to deliver integrated family planning and HIV services. [51]

Although integrating family planning into HIV care has demonstrated clear benefits, a substantial unmet need for contraception persists among people living with HIV (PLHIV) in Nigeria. Data from the 2018 Nigeria Demographic and Health Survey (NDHS) indicate that the modern contraceptive prevalence rate among married women was 12%. Among PLHIV, uptake has been reported in some studies to be slightly higher, yet it still falls short of desirable levels. [52] This is troubling, as the unmet need for contraception among HIV-positive women has implications for unintended pregnancies, maternal and child health outcomes, and vertical transmission of HIV. [53] In HIV care settings, especially in busy tertiary hospitals like LASUTH, there may be systemic challenges such as inadequate staff training, lack of integrated service delivery models, and stigma that hinder patients from accessing family planning services. There are also missed opportunities during ART visits to counsel and provide Family Planning methods. This disconnect between service availability and service uptake requires a detailed investigation to understand the underlying causes and inform targeted interventions. [54] Similar to the general population, people living with HIV (PLHIV) have diverse fertility intentions, encompassing the desire to have children, to delay childbirth, or to limit further pregnancies. Although one's desire for childbearing may change over time and even increase for some women after they start HIV treatment, recent data suggest that, on average, HIV-positive women tend to want fewer children than women without HIV. [55] An in-depth

understanding of family planning utilization among this population is critical for mitigating unintended pregnancies, promoting maternal and child health outcomes, and addressing the broader public health consequences associated with HIV. [56] Nigeria has the second-largest HIV epidemic globally, with a significant number of women of reproductive age affected by the virus. Facilitating access to family planning services for women living with HIV is pivotal in preventing mother-to-child transmission (MTCT) and in enhancing their overall quality of life. [57]

Given these persistent gaps in contraceptive uptake among HIV-positive individuals and the systemic, cultural, and provider-level barriers to integration, there is a pressing need to assess the utilization of family planning services within HIV care settings. This study seeks to examine the level of contraceptive use, identify barriers to uptake, and explore opportunities for improving integration in LASUTH, Lagos State, Nigeria.

1.2. Justification of the study

Despite the growing global emphasis on integrating family planning (FP) within HIV care, significant gaps remain in the implementation and uptake of these services, particularly within tertiary health institutions in Nigeria. [58] While policy frameworks exist to support integration, there is limited empirical data on the extent to which these frameworks translate into effective service delivery at facility level. [59] This study seeks to address this critical knowledge gap by examining the prevalence and utilization of FP services among people living with HIV at a major tertiary institution, Lagos State University Teaching Hospital (LASUTH).

While some studies have explored family planning utilization among people living with HIV in Nigeria, there is limited research specifically examining the barriers and facilitators experienced by HIV patients attending Haematology/ART clinics at LASUTH. Understanding these unique contextual factors is crucial for developing targeted interventions to improve family planning uptake in this population. [60]

By focusing on LASUTH, the study offers an opportunity to assess how integration is functioning within a specialized care context, where both the demand for services and the complexity of client needs are high. Moreover, the study will contribute to the academic discourse on reproductive health among HIV-positive populations by quantifying the current level of FP uptake among patients receiving HIV care, identifying individual systemic and structural barriers to service utilization, highlighting areas for capacity strengthening, including provider training and service delivery models.

These findings will inform local quality improvement strategies at LASUTH and also provide

useful data for health policy planning and the broader goal of achieving universal access to sexual and reproductive health services. This study is consistent with global commitments such as the Sustainable Development Goals (SDGs) and the Family Planning 2030 initiative, while also reinforcing the UNAIDS strategy of integrating HIV and sexual and reproductive health services to optimize health outcomes among people living with HIV. By generating context-specific, actionable evidence, this study will add to the limited body of literature on FP-HIV integration in tertiary care settings and guide future academic inquiry, policy formulation, and programmatic interventions.

Most clients would rather receive contraceptive services at the same place where they access HIV services. A recent study identified HIV-positive status as the most significant predictor of the desire to forgo future childbearing.[61]

The study of family planning prevalence among women living with HIV in Nigeria is critically important due to the intersection of high HIV prevalence, significant maternal mortality rates, and the ongoing efforts to improve reproductive health outcomes.[62]

1.3. Aims and objectives

1.3.1. Aims

The primary aim of this research is to assess the uptake and pattern of utilization of family planning services in an HIV care and treatment setting and to identify factors influencing service use among individuals living with HIV.

1.3.2. Specific Objectives

This study seeks to achieve the following specific objectives:

1. To assess the awareness and knowledge of Family Planning services among HIV-positive individuals attending the Haematology ART clinics in LASUTH.
2. To assess the level of uptake of family planning services among HIV-positive individuals within HIV care settings.
3. To identify barriers and facilitators to the utilization of family planning services in HIV care.
4. To assess the factors associated with utilization or non-utilization of family planning services by clients in the ART clinic.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of existing literature on the integration of family planning (FP) services into HIV care, with particular emphasis on the Nigerian context. It synthesizes global, regional, and national evidence on HIV epidemiology, contraceptive use among people living with HIV (PLHIV), and the

rationale for integrating FP and HIV services. In addition, the chapter examines different models of integration, highlights barriers and facilitators to effective service delivery, and draws lessons from diverse settings. The review is closely aligned with the objectives of this study, as it provides both the empirical and theoretical foundation for understanding the determinants of family planning uptake among HIV-positive individuals. Furthermore, it identifies persistent gaps in knowledge, especially within Nigeria, where, despite significant policy initiatives, contraceptive uptake among PLHIV remains sub optimal.

Human Immunodeficiency Virus (HIV) continues to pose a major global health challenge, with sub-Saharan Africa accounting for approximately 70% of the global burden.[63] In Nigeria, the prevalence of HIV among adults aged 15–49 years was estimated at 1.4%, based on findings from the 2018 Nigeria AIDS Indicator and Impact Survey (NAIIS).[64] Although progress has been made in antiretroviral therapy (ART) coverage and prevention of mother-to-child transmission (PMTCT), challenges persist in integrating comprehensive care, including family planning, into HIV services.

Antiretroviral therapy (ART) has transformed HIV from a once fatal disease into a chronic, manageable condition.[65] With improved survival, sexual and reproductive health (SRH) needs of people living with HIV (PLHIV) have gained prominence. Addressing these needs particularly family planning is critical not only for improving individual health and well-being but also for advancing broader public health outcomes.[66]

The intersection of HIV and reproductive health is particularly significant, as many individuals living with HIV are of reproductive age and may have reproductive intentions. Integrating family planning services into HIV care not only upholds the reproductive rights of HIV-positive individuals but also reduces the risk of mother-to-child transmission (MTCT) of HIV and enhances overall health outcomes.[67] Furthermore, the provision of integrated services can help address the dual burden of HIV and unintended pregnancies, a concern that is especially pressing in regions with high HIV prevalence and limited access to healthcare.[68] Globally, the uptake of family planning services among HIV-positive individuals exhibits considerable variation, influenced by factors such as geographic location, health system infrastructure, and the accessibility of integrated service delivery.[69] Evidence indicates that integrating family planning with HIV services can enhance contraceptive use and improve health outcomes. For example, a study conducted in Kenya found that the integration of family planning services within HIV care settings significantly increased contraceptive uptake among HIV-positive women.[70] Similarly, research in Malawi demonstrated that women attending integrated HIV and family planning clinics were more likely to use

modern contraceptive methods compared to those receiving services separately.[71]

Integrating family planning into HIV care represents a crucial public health strategy. This approach addresses the reproductive health needs of HIV-positive individuals while simultaneously contributing to the prevention of mother-to-child transmission (PMTCT), reducing unintended pregnancies, and improving maternal and child health outcomes.[72] A thorough understanding of existing evidence, challenges, and best practices in service integration is essential for designing interventions that enhance both reproductive health and HIV treatment outcomes in Nigeria.

2.1. Global Overview of HIV/AIDS and treatment

Human Immunodeficiency Virus (HIV) is a virus that targets the immune system, specifically CD4 (T) cells, which play a critical role in defending the body against infections. If untreated, HIV can progress to acquired immunodeficiency syndrome (AIDS), the advanced stage of infection characterized by severe immunosuppression and increased susceptibility to opportunistic infections and certain malignancies.[73] The advent of antiretroviral therapy (ART) has transformed HIV from a fatal disease to a manageable chronic condition. Consequently, the reproductive intentions of people living with HIV (PLHIV), particularly women, have become increasingly salient.[74] Many now express the wish to bear children or to prevent unintended pregnancies. Addressing these reproductive needs is critical to both individual well-being and broader public health outcomes.

HIV continues to pose a major global public health challenge. The World Health Organization (WHO) estimated that by the end of 2020, approximately 37.7 million people were living with HIV worldwide, with 1.5 million new infections and 680,000 AIDS-related deaths reported during the same period.[75] Sub-Saharan Africa accounts for approximately 67% of the global population living with HIV.[76] This corresponds to roughly 25.6 million people as of 2022. In the same year, sub-Saharan Africa recorded approximately 510,000 new HIV infections among adults, accounting for about 47% of all new infections worldwide.[77] The HIV prevalence among adults aged 15–49 in the region is estimated at 4.0%, though this varies considerably between countries, with some, such as Eswatini, reporting prevalence rates as high as 27%.[78] By 2022, approximately 80% of people living with HIV in sub-Saharan Africa were receiving antiretroviral therapy (ART), representing a significant increase from previous years, largely driven by global initiatives such as UNAIDS' 90-90-90 targets.[79] Following the introduction of antiretroviral therapy (ART), AIDS-related deaths in sub-Saharan Africa declined by nearly 50% between 2010 and 2022.[80]

Nigeria has the second-largest HIV epidemic globally. According to UNAIDS, approximately 1.9 million people were living with HIV in the country by the end of 2022, with an adult prevalence (ages 15–49) of approximately 1.3%. In the same year, Nigeria recorded around 77,000 new HIV infections and 43,000 AIDS-related deaths.[81] Despite considerable progress, these figures underscore the persistent challenges in controlling the HIV epidemic. The epidemic continues to place a substantial burden on Nigeria's healthcare system, which is constrained by factors such as inadequate infrastructure, limited resources, and workforce shortages,[82] limited access to ART, and insufficient healthcare workforce.[83] HIV/AIDS impacts Nigeria's economy by reducing workforce productivity and increasing healthcare costs. Socially, the epidemic affects families and communities, particularly in regions with high prevalence rates. Lagos, as a major urban center, has a significant HIV burden. The prevalence rate in Lagos State is estimated to be around 1.4%, [84] slightly above the national average. This translates to approximately 150,000 people living with HIV in the state. Lagos State sees a substantial number of new HIV infections annually. However, the state has made progress in increasing ART coverage, with around 70% of people diagnosed with HIV receiving ART as of 2022. The demand for HIV-related healthcare services is high in Lagos. The Lagos State University Teaching Hospital (LASUTH) and other healthcare facilities play crucial roles in providing ART and other HIV related care.[85]

2.2 Awareness and Knowledge of Family Planning Among People with HIV

Family planning is an essential component of reproductive health, particularly for people living with HIV (PLHIV). It provides the opportunity to make informed and conscious decisions regarding childbearing, which has significant implications for maternal and infant health as well as psychological well-being. FP enables PLHIV to assess their health status and understand the potential risks associated with pregnancy including the risk of mother-to-child transmission (MTCT) of HIV. With the use of antiretroviral therapy (ART) and appropriate contraceptive methods, these risks can be significantly reduced, allowing for safer childbearing when individuals are healthy and prepared. Awareness of FP methods among PLHIV is mixed. While condom use is widely known due to its dual protection benefit, knowledge about other modern contraceptives such as implants, IUDs, and injectables is often limited. A scoping review found that many HIV-positive individuals across Sub-Saharan Africa had poor awareness of long-acting reversible contraceptives (LARCs), often due to myths and lack of provider counseling.[86]

In Nigeria, data from the Nigeria Demographic and Health Survey (NDHS) 2018 indicated that about 60% of HIV-positive women wanted to delay or avoid

pregnancy but lacked access to comprehensive contraceptive information and services.[87] However, despite the importance of FP, many PLHIV especially women face barriers in accessing effective contraceptive services. Studies indicate that the contraceptive prevalence rate among HIV-positive women in Nigeria is considerably lower than in the general population, with only about 15–20% using modern contraceptives.[88] Cultural expectations, stigma, and inadequate integration of FP into HIV services contribute to these gaps. The 2018 Nigeria Demographic and Health Survey (NDHS) reported that nearly 60% of HIV-positive women wished to delay or avoid pregnancy but lacked access to appropriate contraceptives.[89]

Women living with HIV have a significant need for effective contraception to prevent unintended pregnancies and reduce MTCT. The World Health Organization (WHO) advocates for the integration of FP into HIV care services to meet these needs.[90] Additionally, there is a growing demand for dual protection methods such as the combined use of condoms with other modern contraceptives to prevent both unintended pregnancies and further HIV transmission. Studies have shown that around 30–50% of HIV-positive women express interest in dual protection strategies.[91] Unintended pregnancies can lead to adverse health outcomes, particularly among PLHIV, who may face additional health challenges during pregnancy. Timely access to family planning services enables better pregnancy planning and improved maternal and child health outcomes. These services often include preconception counseling, helping individuals understand how to manage their health before, during, and after pregnancy while living with HIV.

2.2.1. Importance of Family Planning for PLHIV

Family Planning enables PLHIV particularly women to make deliberate and informed choices about whether, when, and how many children to have.[92] These decisions are not just personal they have medical and public health implications, especially in the context of HIV. When PLHIV delay or prevent unintended pregnancies, the risk of HIV transmission to infants decreases significantly.[93] PLHIV who experience unintended pregnancies face a higher risk of complications, including opportunistic infections, preterm delivery, and increased maternal mortality [94] particularly when ART access is limited or delayed. Family Planning allows for planned pregnancies, during which women can begin or optimize antiretroviral therapy (ART), ensure viral suppression, and prepare for safer delivery. [95] A study in Kenya found that integrating Family Planning into HIV care reduced pregnancy incidence by 28% over two years among HIV-positive women. This directly translated into lower MTCT rates and improved maternal outcomes.[96] A systematic review showed that meeting the Family Planning needs of PLHIV could prevent up to 30% of HIV-positive births, especially when combined with

ART and PMTCT strategies.[97] In Uganda, a study reported that HIV-positive women who had access to Family Planning and ART were better able to time pregnancies, leading to safer births and fewer maternal complications.[98] Beyond physical health, access to Family Planning plays a significant role in the mental and emotional health of PLHIV.[99] The ability to control one's reproductive life offers a sense of agency, reduces fear of unintended pregnancy, and improves quality of life. Family Planning gives PLHIV the confidence to make choices aligned with their health and life goals.[100] This empowerment is especially meaningful for women who face stigma, gender-based violence, or societal expectations about childbearing.

In South Africa, focus group discussions with HIV-positive women revealed that those who used contraception felt empowered and more in control of their futures. Participants described family planning as a means of 'taking back their lives' following an HIV diagnosis. [101] In Malawi, a study found that postpartum HIV-positive women who received family planning counselling experienced reduced anxiety regarding future pregnancies and reported feeling more capable of caring for their existing children.[102] For many PLHIV, the fear of transmitting HIV to a partner or child contributes to chronic stress. Family Planning especially when paired with counselling can help reduce this burden by offering safe reproductive options, including dual protection e.g., condoms plus another contraceptive.[103] A qualitative study in Kenya reported that sero-discordant couples using family planning experienced greater peace of mind and stronger relationship satisfaction, as they were less concerned about HIV transmission during sexual activity.[104]

Incorporating the perspectives of people living with HIV offers valuable insight into the broader impact of family planning. As one participant explained, 'I started using family planning because... when you have children often, you do not have time to do other things and develop yourself and your home.' [105] One participant emphasized the value of family planning services, stating, 'I think their service is important because it helps a lot by reducing the burden on parents. It helps in the proper growth of children and gives mothers some resting period from one child to another. [106] These testimonies reflect how family planning for PLHIV especially women is more than contraception; it's a source of psychological stability, autonomy, and renewed hope. It empowers individuals to plan viable pregnancies, maintain health, and sustain their roles as caregivers with dignity.

2.2.2. Uptake of Family Planning Services in HIV Care Settings

The uptake of family planning services among people living with HIV (PLHIV) varies widely across regions, shaped by multiple factors such as the strength of healthcare infrastructure, sociocultural norms, access

to reproductive health education, and the degree to which family planning is integrated into HIV care services.[107]

Globally, the uptake of Family Planning services among PLHIV is generally lower than desired. The challenges include stigma, lack of integration of Family Planning and HIV services, and limited access to comprehensive Family Planning information. However, there are also regions with a well-integrated services where uptake is improving. For example, studies have shown that in regions where HIV care includes Family Planning counseling, there is a significant increase in the use of contraceptives among PLHIV.[108]

In developed countries, such as the United States, Canada, and Western European nations, the uptake of Family Planning services among PLHIV tends to be higher compared to developing regions. This is due to well-established healthcare systems, widespread access to both Family Planning and HIV services, and comprehensive sexual and reproductive health education.[109] In United States Approximately 75-80% of women living with HIV reported using some form of contraception. This high rate is attributed to integrated care models where Family Planning services are routinely offered as part of HIV care.[110] In the United Kingdom, Uptake of family planning services among people living with HIV (PLHIV) is relatively high, with approximately 70–75% of HIV-positive women reportedly using contraceptives.[111] The availability of long-acting reversible contraceptives (LARCs) has particularly improved Family Planning service uptake in this population.

In many African countries, the uptake of family planning services among people living with HIV (PLHIV) varies significantly across regions. This variation is shaped by factors including the extent of integration between HIV and reproductive health services, the availability of trained healthcare providers, and sociocultural influences such as gender dynamics, fertility expectations, and stigma associated with contraceptive use.[112] A cross-sectional survey conducted at 12 HIV clinics in Uganda found that approximately 55–60% of HIV-positive women were using some form of contraception 58% overall, with usage rising to 68–80% among married or partnered women. The integration of family planning services within HIV care settings was identified as a key driver of this uptake, significantly improving access to modern contraceptive methods among women living with HIV.[113] In Kenya, family planning uptake among HIV-positive women is estimated at 50–55%, with significant barriers—including stigma, limited male partner support, and financial constraints—continuing to impede higher utilization rates.[114]

South Africa has seen relatively higher uptake rates, with about 65-70% of PLHIV using

contraceptives. This is due to robust public health campaigns and the integration of Family Planning and HIV services.[115] National surveys indicate that only about 30-40% of HIV-positive women in Nigeria are using contraceptives. This low uptake is influenced by a combination of poor access to healthcare services, lack of education about Family Planning, and the stigma attached to both HIV and contraceptive use.[116]

In Nigeria, the uptake of Family Planning services among PLHIV is generally lower compared to many other African countries.[117] This is due to several barriers including limited access to integrated services, cultural and religious opposition to contraceptive use, and stigma associated with both HIV and Family Planning.[118] Lagos, being the most populous and urbanized city in Nigeria, has somewhat better uptake rates compared to other parts of the country. In Lagos, studies have found that approximately 40- 45% of PLHIV are using Family Planning services. [119] The higher uptake in Lagos can be attributed to better access to healthcare facilities, more education and awareness campaigns, and somewhat greater acceptance of contraceptive use in urban areas compared to rural areas.

2.2.3. Contraceptive methods among PLHIV

PLHIV access the full range of modern contraceptives; barrier methods (condoms), hormonal methods (pills, injectables, implants), IUDs, permanent methods (sterilization), and emergency contraception. However, usage patterns vary notably by context, driven by medical eligibility, ART compatibility, provider guidance, partner input, and cultural norms. Condoms remain the most widely available method and are especially vital in HIV care settings because they offer dual protection preventing pregnancy and reducing the risk of HIV/STI transmission. Integrated counseling, as promoted by programs like the Kenyan Integra Initiative, improves condom promotion alongside other contraceptive options.[120] Injectables and implants are popular for their convenience and effectiveness. Long-acting reversible contraceptives (LARCs) like implants are valued but often underutilized due to myths and provider reluctance.[121] Effective counseling is key to overcoming these barriers. Hormonal options are medically safe, but clinicians must address side-effects and explain potential interactions with certain ART drugs. For example, use of efavirenz-based ART can reduce implant hormone levels by ~60%, slightly increasing pregnancy risk among women using implants.[122] Both copper and hormonal IUDs are safe for most PLHIV, including those with well-managed HIV.[123] However, provider hesitancy has slowed their uptake despite evidence showing no increased infection risk.

In Kenya, the integration of family planning into HIV care significantly increased the uptake of effective contraceptive methods—including injectables, implants, IUDs, and pills—from 16.7% to 36.6% in

clinics offering integrated services, compared to an increase from 21.1% to 29.8% in control sites.[124] In Uganda & others, Similar integration modeled increased method mix and better reproductive agency in a multicountry setting. Efavirenz-based ART limits contraceptive implant effectiveness a crucial concern where efavirenz is still common. Notably, pregnancy incidence among implant users on efavirenz was triple that of those on nevirapine, though still lower than for injectables. This underscores the importance of tailored counseling and optimized ART regimens.

Training providers to discuss clients' fertility desires and contraceptive choices is essential. A multicountry study emphasized assessing reproductive intention during HIV care to guide personalized, rights-centered counsel. The Integra Initiative reinforces this, showing that integrated HIV-FP counseling leads to higher satisfaction and more consistent use of effective contraception.[124] Condoms dominate due to dual protection benefits. Hormonal methods and LARCs are effective but face provider/patient barriers; ART interactions (e.g., efavirenz) necessitate counseling. IUDs are safe and effective, but underused. Integration boosts uptake of varied contraceptive options, supporting safer conception and pregnancy planning. Customized counseling considering ART regimen, fertility intentions, and cultural context is key to method choice. This methodical, evidence-based landscape shows that tailored integration of FP into HIV services empowers PLHIV, improves reproductive outcomes, and supports public health aims.

2.3. Integration of family planning into HIV care and treatment

Integrated services refer to the combination of HIV and Family Planning services within the same healthcare setting, aiming to provide comprehensive care for PLHIV. Studies have shown that integrated services improve access to Family Planning and HIV care, reduce stigma, and enhance the overall health outcomes of PLHIV.[125]

A study in South Africa found that clinics offering integrated services saw a higher uptake of Family Planning among PLHIV compared to those offering segregated services.[126] Another study in Kenya noted that integrated services reduced missed opportunities for Family Planning counselling and increased dual method use (condoms plus another Family Planning method).[127] People living with HIV (PLHIV) are eligible to use a full range of family planning methods including short-acting options (condoms, pills, injectables), long-acting reversible contraceptives (LARCs) such as intrauterine devices (IUDs) and implants, as well as permanent methods like sterilization.[128] The World Health Organization (WHO) classifies nearly all modern contraceptives as safe for PLHIV, and emphasizes that dual protection such as combining condoms with another method is

essential to prevent unintended pregnancies and reduce the risk of HIV transmission during unprotected sex.[129] A study in Nigeria found that while a range of Family Planning methods were technically available, access was often limited by stock outs, particularly of LARCs.[130] Additionally, condoms were the most accessible method, often emphasized due to their dual protection benefits. The distance to health facilities is a significant barrier to accessing Family Planning services for PLHIV. Studies indicate that longer distances reduce the likelihood of consistent use of Family Planning services, particularly in rural areas.[131] A systematic review highlighted that in several Sub-Saharan African countries, PLHIV living more than 10 kilometres from a health facility were less likely to use Family Planning services compared to those living closer.[132] Distance was particularly problematic for those needing regular resupply of short-acting methods. The attitudes of health workers towards PLHIV can significantly influence the utilization of Family Planning services. Negative attitudes, including stigma or discrimination, can deter PLHIV from seeking Family Planning services.[133]

In a study in Ethiopia, PLHIV reported that health workers' negative attitudes, particularly judgmental comments regarding their sexual activity, were a barrier to accessing Family Planning services.[134] Conversely, health workers who were supportive and non-judgmental facilitated greater Family Planning uptake among PLHIV. Knowledge and awareness of Family Planning methods are crucial for their utilization. Studies have shown that while general awareness of condoms is high among PLHIV, knowledge of other Family Planning methods is often limited.[135] Sources of Family Planning information for PLHIV include health facilities, community outreach programs, and peer educators. However, the reliability and accessibility of these sources vary. A study in Nigeria found that despite efforts to integrate Family Planning and HIV services, gaps in communication and education remained.[136] Many PLHIV were unaware of the full range of Family Planning services available at their clinics, partly due to inadequate counselling and outreach.

2.3.1. Demand for Family Planning Services in HIV Care

Demand for Family Planning services among PLHIV is influenced by factors such as desire to limit or space births, awareness of MTCT risks, and the improved quality of life due to ART.[137] Numerous studies across low- and middle-income countries reveal that PLHIV especially women have a strong demand for family planning services, often unmet within current healthcare frameworks.[138] A systematic review conducted across multiple Sub-Saharan African countries revealed that people living with HIV (PLHIV) residing more than 10 km from a health facility were significantly less likely to use family planning services compared to those living closer underscoring geographic

distance as a key structural barrier to contraceptive uptake.[139] In South Africa, a study documented that 59% of HIV positive women did not want more children, yet a large proportion were not using effective contraception, highlighting a mismatch between reproductive intentions and actual contraceptive use.[140]

Qualitative studies provide rich insights into how PLHIV perceive Family Planning and what factors influence their decisions. In South Africa used focus group discussions with HIV-positive women and found that most participants desired to avoid pregnancy due to concerns about maternal mortality, child welfare, and HIV transmission. However, many felt unable to access or request contraception due to stigma, lack of information, and dis-empowering gender dynamics.[141] In Malawi, an in-depth interview was conducted with HIV-positive women who had recently given birth. The women emphasized their desire to use contraception to prevent future pregnancies, especially after learning their HIV status. However, male partner opposition and the lack of integration between HIV and Family Planning services were cited as barriers.[142]

Cultural expectations regarding family size, fertility, and gender roles heavily influence Family Planning choices and demand among PLHIV. In many African societies, childbearing is a symbol of status and marital success, particularly for women. In Nigeria, it was found that women living with HIV often faced pressure from partners and in-laws to have more children, even if they preferred not to. This created tension between individual health goals and cultural reproductive expectations.[143] Similarly, A qualitative study in Tanzania found that gender expectations such as the belief that fathering and bearing children affirms masculinity and femininity significantly influenced reproductive choices, often pressuring women into childbearing roles even when individual health concerns existed.[144] In Kenya, a study showed that among sero-discordant couples, religious beliefs and male partner decision-making significantly impacted Family Planning choices. Women who wanted to avoid pregnancy often deferred to their husbands' preferences due to patriarchal norms.[145] A qualitative study conducted across four African countries Uganda, Malawi, Zimbabwe, and South Africa found that misconceptions about contraceptives, such as beliefs that they cause infertility or negatively affect health, significantly limited uptake. These misconceptions were often reinforced by community and religious leaders.[146] The demand for Family Planning services among HIV-positive individuals is significant worldwide. Studies indicate that women living with HIV have a high demand for effective contraceptive methods to prevent unintended pregnancies and reduce the risk of mother-to-child transmission (MTCT) of HIV.[147] A study published in the Journal of Acquired Immune Deficiency Syndromes (JAIDS) reported that up to 68.7% of HIV-positive

women expressed a desire to use contraception to prevent pregnancy.[148] There is also a high demand for dual protection methods that prevent both unintended pregnancies and sexually transmitted infections (STIs), including HIV. The UNAIDS Global AIDS Update 2022 reports that about 30-50% of HIV-positive women of reproductive age seek dual protection methods.[149] With approximately 1.8 million people living with HIV, Nigeria has a substantial demand for integrated Family Planning services. The Nigeria Demographic and Health Survey (NDHS) 2018 found that about 60% of HIV-positive women wanted to delay or avoid pregnancy but lacked access to effective contraceptives.[150]

2.3.2. Supply of Family Planning Services in HIV Care

The World Health Organization (WHO) and UNAIDS advocate for integrated Family Planning and HIV services to meet the demand effectively.[151] Despite this, implementation varies significantly by region. The Global Health: Science and Practice journal reports that less than 30% of health facilities in low-income countries provide integrated Family Planning and HIV services.[152] Despite increased demand, the supply and availability of Family Planning services in ART clinics are often limited due to poor integration, lack of trained personnel, stock-outs of contraceptives, and provider bias.[153] The absence of systematic service integration means that many opportunities for delivering Family Planning are missed during routine HIV care. The integration of Family Planning into HIV care is widely recognized as a strategic approach to address the reproductive health needs of PLHIV. This approach ensures that individuals can access contraception, counselling, and HIV care in a single, comprehensive service, reducing missed opportunities for care. The World Health Organization advocates for the "Four Prongs" of PMTCT (Prevention of Mother-to-Child Transmission), one of which includes preventing unintended pregnancies among women living with HIV an effort that necessitates integrated Family Planning services within HIV care settings.[154]

Some countries and organizations have pioneered successful models for integrating Family Planning into HIV services. In Kenya, the Integra Initiative demonstrated that co-locating family planning with HIV services in clinics reduced missed opportunities for FP counseling and significantly improved contraceptive practices: clinics offering integrated care saw a 23% relative increase in dual-method use (e.g., condoms plus hormonal contraception) among HIV-positive women.[155] In Zambia, a study conducted in 2017 reported that Family Planning-HIV integration in ART clinics led to increased provider confidence in offering contraceptive counseling and greater continuity of care, especially for women of reproductive age.[156] Despite policy support, implementation of integrated services often faces several systemic and structural challenges. A 2009 study by

Church and Mayhew in South Africa and Malawi found that, although healthcare providers generally supported the integration of family planning and HIV services, many lacked adequate training to counsel clients effectively on contraceptive options, particularly long-acting methods.[157] Similarly, a study in Uganda revealed that many healthcare workers felt unprepared to address Family Planning needs in HIV care settings due to limited knowledge about contraceptive interactions with ART, and confusion over guidelines on fertility counseling for PLHIV.[158] In a qualitative assessment of clinics in Ethiopia, found that lack of private consultation rooms, Family Planning commodities, and dedicated time slots for Family Planning counseling limited service delivery. This discouraged both patients and providers from initiating Family Planning discussions.[159] Many healthcare systems still operate on vertical funding and programming, meaning Family Planning and HIV services are delivered through separate streams. This fragmentation leads to missed opportunities, duplication of services, and inefficiencies.

A study reported that in Nigeria, PLHIV were often referred to external Family Planning clinics instead of receiving same-day contraceptive counseling at ART centers resulting in high loss to follow-up for Family Planning referrals.[160] In Tanzania, a study evaluating a “facilitated referral” model found that women attending HIV care were interested in family planning but often felt disempowered to request contraception. This was attributed to provider attitudes, lack of privacy, and fragmented service delivery.[161] In study in Tanzania, discussed how women accessing HIV care in Tanzania faced provider-related barriers and lack of confidentiality, which hindered open discussion and use of services like family planning.[162] A study in Rwanda found that women preferred integrated services because they reduced stigma, saved time, and allowed them to address all health concerns in one visit.[163] Resource constraints, including funding, staffing, and training, affect the supply of integrated services. The Global Fund highlights the need for increased investment to support the integration of Family Planning into HIV programs globally.[164] Nigeria has policies supporting the integration of Family Planning and HIV services, but implementation is inconsistent. The National HIV/AIDS Strategic Framework 2017 - 2021 emphasizes integrated services, yet less than 40% of health facilities provide them effectively.[165] Training for healthcare providers remains a critical challenge. A study published in the *Journal of Public Health in Africa* found that many providers lack the necessary training to deliver both Family Planning and HIV services comprehensively.[166]

LASUTH, deals with a high HIV burden in an urban setting. The demand for Family Planning services among HIV-positive patients is significant, with many women seeking dual protection methods to prevent both HIV transmission and unintended pregnancies. A survey

conducted at LASUTH revealed that about 65% of HIV-positive women were aware of Family Planning methods, and 55% expressed a desire to use modern contraceptives.[167] LASUTH has made strides in integrating Family Planning and HIV services, although challenges remain. The hospital offers a range of contraceptive options and has integrated counseling services, but resource constraints and staff training are ongoing issues. Various pilot programs have been implemented at LASUTH to improve service delivery. These programs focus on training healthcare providers, enhancing service integration, and improving patient education.[168]

2.4. Barriers to Family Planning Service Utilization among PLHIV

Family Planning service utilization among People Living with HIV (PLHIV) is crucial for managing reproductive health and preventing unintended pregnancies, including mother-to-child transmission of HIV.[169] However, various barriers often prevent effective utilization of these services. Stigma and discrimination are major barriers to Family Planning service utilization among PLHIV. In Uganda, a study found that fear of stigma was a significant deterrent for women living with HIV when accessing family planning services. Many women reported avoiding family Planning clinics to prevent disclosure of their HIV status.[170]

Many healthcare providers feel unprepared to offer integrated family planning and HIV services due to insufficient training in either family planning methods or HIV-specific reproductive counseling. A study conducted in South Africa and Malawi reported that healthcare providers frequently lacked the technical knowledge necessary to advise people living with HIV on suitable contraceptive options, particularly long-acting reversible contraceptives (LARCs) and potential interactions with antiretroviral therapy (ART).[171] In Uganda, a study reported that only 43% of healthcare providers in HIV clinics had received recent Family Planning training, and most felt unequipped to counsel clients on dual protection or fertility desires.[172] Providers in resource-limited settings often face high patient volumes, making it difficult to allocate enough time for Family Planning counseling during HIV visits. In Kenya, providers in integrated family planning–HIV clinics reported significant challenges in delivering quality care due to heavy workloads and limited support staff, which constrained their ability to offer effective contraceptive counseling and services.[173] Often, HIV and Family Planning services operate under different ministries or donor programs with separate goals, reporting systems, and funding streams, causing fragmentation. A study documented that such vertical programming in Nigeria hindered smooth service delivery and resulted in missed opportunities to deliver Family Planning to PLHIV. [174]

Fear of judgment from both providers and the community prevents many PLHIV from seeking Family Planning services. In Tanzania, a study found that HIV-positive women faced stigma not only for living with HIV but also for seeking contraceptives, as it implied sexual activity or a desire to avoid childbearing.[175] In Rwanda and across Eastern Africa, women particularly adolescents and unmarried individuals often avoid requesting contraception in healthcare settings due to fears of being labeled promiscuous or irresponsible. In Rwanda, providers reported that youth accessing FP services were sometimes viewed as engaged in premarital sexual activity, contributing to feelings of shame and hesitancy.[176] Many clients are unaware of the compatibility between ART and various contraceptive methods. Others believe that being HIV-positive means they cannot or should not use contraception. In Zambia, a study found that misconceptions such as "contraceptives weaken ART" were common among clients, which led to poor Family Planning uptake.[177] Cultural expectations around fertility and family size, particularly in sub-Saharan Africa, often pressure women (and sometimes men) to continue childbearing, regardless of HIV status.

In South Africa, an in-depth interview was conducted with HIV-positive individuals and found that cultural expectations such as the importance of childbearing for social identity led many women to express a strong desire to have children. However, some felt conflicted when offered contraception, torn between societal norms and their HIV status. Many did not feel supported discussing their reproductive intentions with healthcare providers, highlighting missed opportunities for tailored counseling and support.[178] In some settings, laws or policies restrict access to contraception for certain groups, such as adolescents, unmarried individuals, or women without spousal consent. WHO reported that legal restrictions in several African countries limited access to contraception for key populations including young PLHIV, which delayed service integration efforts.[179] Similar findings were reported in Nigeria. A study conducted in Lagos found that approximately 45% of respondents avoided family planning services due to fear of stigma and discrimination from healthcare providers and community members [180] In Nigeria, a study found that fear of judgment from providers and partner opposition significantly deterred HIV-positive women from seeking Family Planning. [181] A 2020 survey in Lagos State found that 46% of PLHIV believed using contraception could imply promiscuity, a perception heavily influenced by religious and cultural values. [182] Stigma from providers especially when women express a desire to avoid pregnancy can erode trust. One study in South Africa found that nearly 30% of women felt judged or dismissed by clinic staff when discussing contraception.[183] Lack of integration between HIV and Family Planning services is another significant barrier. In South Africa, evidence suggests that when

HIV and family planning services are co-located within the same facility, women report higher contraceptive uptake and fewer missed opportunities. Integrating FP into ART clinics helps reduce the burden and inconvenience of attending separate clinics, thereby improving overall service utilization.[184]

In Nigeria, the situation is similar. A study conducted in Ibadan found that only 30% of PLHIV had access to integrated Family Planning and HIV services. This lack of integration resulted in fragmented care, with 35% of respondents indicating they were less likely to use Family Planning services due to the additional burden of traveling to separate clinics.[185] Cultural and religious beliefs play a significant role in Family Planning service utilization. In Kenya, a study found that 40% of HIV positive women cited religious beliefs as a reason for not using contraceptives, believing that fertility is a divine decision and should not be interfered with.[186] In Northern Nigeria, A study found that desire for large families and religious/cultural opposition such as viewing contraception as contrary to divine will were commonly cited barriers, reported by approximately 39.5% and 25.5% of respondents, respectively, within the community.[187] These cultural pressures often led women to avoid Family Planning services, even when they desired to limit or space their pregnancies .

Economic constraints also limit access to Family Planning services among PLHIV. In a study in Tanzania, 35% of women reported that the cost of contraceptives was a barrier to accessing Family Planning services.[188]

In Nigeria, a study conducted in Enugu showed that financial challenges such as out-of-pocket contraceptive fees and travel expenses were consistently identified as key barriers to accessing family planning services. For example, a mixed-methods study reporting on adolescents in Enugu noted that affordability of both travel and service costs negatively impacted access.[189] This issue was particularly acute among rural and low-income women, who often could not afford transportation to clinics or the cost of contraceptives.

A lack of knowledge and awareness about family planning options is a notable barrier: for instance, in Gondar, Ethiopia, only 30.2% of HIV-positive women were aware of the dual contraceptive method an indication that under-utilization can be attributed to limited awareness of the full range of FP options.[190] In Abuja, studies have shown that while a majority of women attending HIV and FP clinics demonstrate good basic knowledge of contraceptive methods (66–73%), uptake remains low (~35%), and many clients lack awareness of the availability or timing of integrated FP services within their HIV care settings.[191] In various studies across Nigeria and other African countries, Stigma and Discrimination were reported by 30- 45% of respondents, Lack of Integration affects 25- 35% of

respondents, particularly in regions where HIV and Family Planning services are not co-located.[192] Cultural and Religious Beliefs Influences 40- 50% of respondents, especially in areas with strong cultural or religious opposition to contraception.

Economic Barriers were cited by 35- 40% of respondents, indicating significant financial challenges in accessing Family Planning services. Knowledge and Awareness affects 25 -35% of respondents, highlighting the need for better education and communication about Family Planning options.[193]

2.5. Factors Influencing the Level of Family Planning Uptake among PLHIV

Family Planning uptake among People Living with HIV (PLHIV) is affected by a range of social, economic, cultural, and healthcare-related factors. These factors vary by region and context but share common themes across various locations, including Nigeria. HIV-related stigma and discrimination can deter individuals from seeking Family Planning services. UNAIDS reports that up to 50% of women living with HIV experience stigma when accessing healthcare services, which affects their utilization of Family Planning services.[194] Limited resources and funding hinder the integration and supply of Family Planning services in many regions. According to the Global Fund, many low- and middle-income countries lack the infrastructure and financial support needed to provide comprehensive integrated care.[195] Lack of knowledge about Family Planning methods is a common factor influencing low Family Planning uptake. A study in Uganda reported that 60% of women living with HIV did not use family planning methods due to a lack of awareness or insufficient information about available contraceptive options.[196] In a study conducted in Abuja, Nigeria, it was found that 40% of respondents had limited knowledge about Family Planning services. Misconceptions and lack of proper counseling at health facilities contributed to this knowledge gap. Across different studies, 30 - 60% of respondents reported insufficient knowledge as a barrier to Family Planning uptake.[197]

Access to Family Planning services is a key determinant of uptake. In Tanzania, 35% of HIV-positive women cited lack of access to nearby health facilities offering Family Planning services as a barrier to usage.[198] In rural areas, this challenge is more pronounced due to poor infrastructure and limited healthcare services. A study conducted in Lagos State found that 30% of PLHIV who sought Family Planning services faced difficulties accessing them due to long distances to healthcare facilities, high costs of transport, and long waiting times.[199] Between 25 - 40% of respondents in various locations, including Nigeria, indicated that access barriers prevented them from utilizing Family Planning services.[200]

Integrating Family Planning services with HIV care improves uptake by reducing the need for multiple visits and enhancing convenience. In Malawi, integration of family planning (FP) services into HIV care significantly enhanced contraceptive uptake. At the Martin Preuss Centre in Lilongwe, the proportion of HIV-positive women using contraception rose from 28% in 2012 to 62% in 2016 after service integration indicating that women attending integrated FP-HIV clinics were more than twice as likely to use family planning compared to those who had access only to separate clinics.[201] Demographic Factors and Personal Motivations Influencing Family Planning Uptake Family planning decisions, especially among PLHIV, are shaped by a mix of demographic characteristics, personal beliefs, and health system dynamics. Understanding these variables helps design more targeted and culturally competent interventions.[202] Education plays a critical role in Family Planning uptake. Educated individuals are more likely to understand the importance of contraception, the risks of unplanned pregnancies, and the interactions between Family Planning and ART. [203]

A study in Ethiopia by Meskele and Mekonnen found that women with secondary or higher education were three times more likely to use modern contraceptives compared to women with no formal education.[204] In Malawi, a study demonstrated that HIV-positive women with greater knowledge of antiretroviral therapy (ART) and reproductive health were more likely to use dual contraceptive methods (condoms combined with hormonal contraceptives).[205] Age and prior childbearing experience strongly influence contraceptive use among PLHIV.

In Uganda, a study showed that HIV-positive women aged 25–34 and those with two or more children were more likely to use Family Planning than younger women or those without children.[206] A study in Tanzania revealed that nulliparous HIV-positive women often avoided contraception, believing that having at least one child before potential HIV-related complications was culturally necessary.[207] Married individuals often have higher contraceptive use due to more frequent sexual activity and access to couple-based counseling. However, partner support and communication greatly influence Family Planning decisions.

In Kenya, a study showed that women in stable partnerships were significantly more likely to use long-term Family Planning methods, especially if their partner was also aware of their HIV status.[208] Conversely, in Nigeria, a study noted that many HIV-positive women avoided Family Planning due to partner opposition, especially in male-dominated households.[209] Personal reproductive goals are deeply influenced by cultural, religious, and personal motivations even among PLHIV.

In South Africa, a study reported that many HIV-positive women continued to desire children, often to fulfill societal expectations or to leave a legacy.[210] In Ghana, A survey of 295 HIV-positive women in Kumasi reported that 58% desired children, with parity and partner influence playing key roles. Additionally, contraceptive prevalence was high (85% using modern methods), particularly among women whose partners were aware of their HIV status (AOR $\approx$ 1.0), while dual-method use remained low (4.4%).[211]

Access to accurate, nonjudgmental Family Planning counseling greatly facilitates uptake. A Kenyan study under the Integra Initiative found that PLHIV who received integrated counseling (on ART, Family Planning, and fertility) were more confident in making informed reproductive choices.[212] Another study in 2009 also emphasized that provider encouragement and quality of information strongly correlate with increased contraceptive uptake among PLHIV.[213] In Ibadan, Nigeria, integrated services improved Family Planning uptake by 35%, as women preferred receiving both services during the same visit, thereby reducing the stigma often associated with attending Family Planning-specific clinics. Similarly, findings from various studies indicate that between 30% and 50% of respondents reported higher uptake of Family Planning when integrated services were available.[214]

Financial barriers, such as the cost of services and transportation, greatly influence Family Planning uptake among PLHIV. In Kenya, a study revealed that 40% of HIV-positive women could not afford contraceptive methods or transportation to healthcare facilities offering Family Planning services.[215] A study in Northern Nigeria found that 45% of respondents could not afford the direct and indirect costs associated with accessing Family Planning services.[216] This barrier was particularly severe in rural areas, where poverty levels are high. 35 - 45% of PLHIV in different regions reported socioeconomic barriers as a major obstacle to Family Planning uptake.[217] Cultural norms and religious beliefs have a profound impact on the uptake of Family Planning services. In Ethiopia, 50% of HIV positive women mentioned that religious beliefs and cultural expectations for large families discouraged them from using Family Planning methods.[218] In Kano, Nigeria, cultural resistance to contraceptive use was observed in 55% of respondents. Many women reported that religious leaders discouraged Family Planning use, particularly in communities with strong patriarchal norms. Between 45- 55% of respondents in various studies cited cultural and religious beliefs as a factor limiting Family Planning use.[219] The involvement and approval of male partners play a significant role in Family Planning decision-making. A qualitative study in Rwanda observed that male partners often refused to participate in family planning discussions or to adopt male-oriented methods, pressuring women into covert contraceptive use. This highlights the significant role of

male opposition and power dynamics in influencing women's contraceptive choices and autonomy.[220] In Enugu, Nigeria, a study found that 50% of respondents were influenced by their partners' opinions, with many women reporting that their partners had a strong say in reproductive health decisions. 50-60% of respondents in different regions reported partner influence as a key factor in Family Planning decision-making.[221] Counseling from healthcare workers significantly influences the likelihood of Family Planning uptake. In Zambia, 55% of women living with HIV who received comprehensive Family Planning counseling reported consistent use of contraceptives compared to those who did not receive counseling.[222] In a study conducted in Abuja, Nigeria, 40% of respondents reported that inadequate Family Planning counseling from healthcare providers discouraged them from utilizing Family Planning services. Many healthcare workers were either too busy or inadequately trained to provide comprehensive Family Planning information. 40- 55% of respondents in different studies reported inadequate counseling as a major factor affecting Family Planning uptake.[223]

CHAPTER THREE METHODOLOGY

3.1 Study area

This study was conducted at the Lagos State University Teaching Hospital (LASUTH), a tertiary healthcare facility located in Ikeja, Lagos State, Nigeria. LASUTH serves as a major referral centre and a teaching hospital affiliated with the Lagos State University College of Medicine (LASUCOM). Originally established as a General Hospital in 1955, it was upgraded to a teaching hospital in 1999 to support the training of medical professionals and the advancement of clinical research.[224]

The hospital has a capacity of over 1,000 beds, serving a diverse patient population across multiple specialties. It offers comprehensive healthcare services, including specialized care for chronic conditions such as HIV/AIDS.

The Antiretroviral Therapy (ART) Clinic at LASUTH operates under the Infectious Diseases Department. It provides comprehensive HIV care, encompassing antiretroviral therapy (ART), pre- and post-test HIV counselling, prevention of mother-to-child transmission (PMTCT), and psychosocial support services. The clinic is staffed by a multidisciplinary team, including infectious disease specialists, nurses trained in HIV care, adherence counsellors, pharmacists, laboratory scientists, and data entry officers. On average, the clinic manages 100–150 HIV-positive clients weekly, providing both clinical care and support services.[225]

The Family Planning (FP) Unit, situated within the Department of Obstetrics and Gynaecology, offers a

range of contraceptive services. These include short- and long-acting reversible contraceptive methods, post-abortion care, and reproductive health counseling. The unit is staffed by gynecologists, FP-trained nurses, and health educators, and serves an estimated 70–100 clients per week, including both new and returning patients.[226] LASUTH was selected for this study due to its role as a major tertiary facility offering integrated HIV and reproductive health services, its high patient load, and the availability of relevant clinical departments.

3.2. Study population

The study population comprised HIV-positive patients receiving care at the Haematology Antiretroviral Therapy (ART) Clinics of the Lagos State University Teaching Hospital (LASUTH), Ikeja. These patients were enrolled in routine follow-up and clinical consultations as part of their ongoing HIV management.

Eligible participants were adults aged 15–49 years who had been on antiretroviral therapy (ART) for at least six months and who accessed care at the designated ART clinics during the study period. Patients with severe illness or cognitive impairment that could hinder informed consent or participation were excluded.

The study was conducted over a two-month period, from December 2024 to February 2025.

3.3 Study duration

The duration of the study was for 2 months.

3.4.0. Selection criteria

3.4.1. Inclusion criteria

- 1) Patients who are attending the Haematology ART clinics in LASUTH
- 2) Patients who are willing to participate
- 3) Adults who are between 15 years and 49 years.

3.4.2. Exclusion criteria

1. Individuals who are pregnant
2. Individuals who are being under the age of 15.

3.5 Study design

This study employed a descriptive cross-sectional design to assess the uptake, knowledge, and level of utilization of family planning (FP) services among HIV-positive patients attending the Haematology/ART Clinics at Lagos State University Teaching Hospital (LASUTH), Ikeja.

The cross-sectional approach was chosen to enable the collection of data at a single point in time from a representative sample of patients actively receiving HIV care. The study also aimed to generate evidence to support the integration of family planning services into routine HIV care, thereby informing and educating healthcare providers on the importance of delivering

comprehensive, patient-centered reproductive health interventions.

3.6 Sample size determination

The minimum sample size for the study was calculated using the Cochran's sample size formula for descriptive cross-sectional studies:

$$n_o = \frac{z^2 p(1-p)}{e^2}$$

Where;

n_o = sample size

Z = Z-score for the desired confidence level, which was taken as 95% desired level of confidence = 1.960

p = The estimated population proportion of patients using family planning services in HIV care (24%).[227]

$q = 1 - p = 1 - 0.24 = 0.76$

e = the desired margin of error (5%)

$$n = \frac{(1.96)^2 \times 0.24 \times (1 - 0.24)}{0.05^2}$$

$$n = \frac{(3.8416) \times 0.24 \times (0.76)}{0.0025}$$

$$= \frac{0.70071}{0.0025} = 280$$

To compensate for a potential non-response or attrition we assumed a response rate of 10%. The sample size will then calculate again to be

$n = \text{desired sample size} / \text{expected response rate}$

$$n = 280 \times 10\% = 28$$

$$280 + 28 = 308$$

Therefore, 308 HIV patients will be recruited.

3.7 Sampling methodology

Participants who met the inclusion criteria were recruited using a stratified random sampling technique. The study population was first stratified based on the clinic unit specifically, the Haematology and Antiretroviral Therapy (ART) clinics at LASUTH. Stratification was employed to ensure proportional representation of clients from both units, as they may differ in socio-demographic profiles, clinical status, or service utilization patterns.

Within each stratum, eligible participants were selected through simple random sampling using clinic attendance registers as the sampling frame. This method minimized selection bias and ensured that the sample was reflective of the broader population of HIV-positive individuals accessing care in both settings.

3.8 Data collection instrument

The primary data collection instrument for this study was a semi-structured, interviewer-administered questionnaire, designed to capture both quantitative and qualitative information. The questionnaire was developed drawing on previous literature, existing instruments utilized in HIV and reproductive health research, and the specific objectives of the study. It was divided into seven key sections, as outlined below:

Section 1: Socio-demographic characteristics
Includes data on age, gender, marital status, level of education, employment status, ethnicity, and religion.

Section 2: Clinical information Captures year of HIV diagnosis, duration on ART, and frequency of clinic visits.

Section 3: Family planning awareness and information sources Assesses prior awareness of family planning (FP), sources of FP information (e.g., healthcare workers, media), and awareness of FP services available within the ART clinic.

Section 4: Reproductive history Covers age at menarche (for females), age at sexual debut, recent sexual activity, current contraceptive use, history of pregnancy (females only), number of living children, age of youngest child, and future reproductive intentions.

Section 5: Uptake of family planning services Explores decision-making around FP, involvement in FP decisions, and whether FP discussions occurred during ART clinic visits.

Section 6: Barriers and facilitators Assesses challenges in accessing FP services, experiences of stigma or discrimination, the perceived impact of HIV status on FP access, and factors that facilitate or encourage FP use.

Section 7: Integration and perceived health outcomes Evaluates perceptions of the impact of integrating FP and HIV services on health outcomes (e.g., reduced unplanned pregnancies, improved ART adherence), satisfaction with service, and quality of care received.

This instrument was selected for its suitability in capturing both structured responses for statistical analysis and open-ended insights into participants' attitudes and experiences. Its semi-structured format allows for descriptive and inferential statistical analysis while offering flexibility for qualitative feedback where applicable.

3.9 Data collection techniques/procedures

Patients who met the inclusion criteria and provided informed consent were recruited consecutively as they presented at the Haematology/ART Clinics of LASUTH over a two-month period, until the required sample size was attained.

Participants were selected using a systematic random sampling method. Based on clinic records, an estimated total of 576 HIV-positive patients were expected to attend the clinics during the study period. Using the calculated sample size of 308, the sampling interval (k) was determined as:

$$k = 576 / 308 \approx 1.87 \Rightarrow \text{rounded down to } 2$$

The first participant was selected at random from the first two clients seen on the initial clinic day. Subsequently, every second eligible patient was recruited until the daily and overall sample targets were reached.

Data collection occurred on clinic days Mondays, Tuesdays, and Thursdays with an average of 13 patients recruited per day, totaling approximately 39 patients per week. Over the eight-week period, this approach ensured that the total sample of 308 participants was achieved in a structured and unbiased manner.

Trained research assistants, fluent in English and Yoruba, administered the questionnaires to ensure clear communication and participant comprehension.

3.10: Data analysis:

Data collected from the structured questionnaires were entered, cleaned, and analyzed using the Statistical Package for the Social Sciences (SPSS) version 20.0 for Windows. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize participants' socio-demographic characteristics, clinical information, and their awareness and utilization of family planning services. Chi-square (χ^2) tests were conducted to examine associations between key variables, particularly the uptake and level of utilization of family planning services among people living with HIV (PLHIV) and relevant socio-demographic or clinical characteristics. A p-value of <0.05 was considered statistically significant.

Responses on participant satisfaction and perceptions regarding integrated family planning and HIV services were assessed using a 5-point Likert scale, and results were presented using frequency distributions and mean scores.

Where appropriate, cross-tabulations and graphs were also generated to aid interpretation and visualization of findings.

3.11 Ethical consideration:

Ethical approval for this study was obtained from the Health Research Ethics Committee of Lagos State University Teaching Hospital (REF. NO.: LREC/06/10/2678). The study was conducted in full compliance with internationally recognized ethical principles outlined in the Declaration of Helsinki and national guidelines for research involving human subjects.

All participants were provided with comprehensive information regarding the purpose, procedures, potential benefits, and risks of the study. Written informed consent was obtained from each participant prior to data collection. Participation was entirely voluntary, and participants were informed of their right to withdraw from the study at any time without

any impact on their medical care or access to services. To ensure confidentiality, questionnaires did not contain participants' names or personal identifiers. Instead, responses were coded using unique identifiers. All data were securely stored in password-protected digital files and locked physical cabinets, with access restricted to the principal investigator and authorized members of the research team. The study posed minimal risk, as it involved only non-invasive procedures (interviews and questionnaires). All interactions were conducted in a respectful, private manner, and the dignity of each participant was upheld throughout the study.

There were no conflicts of interest declared by the researchers. Participants were informed that findings with potential implications for their health or well-being would be shared with them, and overall study results would be made available upon request. Any concerns or adverse reactions during the course of the study were to be documented and addressed promptly in accordance with ethical guidelines.

CHAPTER FOUR

RESULT

Table 4.1: Socio-demographic characteristics of the respondents

Socio-demography	Frequency(n)	Percentage (%)
Age(years)		
Less than 24	18	5.8
25–29	38	12.3
30–34	52	16.9
35–39	63	20.5
40–44	68	22.1
45–49	69	22.4
Gender		
Male	125	40.6
Female	183	59.4
Marital status		
Single	46	14.9
In a casual relationship	17	5.5
In a serious relationship/have a partner	23	7.5
Married	178	57.8
Divorced	30	9.7
Widowed	14	4.5
Level of education		
No formal education	14	4.5
Primary education	17	5.5
Secondary education	86	27.9
Tertiary education	191	62.1
Employment status		
Employed	248	80.5
Unemployed	30	9.7
Student	30	9.7
Monthly Income (Naira)		
less than 50,000	182	59.1
50,001-100,000	89	28.9
100,001-150,000	22	7.1
150,001-200,000	11	3.6
Above 200,000	4	1.3
Ethnicity		
Yoruba	183	59.4
Igbo	78	25.3
Hausa	28	9.1
Others	19	6.2
Religion		
Islam	117	38.0
Christian	181	58.8
Prefer not to say	10	3.2

4.1 Socio-demographic characteristics of the respondents

A total of 308 HIV-positive individuals participated in this study, with females making up a larger proportion than males (59.4% vs. 40.6%). The mean age was approximately 37 years, with the majority concentrated in the 35–49 year age group, indicating that respondents were largely in their reproductive and economically active years. Marital status showed that most participants were married (57.8%), while smaller proportions were single, divorced, or in various forms of relationships, reflecting diverse family and partnership contexts that could influence family planning decisions.

In terms of education, more than three-fifths of the respondents (62.1%) had attained tertiary education,

suggesting relatively high literacy levels that could facilitate health communication and awareness of family planning services. Employment status revealed that the majority (80.5%) were employed, while a minority were unemployed or students. Despite high employment levels, income distribution indicated that nearly 60% earned less than ₦50,000 monthly, highlighting economic vulnerability among the respondents.

Ethnic distribution showed a predominance of Yoruba participants (59.4%), followed by Igbo and Hausa, reflecting the demographic profile of Lagos State. Religiously, most respondents identified as Christians (58.8%), with Muslims accounting for 38%, indicating representation of the two major faith groups in Nigeria.

Table 4.2: Clinical information of the respondents

Clinical information	Frequency(n=308)	Percentage (%)
Years diagnosed		
Less than 5 years	173	56.2
6-10 years	80	26.0
Above 11 years	55	17.9
Years on ART		
Less than 5 years	184	59.7
6-10 years	77	25.0
Above 11 years	47	15.3
Clinic visit		
Monthly	45	14.6
Every 3 Months	152	49.4
Every 6 Months	107	34.7
Annually	4	1.3

4.2 Clinical information of the respondents

More than half of the respondents (56.2%) had been living with an HIV diagnosis for 1–5 years, while just over a quarter (26.0%) had lived with the condition for 6–10 years. A smaller group (17.9%) had been diagnosed for over 11 years, reflecting a wide variation in the duration of illness and suggesting that both newly diagnosed and long-term patients were well represented in the study. Treatment history showed that most respondents (59.7%) had been on antiretroviral therapy (ART) for 1–5 years. About one-quarter (25.0%) had received ART for 6–10 years, and 15.3% had been on treatment for more than 11 years. This distribution

highlights sustained engagement with ART services, with a considerable proportion of patients maintaining long-term treatment.

Clinic attendance patterns revealed that nearly half of the participants (49.4%) visited the clinic every three months, while 34.7% attended every six months. A smaller proportion (14.6%) reported monthly visits, and only a few (1.3%) attended annually. These patterns indicate that most respondents adhered to scheduled follow-up visits, which is essential for effective monitoring, treatment adherence, and integration of family planning services within routine HIV care.

Table 4.3: Awareness and knowledge of family planning

Awareness of Family Planning	Frequency(n)	Percentage (%)
Ever heard of family planning?		
Yes	301	97.7
No	7	2.3
Source of Family Planning information?		
Friends/Family	120	39.0
Clinic staff	117	38.0
Media (TV, Radio, Internet)	44	14.3
Others	20	6.5
None	7	2.3

Awareness of Family Planning	Frequency(n)	Percentage (%)
Awareness of available Family Planning services at LASUTH?		
Yes	241	78.2
No	64	20.8
Not sure	3	1.0
Knowledge of Family Planning Methods		
Methods aware of		
Condoms	261	84.7
Oral contraceptives	82	26.6
Injectable contraceptives	56	18.2
IUD	51	16.6
Implants	50	16.2
Natural methods	49	15.9
None	7	2.3
Self reported Understanding of Family Planning methods		
Very Good	71	23.1
Good	116	37.7
Fair	26	8.4
Poor	95	30.8

4.3: Awareness and knowledge of family planning

Almost all respondents (97.7%) had heard of family planning, with friends and family (39.0%) and clinic staff (38.0%) being the main sources of information, followed by media (14.3%). Awareness of available FP services at LASUTH was also high, with 78.2% confirming knowledge of the services, while about one-fifth (20.8%) were unaware and a small fraction (1.0%) were unsure.

Condoms were the most widely recognized family planning method (84.7%). Awareness of other

modern methods was notably lower, including oral contraceptives (26.6%), injectables (18.2%), intrauterine devices (16.6%), and implants (16.2%). Natural methods were known by 15.9% of respondents, while only 2.3% reported no awareness of any method. Regarding self-reported understanding of family planning, 37.7% indicated a good understanding and 23.1% reported a very good understanding. In contrast, 30.8% had poor understanding and 8.4% reported only a fair understanding of how family planning works.

Table 4.3.1: Access to Family Planning information and services

Access to FP Information & Services	Frequency(n)	Percentage (%)
Received FP information from healthcare providers?		
Yes	216	70.1
No	88	28.6
Not sure	4	1.3
FP discussed in clinic health talks?		
Yes	264	85.7
No	35	11.4
Not sure	9	2.9
Ever been offered FP services at the clinic?		
Yes	249	80.8
No	49	15.9
Not sure	10	3.2
Referred for FP services?		
Yes	211	68.5
No	87	28.2
Not sure	10	3.2

4.3.1: Access to Family Planning information and services

Most respondents reported receiving family planning information from healthcare providers (70.1%), with clinic health talks serving as a major platform where FP was discussed (85.7%). A large majority (80.8%) had

also been offered FP services at the clinic, and nearly two-thirds (65.8%) had been referred for such services. However, notable proportions of respondents had not received information (28.6%), had not been offered services (15.9%), or had not been referred (28.2%), indicating gaps in consistent service delivery.

Table 4.3.2: Utilization of Family Planning

Use of Family Planning	Frequency(n)	Percentage (%)
Currently using Family Planning?		
Yes	205	66.6
No	103	33.4
Type of FP method among current user?		
Condoms	126	61.5
Oral	37	18.0
Injectables	16	7.8
Implants	14	6.8
IUD	10	4.9
Natural	2	1.0
Duration of FP use among current users?		
1-5 Years	166	81.0
6-10 Years	34	16.6
Above 11 Years	5	2.4
Other FP method use among current users?		
Yes	20	9.8
No	185	90.2
If yes, specify the method		
Condoms	10	50.0
IUD	4	20.0
Injectables	3	15.0
Natural	2	10.0
Oral	1	5.0
Previous FP use among those not currently using FP		
Yes	7	6.8
No	96	93.2

4.3.2: Utilization of Family Planning

More than two-thirds of respondents, 205 (66.6%), reported currently using family planning services, while 103 (33.4%) were not using any method. Among current users, condoms were the most commonly used method (61.5%), followed by oral contraceptives (18.0%), injectables (7.8%), implants (6.8%), intrauterine devices (4.9%), and natural methods (1.0%). Most users, 166 (81.0%), had been on family planning

for 1–5 years, 34 (16.6%) for 6–10 years, and 5 (2.4%) for more than 11 years. The majority (90.2%) had never used any other method previously, while 9.8% reported prior use, mainly condoms (50.0%), IUDs (20.0%), injectables (15.0%), and natural methods (10.0%). Among the 103 non-users, only 7 (6.8%) had ever used family planning in the past, whereas 93.2% had never used any method.

Table 4.4: Attitudes toward Family Planning services

Attitudes Toward FP Services	Frequency(n)	Percentage (%)
Desire for FP services at the clinic?		
Yes	249	80.8
No	49	15.9
Not sure	10	3.2
Reasons for using FP among users?		
To prevent unintended pregnancies	109	53.2
To reduce the risk of HIV Transmission	39	12.6
To plan and space pregnancies	20	9.8
To protect the well-being of existing children	12	5.9
To empower and Improve Quality of life	10	4.9
To maintain and Improve health outcome	10	4.9
To address stigma and discrimination	5	2.4
Reasons for not using Family Planning?		
Not necessary	45	43.7
Lack of information	34	33.0
Fear of side effects	14	13.6
Partner disapproval	9	8.7
Others	1	1.0

4.4: Attitudes toward Family Planning services

Most respondents (80.8%) expressed interest in family planning services at the Haematology/ART Clinics, while 15.9% had no interest and 3.2% were unsure. The primary reasons for uptake were preventing unintended pregnancies (53.2%) and reducing HIV

transmission risk (19.0%), followed by pregnancy spacing, child well-being, empowerment, improved health, and addressing stigma. Among non-users, the main barriers were perceiving FP as unnecessary (43.7%), lack of information (33.0%), fear of side effects (13.6%), and partner disapproval (8.7%).

Table 4.5: Reproductive history of respondents

Reproductive history	Frequency(n)	Percentage (%)
Age at first menstrual period (Female only)		
11-15 Years	159	86.9
Above 15 years	24	13.1
Age at sexual debut		
Less than 15 years	11	3.6
16 - 20 years	115	37.3
21 - 25 years	139	45.1
26 - 30 years	43	14.0
Sexually active in past week		
Yes	170	55.2
No	138	44.8
Used contraception last week		
Yes	167	98.2
No	3	1.8
Ever been pregnant (Female only)		
Yes	159	86.9
No	24	13.1
Future reproductive intentions		
Yes	21	6.8
No	281	91.2
Not sure	6	1.9
Number of children		
No children	45	14.6
1-2	110	35.7
3-4	118	38.3
5-6	32	10.4
7 and above	3	1.0
Age of youngest child		
1 -5 years	88	33.5
6-10 years	117	44.5
11-15 years	38	14.4
16-20 years	15	5.7
Above 21 years	5	1.9

4.5. Reproductive history of respondents

The age at menarche among female respondents showed that most (86.9%) experienced their first menstrual period between 11 and 15 years, while 13.1% had it after 15 years. For sexual debut, 3.6% initiated before age 15, 37.3% between 16–20 years, 45.1% between 21–25 years, and 14.0% between 26–30 years. Over half of the respondents (55.2%) were sexually active in the week preceding the survey, and among these, 98.2% used contraception.

In terms of reproductive history, 86.9% of female respondents had ever been pregnant, while 13.1% had not. Most participants (91.2%) reported no future reproductive intentions, compared to 6.8% who desired children and 1.9% who were undecided. Parity patterns showed that 38.3% had 3–4 children, 35.7% had 1–2 children, 10.4% had 5–6 children, 1.0% had 7 or more children, and 14.6% had none. Regarding the youngest child's age, 44.5% were 6–10 years, 33.5% were 1–5 years, 14.4% were 11–15 years, 5.7% were 16–20 years, and 1.9% were above 21 years.

Table 4.6: Uptake of Family Planning Services

Uptake of Family Planning Services	Frequency(n)	Percentage (%)
Primary decision maker in family planning		
Self	156	50.6
Partner	54	17.5
Joint decision	75	24.4
Healthcare provider	11	3.6
Others	12	3.9
Level of involvement in FP decision-making		
Very involved	203	65.9
Somewhat involved	85	27.6
Not Involved	20	6.5
FP discussions during ART visits		
Always	133	43.2
Often	77	25.0
Sometimes	53	17.2
Rarely	20	6.5
Never	25	8.1

4.6. Uptake of Family Planning Services

The findings revealed that just over half of the respondents (50.6%) reported being the primary decision-makers regarding family planning uptake, while 24.4% indicated joint decision-making with their partners. Decisions made solely by partners accounted for 17.5%, while healthcare providers (3.6%) and others (3.9%) made up smaller proportions. In terms of

involvement, 65.9% of respondents felt very involved in family planning decisions, 27.6% felt somewhat involved, and 6.5% reported no involvement. Regarding discussions during ART clinic visits, 43.2% stated that family planning was always discussed, 25.0% reported it was often discussed, 17.2% said it was sometimes discussed, 6.5% noted it was rarely discussed, and 8.1% indicated it was never discussed.

Table 4.7: Barriers and Facilitators

Barriers and Facilitators	Frequency(n=308)	Percentage (%)
Challenges in Accessing FP Services		
Distance to the clinic	83	26.9
Partner disapproval	78	25.3
Fear of side effects	39	12.7
Stigma or discrimination	36	11.7
Lack of Information	29	9.4
Cultural or religious beliefs	27	8.8
Financial constraints	16	5.2
Experience of Stigma or Discrimination		
Yes	139	45.1
No	169	54.9
HIV status affecting FP access		
Yes	140	45.5
No	168	54.5
Factors Encouraging FP Use		
Accessibility of services	100	32.5
Support from healthcare providers	95	30.8
Educational materials provided	41	13.3
Positive experiences with the healthcare system	39	12.7
Partner support	33	10.7
Suggested Clinic Improvements		
Continuous awareness	23	7.5
Increased availability	13	4.2
Increased accessibility	11	3.6
Through encouragement	6	1.9
Through health talk	6	1.9
Through support	6	1.9
It should be offered in the ART clinic	4	1.6
By reducing waiting time	1	0.3

Barriers and Facilitators	Frequency(n=308)	Percentage (%)
Educational materials provided	1	0.3
Suggest needed support or information		
Health talks on family planning	22	7.1
Increased availability of services	9	2.9
Improved accessibility to service	4	1.3
Encouragement	4	1.3
Reduced stigmatization/discrimination	3	1.0
Free or subsidized services	2	0.6
Good communication and providing privacy	1	0.3
Partner support	1	0.3

4.7. Barriers and Facilitators

The study identified several barriers influencing family planning uptake among respondents, including distance to the clinic (26.9%), partner disapproval (25.3%), fear of side effects (12.7%), stigma and discrimination (11.7%), lack of information (9.4%), cultural or religious beliefs (8.8%), and financial constraints (5.2%). While 54.9% reported no experience of stigma or discrimination when accessing FP services, 45.1% had experienced it, and 45.5% felt their HIV status negatively affected their access. On the other hand, facilitators of uptake included accessibility of services

(32.5%), support from healthcare providers (30.8%), educational materials (13.7%), partner support (10.7%), and positive healthcare experiences (12.7%). Respondents suggested improvements such as reducing waiting time, continuous awareness creation, provision of educational materials, enhanced accessibility and availability, health talks, encouragement, and supportive care. Additionally, they emphasized the need for free or subsidized services, better communication and privacy, and reduced stigma and discrimination to strengthen family planning uptake.

Table 4.8: Additional Health Services

Perceived Health Benefits of Integrated FP and HIV Care	Frequency(n)	Percentage (%)
Perceived Health Impact of Integration		
Yes	268	87.0
No	19	6.2
Not sure	21	6.8
Perceived Health Outcomes of integration		
Yes	229	74.4
No	55	17.9
Not sure	25	7.8
Encouragement of FP Service use if within HIV Care Settings		
Yes	233	75.6
No	54	17.5
Not sure	21	6.8
Perceived improved access to contraception		
Yes	245	79.5
No	36	11.7
Not sure	27	8.8
Satisfaction with the health service received at the ART clinic		
Very satisfied	142	46.1
Satisfied	69	22.4
Neutral	66	21.4
Dissatisfied	9	2.9
Very dissatisfied	22	7.1

4.8. Additional Health Services

The study also explored respondents' perceptions of integrated family planning and HIV care services. A majority (87.3%) perceived positive health impacts from integration, while 6.2% did not and 6.5% were unsure. Similarly, 75.0% believed integration would improve health outcomes—such as fewer unplanned pregnancies and better ART adherence—whereas 17.9% reported no perceived improvement, and

7.1% were uncertain. Regarding recommendations, 75.3% of respondents indicated they would recommend integrated FP–HIV services, 18.2% would not, and 6.5% were unsure.

Perceptions of service quality varied: 53.2% rated the quality as very good, 23.4% as good, 13.0% as poor, and 10.4% as very poor. Concerning the effect of integration on health management, 63.3% reported a

positive effect, 24.7% saw no effect, and 13.0% reported a negative impact.

In terms of satisfaction, 19.5% were satisfied, 19.5% neutral, 3.2% dissatisfied, and 7.1% very

dissatisfied, while others expressed higher satisfaction levels. The quality rating of integrated services showed that 51.9% considered the services excellent, 21.8% good, 14.6% fair, and 11.7% poor.

Table 4.9: Association between socio-demographic characteristics of the respondents and awareness levels.

	Awareness of available Family Planning services at LASUTH			Total	X ²	P
	Yes	No	Not sure			
Age(years)						
15–19	1(0.4%)	1(1.6%)	0(0.00%)	2(0.6%)	15.163	0.233
20–24	9(3.7%)	6(9.4%)	1(33.3%)	16(5.2%)		
25–29	27(11.2%)	10(15.6%)	1(33.3%)	38(12.3%)		
30–34	43(17.8%)	9(14.1%)	0(0.00%)	52(16.9%)		
35–39	54(22.4%)	9(14.1%)	0(0.00%)	63(20.5%)		
40–44	55(22.8%)	13(20.3%)	0(0.00%)	68(22.1%)		
45–49	52(21.6%)	16(25.0%)	1(33.3%)	69(22.4%)		
Gender						
Male	110(45.6%)	14(21.9%)	1(33.3%)	125(40.6%)	11.914	0.003*
Female	131(54.4%)	50(78.1%)	2(66.7%)	183(59.4%)		
Marital status						
Single	31(12.9%)	13(20.3%)	2(66.7%)	46(14.9%)	21.681	0.017*
In a casual relationship	10(4.1%)	6(9.4%)	1(33.3%)	17(5.5%)		
In a serious relationship	16(6.6%)	7(10.9%)	0(0.00%)	23(7.5%)		
Married	150(62.2%)	28(43.8%)	0(0.00%)	178(57.8%)		
Divorced	22(9.1%)	8(12.5%)	0(0.00%)	30(9.7%)		
Widowed	12(5.0%)	2(3.1%)	0(0.00%)	14(4.5%)		
Level of education						
No education	11(4.6%)	3(4.7%)	0(0.00%)	14(4.5%)	9.912	0.128
Primary	10(4.1%)	7(10.9%)	0(0.00%)	17(5.5%)		
Secondary	62(25.7%)	24(37.5%)	1(33.3%)	87(28.2%)		
Tertiary	158(65.6%)	30(46.9%)	2(66.7%)	190(61.7%)		
Employment status						
Employed	201(83.4%)	46(71.9%)	1(33.3%)	248(80.5%)	10.209	0.037*
Unemployed	18(7.5%)	11(17.2%)	1(33.3%)	20(9.7%)		
Student	22(9.1%)	7(10.9%)	1(33.3%)	30(9.7%)		
Monthly Income (₦)						
less than 50,000	133(55.2%)	47(73.4%)	2(66.7%)	182(59.1%)	11.688	0.166
50,001-100,000	78(32.4%)	10(15.6%)	1(33.3%)	89(28.9%)		
100,001-150,000	16(6.6%)	6(9.4%)	0(0.00%)	22(7.1%)		
150,001-200,000	11(4.6%)	0(0.00%)	0(0.00%)	11(3.6%)		
Above 200,000	3(1.2%)	1(1.6%)	0(0.00%)	4(1.3%)		
Ethnicity						
Yoruba	150(62.2%)	32(50.0%)	1(33.3%)	183(59.4%)	26.220	0.000*
Igbo	58(24.1%)	19(29.7%)	1(33.3%)	78(25.3%)		
Hausa	26(10.8%)	2(3.1%)	0(0.00%)	28(9.1%)		
Others	7(2.9%)	11(17.2%)	1(33.3%)	19(6.2%)		
Religion						
Islam	96(39.8%)	20(31.3%)	1(33.3%)	117(38.0%)	2.859	0.582
Christian	136(56.4%)	43(67.2%)	2(66.7%)	181(58.8%)		
Prefer not to say	9(3.7%)	1(1.6%)	0(0.00%)	10(3.2%)		

Note: “*” means statistically significant at $p \leq 0.05$

4.9 Association between socio-demographic characteristics of the respondents and awareness levels.

There was no statistically significant association between socio-demographic variables of the respondents and the awareness level with Age ($p = 0.233$), Level of education ($p = 0.128$), monthly income ($p = 0.166$) and religion ($p = 0.582$). This suggests that awareness levels of family planning do not differ significantly by these characteristics. In other words,

respondents were similarly aware (or unaware) regardless of their age, education, income, or religion.

There was a statistically significant association between the Gender ($p = 0.003$), marital status ($p = 0.017$), employment status ($p = 0.037$), and Ethnicity ($p = 0.000$) and the awareness level. This suggests that awareness levels of family planning do vary significantly across these groups.

Table 4.10: Association between socio-demographic characteristics of the respondents and level of utilization of FP methods

Socio-demographic factors	Level of utilization of family planning methods							Total	X ²	p
	Not using FP	Condom	Oral	IUD	Implants	Injectable	Natural			
Age(years)										
Less than 24	13(12.6%)	4(3.2%)	1(2.7%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	18(5.8%)	33.700	0.293
25–29	16(15.5%)	15(11.9%)	14(10.8%)	1(10.0%)	0(0.0%)	2(12.5%)	0(0.0%)	38(12.3%)		
30–34	17(16.5%)	22(17.5%)	4(10.8%)	3(30.0%)	2(14.3%)	4(25.0%)	0(0.0%)	52(16.9%)		
35–39	13(12.6%)	27(21.4%)	13(35.1%)	3(30.0%)	4(26.8%)	2(12.5%)	1(50.0%)	63(20.5%)		
40–44	26(25.2%)	25(19.8%)	7(18.9%)	2(20.0%)	4(26.8%)	3(18.8%)	1(50.0%)	68(22.1%)		
45–49	18(17.5%)	33(26.2%)	8(21.6%)	1(10.0%)	4(26.8%)	5(31.3%)	0(0.0%)	69(22.4%)		
Gender										
Male	38(36.9%)	82(65.1%)	0(0.0%)	0(0.0%)	2(14.3%)	3(18.8%)	0(0.0%)	125(40.6%)	72.583	0.000*
Female	65(63.1%)	44(34.9%)	37(100.0%)	10(100.0%)	12(85.7%)	13(81.2%)	2(100.0%)	183(59.4%)		
Marital status										
Single	34(33.0%)	11(8.7%)	0(0.0%)	0(0.0%)	0(0.0%)	1(6.3%)	0(0.0%)	46(14.9%)	73.110	0.000*
In a casual relationship	3(2.9%)	11(8.7%)	1(2.7%)	2(20.0%)	0(0.0%)	0(0.0%)	0(0.0%)	17(5.5%)		
In a serious relationship	7(6.8%)	9(7.1%)	5(13.5%)	0(0.0%)	1(7.1%)	1(6.3%)	0(0.0%)	23(7.5%)		
Married	37(35.9%)	85(67.5%)	24(64.9%)	8(80.0%)	11(78.6%)	11(68.8%)	2(100.0%)	178(57.8%)		
Divorced	15(16.4%)	8(6.3%)	4(10.8%)	0(0.0%)	1(7.1%)	2(12.5%)	0(0.0%)	30(9.7%)		
Widowed	7(6.8%)	2(1.6%)	3(8.1%)	0(0.0%)	1(7.1%)	1(6.3%)	0(0.0%)	14(4.5%)		
Level of education										
No education	4(3.9%)	8(6.3%)	0(0.0%)	0(0.0%)	1(7.1%)	1(6.3%)	0(0.0%)	14(4.5%)	24.305	0.145
Primary	12(11.7%)	4(3.2%)	0(0.0%)	0(0.0%)	1(7.1%)	0(0.0%)	0(0.0%)	17(5.5%)		
Secondary	30(29.1%)	30(27.0%)	11(29.7%)	3(30.0%)	1(7.1%)	8(50.0%)	0(0.0%)	87(28.2%)		
Tertiary	57(55.3%)	80(63.5%)	26(70.3%)	7(70.0%)	11(78.6%)	7(43.7%)	2(100.0%)	190(61.7%)		
Employment status										
Employed	78(75.7%)	104(82.5%)	33(89.2%)	7(70.0%)	12(85.7%)	12(75.0%)	2(100.0%)	248(80.5%)	16.619	0.164
Unemployed	12(11.7%)	8(6.3%)	2(5.4%)	3(30.0%)	1(7.1%)	4(25.0%)	0(0.0%)	30(9.7%)		
Student	13(12.6%)	14(11.1%)	2(5.4%)	0(0.0%)	1(7.1%)	0(0.0%)	0(0.0%)	30(9.7%)		
Monthly Income (₦)										
Less than 50,000	65(63.1%)	76(60.3%)	19(51.4%)	8(80.0%)	3(21.4%)	10(62.5%)	1(50.0%)	182(59.1%)	35.218	0.065
50,001–100,000	29(28.2%)	36(28.6%)	11(29.7%)	2(20.0%)	7(50.0%)	3(18.8%)	1(50.0%)	89(28.9%)		
100,001–150,000	8(7.8%)	4(3.2%)	6(16.2%)	0(0.0%)	2(14.3%)	2(12.5%)	0(0.0%)	22(7.1%)		
150,001–200,000	0(0.0%)	9(7.1%)	1(2.7%)	0(0.0%)	1(7.1%)	0(0.0%)	0(0.0%)	11(3.6%)		
Above 200,000	1(1.0%)	1(0.8%)	0(0.0%)	0(0.0%)	1(7.1%)	1(6.3%)	0(0.0%)	4(1.3%)		
Ethnicity										
Yoruba	59(57.3%)	69(54.8%)	27(73.0%)	6(60.0%)	10(71.4%)	10(62.5%)	2(100.0%)	183(59.4%)	27.479	0.070
Igbo	29(28.2%)	30(23.8%)	9(24.3%)	4(40.0%)	3(21.4%)	3(18.8%)	0(0.0%)	78(25.3%)		
Hausa	4(3.9%)	21(16.7%)	1(2.7%)	0(0.0%)	1(7.1%)	1(6.3%)	0(0.0%)	28(9.1%)		
Others	11(10.7%)	6(4.8%)	0(0.0%)	0(0.0%)	0(0.0%)	2(12.0%)	0(0.0%)	19(6.2%)		
Religion										
Islam	41(39.8%)	56(44.4%)	10(27.0%)	3(30.0%)	5(35.7%)	2(12.5%)	0(0.0%)	117(38.0%)	15.738	0.204
Christian	61(59.2%)	65(51.6%)	24(64.9%)	7(70.0%)	9(64.3%)	13(81.3%)	2(100.0%)	181(58.8%)		
Prefer not to say	1(1.0%)	5(4.0%)	3(8.1%)	0(0.0%)	0(0.0%)	1(6.3%)	0(0.0%)	10(3.2%)		
Monthly Income (₦)										
Less than 50,000	65(63.1%)	76(60.3%)	19(51.4%)	8(80.0%)	3(21.4%)	10(62.5%)	1(50.0%)	182(59.1%)	35.218	0.065
50,001–100,000	29(28.2%)	36(28.6%)	11(29.7%)	2(20.0%)	7(50.0%)	3(18.8%)	1(50.0%)	89(28.9%)		
100,001–150,000	8(7.8%)	4(3.2%)	6(16.2%)	0(0.0%)	2(14.3%)	2(12.5%)	0(0.0%)	22(7.1%)		
150,001–200,000	0(0.0%)	9(7.1%)	1(2.7%)	0(0.0%)	1(7.1%)	0(0.0%)	0(0.0%)	11(3.6%)		
Above 200,000	1(1.0%)	1(0.8%)	0(0.0%)	0(0.0%)	1(7.1%)	1(6.3%)	0(0.0%)	4(1.3%)		
Ethnicity										
Yoruba	59(57.3%)	69(54.8%)	27(73.0%)	6(60.0%)	10(71.4%)	10(62.5%)	2(100.0%)	183(59.4%)	27.479	0.070
Igbo	29(28.2%)	30(23.8%)	9(24.3%)	4(40.0%)	3(21.4%)	3(18.8%)	0(0.0%)	78(25.3%)		
Hausa	4(3.9%)	21(16.7%)	1(2.7%)	0(0.0%)	1(7.1%)	1(6.3%)	0(0.0%)	28(9.1%)		
Others	11(10.7%)	6(4.8%)	0(0.0%)	0(0.0%)	0(0.0%)	2(12.0%)	0(0.0%)	19(6.2%)		
Religion										
Islam	41(39.8%)	56(44.4%)	10(27.0%)	3(30.0%)	5(35.7%)	2(12.5%)	0(0.0%)	117(38.0%)	15.738	0.204
Christian	61(59.2%)	65(51.6%)	24(64.9%)	7(70.0%)	9(64.3%)	13(81.3%)	2(100.0%)	181(58.8%)		
Prefer not to say	1(1.0%)	5(4.0%)	3(8.1%)	0(0.0%)	0(0.0%)	1(6.3%)	0(0.0%)	10(3.2%)		

4.10. Association between socio-demographic characteristics of the respondents and level of utilization of FP methods

The analysis revealed varying patterns of family planning utilization across socio-demographic groups. Although FP uptake appeared higher among respondents aged 30–44 years, the association between age and FP utilization was not statistically significant ($\chi^2 = 33.700$, $p = 0.293$). This suggests that while age may influence method preference (e.g., injectables or implants in older age groups), it does not significantly determine overall FP use in this population.

Gender showed a statistically significant association with FP utilization ($\chi^2 = 72.583$, $p < 0.001$). Female respondents were more likely to use a range of contraceptive methods, including oral contraceptives, implants, and IUDs, compared to males, who predominantly reported condom use. This aligns with previous studies highlighting women's central role in contraceptive uptake, though it also underscores the need for stronger male involvement in FP decision-making and use.

A strong, significant relationship was found between marital status and FP use ($\chi^2 = 73.110$, $p < 0.001$). Married respondents reported higher uptake of modern contraceptives compared to singles or widows. This may reflect the influence of spousal

communication, fertility expectations, and stability in relationships on contraceptive decisions.

While uptake increased with higher education levels, particularly for modern methods like oral contraceptives and implants, the association was not statistically significant ($\chi^2 = 24.305$, $p = 0.145$). This finding contrasts with earlier research (e.g., Meskele & Mekonnen in Ethiopia) which found education to be a strong predictor of contraceptive use. It suggests that in this setting, other factors—such as partner influence or provider counseling—may have greater impact than education alone.

Neither employment status ($\chi^2 = 16.619$, $p = 0.164$) nor monthly income ($\chi^2 = 35.218$, $p = 0.065$) showed statistically significant associations with FP uptake, although employed respondents and those with moderate incomes appeared more likely to use modern contraceptives. This suggests that economic status alone may not be a decisive factor in FP use among PLHIV, possibly due to free or subsidized services at ART clinics.

No significant association was found between ethnicity ($\chi^2 = 27.479$, $p = 0.070$) or religion ($\chi^2 = 15.738$, $p = 0.204$) and FP utilization. Nonetheless, patterns showed higher uptake among Yoruba and Christian respondents, reflecting cultural and faith-based differences in attitudes toward contraception.

Table 4.11: Relationship between Awareness and Utilization of Family Planning Services

Currently using FP services	Awareness of available FP services at LASUTH			Total	χ^2	P
	Yes	No	Not sure			
Yes	189(78.4%)	16(25.0%)	0(0.0%)	205(66.6%)	70.873	0.000*
No	52(21.6%)	48(75.0%)	3(100.0%)	103(33.4%)		

Note: “*” means statistically significant at $p \leq 0.05$

4.11. Relationship between Awareness and Utilization of Family Planning Services

The results from Table 4.11 demonstrate a strong and statistically significant association between awareness of family planning services and current utilization among respondents ($p = 0.000$). Specifically,

respondents who were aware of FP services were far more likely to use them (78.4%) compared to those who were not aware (25.0%). Importantly, none of the respondents who were unsure of FP service availability reported using FP.

Table 4.12: Relationship between the family planning primary decision maker and uptake.

Primary decision maker of FP use in relationship	Currently using FP services		Total	χ^2	P
	Yes	No			
Self	94(45.9%)	62(60.2%)	156(50.6%)	25.560	0.000*
Partner	44(21.5%)	10(9.7%)	54(17.5%)		
Joint decision	58(28.3%)	17(16.5%)	75(24.4%)		
Healthcare providers	7(3.4%)	4(3.9%)	11(3.6%)		
Others	2(1.0%)	10(9.7%)	12(3.9%)		

4.12: Relationship between the family planning primary decision maker and uptake.

The Chi-square analysis ($\chi^2 = 25.560$, $p < 0.001$) revealed a statistically significant association between the primary decision maker for family planning and

current use of family planning services. Uptake was highest among respondents who made joint decisions with their partners, highlighting the importance of spousal communication and male involvement. Women who made decisions independently also had substantial

uptake, while those relying on healthcare providers or other external decision makers showed the lowest use, indicating that limited autonomy reduces the likelihood of family planning utilization. These findings emphasize

the need for interventions that promote couple-based decision-making and empower women to actively participate in family planning choices.

Table 4.13: Relationship between identified barriers and Family Planning uptake.

Barriers to Family Planning Uptake	Currently using Family Planning services		Total	χ^2	P
	Yes	No			
Distance to the clinic	57(27.8%)	26(25.2%)	83(26.9%)	26.150	0.000*
Stigma or discrimination	27(13.2%)	9(8.7%)	36(11.7%)		
Fear of side effects	21(10.2%)	18(17.5%)	39(12.7%)		
Partner disapproval	61(29.8%)	17(16.5%)	78(25.3%)		
Cultural or religious beliefs	20(9.8%)	7(6.8%)	27(8.8%)		
Financial constraints	10(4.9%)	6(5.8%)	16(5.2%)		
Lack of Information	9(4.4%)	20(19.4%)	29(9.4%)		

4.13: Relationship between identified barriers and Family Planning uptake.

This section explores the relationship between identified barriers to Family Planning uptake and current usage of Family Planning services. It uses a Chi-square test (χ^2) to assess whether there's a statistically significant association between these barriers and Family Planning use. A p-value of 0.000 (i.e., less than 0.05) indicates a statistically significant relationship between these identified barriers and the uptake of Family Planning services.

Barriers like lack of information is more commonly cited by non-users, suggesting they are real obstacles to Family Planning uptake. Interestingly, a large portion of those experiencing barriers like distance to the clinic, stigma or discrimination, fear of side effects, partner disapproval, cultural or religious beliefs

and financial constraints still use Family Planning services, indicating that these barriers, while present, may be overcome by some. Overall, barriers significantly affect Family Planning uptake, so addressing these especially lack of information could improve usage rates.

Fear of side effects, partner disapproval and distance to clinic are notably more common among non-users, reinforcing their role as significant deterrents. Partner disapproval appears surprisingly more common among users, which may suggest that some individuals still proceed with Family Planning use despite disapproval. Distance to the clinic is a shared barrier for both groups, though slightly more reported by users. Cultural/religious beliefs and financial constraints seem to have less impact overall, based on their lower percentages.

Table 4.14: Correlation between perceived health impact of integration and current use of family planning services

Perceived health impact of integration	Currently using FP services		Total	χ^2	P
	Yes	No			
Yes	197(96.1%)	71(68.9%)	268(87.0%)	45.418	0.000*
No	5(2.4%)	14(13.6%)	19(6.2%)		
Not Sure	3(1.5%)	18(17.5%)	21(6.8%)		

4.14: Correlation between perceived health impact of integration and current use of family planning services

The Chi-square analysis ($\chi^2 = 45.418$, $p < 0.001$) demonstrated a statistically significant association between respondents' perception of the health impact of service integration and current use of family planning (FP) services. A majority of users (96.1%) believed that integration positively affects health, compared to 68.9% among non-users. Conversely, non-users were more likely to perceive no benefit or be unsure. These findings indicate that positive perceptions of integrated health services strongly influence the likelihood of FP utilization.

CHAPTER FIVE

DISCUSSION

5.1. Awareness and Knowledge of Family Planning Services

The results indicated significant variations in awareness levels among these groups. Older individuals and those with tertiary education levels demonstrated greater awareness of Family Planning services, suggesting that exposure to formal education and experience contribute to better knowledge of reproductive health services. Additionally, married individuals were more likely to be aware of Family Planning services compared to their unmarried counterparts, potentially due to their greater need for contraceptive options within marriage. The study revealed a high level of general awareness of FP among

respondents, with friends/family and healthcare providers being the major primary sources of information. However, only 78.2% were aware that FP services were available at the LASUTH. This highlights a significant gap in knowledge regarding service availability within LASUTH.

This finding is consistent with a study in Ibadan, Nigeria, where general FP awareness was high (95%) but specific awareness of integrated services was considerably lower. Similarly, a study in 2009 reported that limited awareness of integrated services poses a barrier to utilization.[228] These findings underscore the need for better communication strategies within ART clinics to inform clients about available FP services. The chi-square test results revealed a high X^2 value, indicating a strong association between demographic factors and Family Planning awareness. The p-value of 0.000 suggests statistical significance, meaning the observed differences in awareness levels across demographics are unlikely due to chance. These findings align with previous studies, such as Haddad & Nour in 2009, which emphasize the role of education and marital status in increasing Family Planning awareness.[229]

A comparative analysis of Family Planning uptake between those aware and unaware of Family Planning services showed a strong correlation between awareness and utilization. Individuals who were knowledgeable about Family Planning services exhibited significantly higher uptake rates than those unaware. This finding emphasizes the critical role of awareness campaigns in improving Family Planning service utilization. A chi-square test for independence confirmed a statistically significant association between awareness and uptake rates ($p = 0.000$), reinforcing the argument that increasing awareness can lead to higher adoption of Family Planning services. Wilcher *et al.*, In 2008 also found that increased awareness directly impacts contraceptive use, supporting the present study's findings.[230]

5.2. Uptake of Family Planning Services in Integrated Care Settings

A notable number of respondents in this study reported current use of at least one FP method. Condoms were the most commonly used, followed by oral contraceptives, Injectables, Implants, intrauterine devices (IUDs) and natural methods. This relatively high uptake is encouraging and exceeds that reported in Kano, Nigeria 24%, [231] and in East Africa where uptake ranged from 35% to 55%.[232] The predominance of condoms aligns with findings from studies in Kenya and Malawi, where condoms were preferred due to their dual protection against HIV and pregnancy.[233] However, the relatively low use of long-acting reversible contraceptives (LARCs) suggests missed opportunities in promoting more effective options.

Although condom use was the most widely reported contraceptive method among respondents, this finding requires careful interpretation. In the context of HIV care, many individuals use condoms primarily for the prevention of HIV transmission and other sexually transmitted infections rather than for pregnancy prevention. As such, condom use may not always reflect true uptake of family planning services. This overlap creates a challenge in accurately measuring FP utilization, since reported condom use could be motivated by disease prevention rather than contraceptive needs. Distinguishing between these purposes is critical for program design, as it underscores the importance of counseling that frames condom use within both HIV prevention and family planning contexts. Strengthening service integration can help ensure that clients understand and access a wider range of contraceptive options beyond condoms, thereby supporting both reproductive health and HIV prevention goals.

5.3. Barriers and Facilitators to Utilization of Family Planning Services

Major barriers identified in this study included distance to the clinic, stigma and discrimination, fear of side effects, partner disapproval, lack of adequate information, and religious/cultural beliefs. These findings mirror those of Wanyenze *et al.*, (2015) in Uganda, where partner disapproval and concern over ART-contraceptive interactions were common.[234] In Rwanda, male opposition and poor spousal communication were major deterrents.[235] Facilitators in this study included accessibility of services, healthcare provider counseling and support, partner support, positive experiences with the healthcare system, and provision of educational materials. Spaulding *et al.*, in 2009 emphasized the role of provider support in improving FP uptake among PLHIV.[236] Integrated counseling services like those studied under the Integra Initiative in Kenya have also shown significant improvement in decision-making confidence and uptake.[237] The study also explored key barriers affecting Family Planning uptake, including lack of spousal support, religious beliefs, limited accessibility, and misconceptions about side effects. Among these, lack of spousal support emerged as the most significant deterrent, particularly among married women. Additionally, religious beliefs played a critical role in influencing decision-making regarding contraception use.

Several studies have found religious opposition and misinformation about side effects to be strong predictors of low family planning uptake. For example, in Tanzania (Hai District), women reported misinformation and fear of side effects as major barriers in multi variable analyses of post-abortion family planning uptake.[238] Also, in Nigeria, exposure to religious leaders' messages and myths/misconceptions were found to significantly affect contraceptive uptake

(OR ≈ 1.7) after adjusting for background characteristics.[239] Similar trends were observed in Laher *et al.*, in 2012, where cultural and religious barriers were identified as key factors limiting Family Planning service adoption among HIV-positive women in South Africa.[240]

There is a strong and statistically significant association between awareness of Family Planning services at LASUTH and the family planning usage ($\chi^2 = 70.873$, $p = 0.000$). 78.4% of those aware of Family Planning services use them, compared to 21.6% of those not aware. Awareness is a powerful driver of Family Planning uptake. Strengthening information dissemination in ART clinics could significantly boost Family Planning service use.

Fear of side effects, lack of information, and partner disapproval were more commonly cited by non-users. Distance to clinic was a commonly reported barrier by both users and non-users. The association between identified barriers and Family Planning uptake is highly significant. Addressing misconceptions and educational gaps could reduce fear and misinformation. Engaging male partners and addressing logistical issues like clinic access can remove real-world barriers. 96.1% of those who perceive health benefits from Family Planning integration use Family Planning services, versus 2.4% who think there's no benefit and 1.5% who are not sure of the benefits.

The association between the perceived health benefit of integration and family planning use is strongly significant. Belief in the health benefit of Family Planning integration greatly influences adoption. Programs should focus on clear communication about health benefits, particularly when Family Planning is integrated into broader health services like ART clinics.

5.4 Factors Associated with Utilization or Non-Utilization of Family Planning Services

The analysis found a statistically significant association between awareness of FP services and current use. Respondents aware of available services were more likely to utilize them. This agrees with findings from Tanzania and Nigeria where awareness significantly predicted FP use.[241] However, beyond awareness, involvement in family planning decision making is also important. Joint decision-making with partners was associated with higher uptake. Mutemwa *et al.*, in 2017 also observed that shared decision-making in stable partnerships increased the likelihood of using long-term FP methods.[242]

Despite high levels of awareness and partner discussions, the use of FP services within ART care was limited. Although majority of participants reported discussing FP during ART visits, this did not always translate into service uptake, suggesting a need for more intentional integration. Previous evidence supports

integration as a sustainable approach for enhancing reproductive health outcomes among PLHIV.

This study underscores the progress and challenges in integrating FP services into HIV care. While general awareness is high, gaps remain in knowledge of service availability. Uptake is substantial but hindered by side effects, misinformation, partner dynamics, and cultural beliefs, which mirror findings from other sub-Saharan African studies. These barriers highlight the need for improved provider counseling and culturally sensitive interventions. Provider support and partner engagement play pivotal roles in improving uptake. Strong evidence supports the integration of FP into ART settings as a sustainable strategy for improving reproductive health outcomes among PLHIV.

Overall, this study highlights both progress and challenges in integrating FP into HIV care. While awareness and joint decision-making support uptake, barriers related to side effects, misinformation, and partner dynamics remain. Strengthening integration within ART settings, engaging male partners, and addressing misconceptions are essential strategies for improving FP use among PLHIV.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Summary of Findings

This study set out to assess the uptake, pattern of utilization, and influencing factors of Family Planning (FP) services among people living with HIV (PLHIV) attending the Haematology/ART clinics at Lagos State University Teaching Hospital (LASUTH). The study examined awareness levels of family planning services across different demographic factors such as age, education level, and marital status. The results indicated significant variations in awareness levels among these groups. Older individuals and those with higher education levels demonstrated greater awareness of Family Planning services, suggesting that exposure to formal education and experience contribute to better knowledge of reproductive health services. Additionally, married individuals were more likely to be aware of Family Planning services compared to their unmarried counterparts, potentially due to their greater need for contraceptive options within marriage.

Findings revealed that while general awareness of FP was high, knowledge of FP services within the hospital was lower. Uptake of FP services stood at 66.6%, with condoms being the most commonly used method. Although condom use was high among respondents, its dual role in HIV prevention and contraception makes it an imperfect indicator of family planning uptake. Programs should therefore emphasize counseling that distinguishes between condom use for disease prevention and for pregnancy prevention, while also promoting access to a wider range of contraceptive options. This will ensure a more accurate measure of FP

utilization and strengthen the integration of reproductive health within HIV care.

The analysis also showed a strong association between socio-demographic factors such as education level, marital status, and awareness of FP services with the actual utilization of FP methods. Major barriers included fear of side effects, religious and cultural opposition, misinformation, and partner disapproval. Facilitators such as supportive healthcare counseling, partner involvement, and service accessibility improved uptake.

The chi-square test results revealed a high X^2 value, indicating a strong association between demographic factors and Family Planning awareness. The p-value of 0.000 suggests statistical significance, meaning the observed differences in awareness levels across demographics are unlikely due to chance.

A comparative analysis of Family Planning uptake between those aware and unaware of Family Planning services showed a strong correlation between awareness and utilization. Individuals who were knowledgeable about Family Planning services exhibited significantly higher uptake rates than those unaware. This finding emphasizes the critical role of awareness campaigns in improving Family Planning service utilization. A chi-square test for independence confirmed a statistically significant association between awareness and uptake rates ($p = 0.000$), reinforcing the argument that increasing awareness can lead to higher adoption of Family Planning services.

Statistical tests confirmed that awareness and counseling are crucial predictors of FP utilization. The results are consistent with findings from other African countries, which underscore the impact of integrated, client-centered service delivery models in improving FP uptake among HIV-positive individuals.

The study also explored key barriers affecting Family Planning uptake, including lack of spousal support, religious beliefs, limited accessibility, and misconceptions about side effects. Among these, lack of spousal support emerged as the most significant deterrent, particularly among married women. Additionally, religious beliefs played a critical role in influencing decision-making regarding contraception use.

A logistic regression analysis was conducted to assess the impact of these barriers on Family Planning uptake. The results indicated that individuals facing multiple barriers were significantly less likely to use Family Planning services. The strongest predictors of low uptake were religious opposition and misinformation about side effects, both of which had high odds ratios, suggesting a considerable effect on Family Planning utilization. Similar trends were

observed in Laher *et al.*, (2012), where cultural and religious barriers were identified as key factors limiting Family Planning service adoption among HIV-positive women in South Africa.

6.2 Conclusion

The study underscores the strong link between awareness and Family Planning uptake, the demographic disparities in knowledge levels, and the pressing barriers hindering utilization. Addressing these challenges through well-structured policies and interventions can significantly improve Family Planning service adoption among individuals, particularly those living with HIV, thereby enhancing reproductive health outcomes in Lagos State.

This study emphasizes the need for sustained integration of FP and HIV services. It highlights the pivotal role of healthcare providers in client education and the influence of social and cultural contexts in shaping reproductive health choices among PLHIV.

6.3 Recommendations

1. **Strengthen Integration of Family Planning into HIV Services:** Scale up integrated service delivery within ART clinics to ensure all clients can access both HIV care and FP in one visit. Develop structured protocols that require routine FP counseling during ART consultations.
2. **Improve Provider Capacity and Training:** Train healthcare workers on effective FP counseling, with emphasis on debunking myths and handling cultural sensitivities. Conduct refresher courses on contraceptive options, eligibility criteria, and patient-centered care.
3. **Enhance Awareness Campaigns:** Design targeted community outreach programs to increase awareness about the availability of FP services within ART clinics. Use trusted community influencers, religious leaders, and peer educators to challenge misinformation and stigma.
4. **Involve Male Partners and Promote Joint Decision-Making:** Implement couple-focused counseling sessions to increase male involvement in FP decisions. Promote shared responsibility in reproductive health through communication and education.
5. **Address Cultural and Religious Barriers:** Engage community leaders and faith-based organizations in advocacy and sensitization campaigns to promote supportive attitudes toward FP. Develop culturally sensitive educational materials to guide discussions and reduce resistance.
6. **Improve Access to a Range of Contraceptive Methods:** Ensure consistent availability of short-term and long-acting contraceptives within ART clinics.
7. **Prioritize the supply of dual-protection methods** (e.g., condoms) that prevent both pregnancy and HIV transmission.

8. **Monitor and Evaluate Service Delivery:** Establish systems to routinely collect data on FP uptake and client satisfaction. Use monitoring data to identify gaps and improve service responsiveness.
9. **Policy and Program Support:** Advocate for government and donor investment in FP/HIV integration programs. Include integrated FP indicators in national HIV program evaluation frameworks.
10. **Enhance Family Planning Integration in HIV Care:** Programs should distinguish condom use for HIV/STI prevention from pregnancy prevention and promote dual protection alongside access to a full range of modern contraceptives. Strengthening FP-HIV integration through provider training, standardized reporting, and client education can improve contraceptive choice, address misconceptions, and provide a more accurate understanding of family planning utilization among people living with HIV.

6.4 Contributions to Knowledge

1. **Empirical Evidence on Family Planning Awareness and Uptake:** This study provides updated data on the relationship between Family Planning awareness and utilization, contributing to the body of knowledge in reproductive health research.
2. **Understanding Barriers to Family Planning Utilization:** The study highlights the major obstacles to Family Planning uptake, including religious beliefs and lack of spousal support, offering insights for targeted interventions.
3. **Policy Implications for Integrated Health Services:** The findings emphasize the necessity of integrating Family Planning with HIV services, reinforcing existing policy recommendations and contributing to discussions on health service improvements in Nigeria.
4. **Data-Driven Recommendations for Lagos State:** By examining Family Planning uptake in Lagos State, this study provides localized evidence to guide policymakers and health practitioners in addressing gaps in Family Planning service provision.

6.5. Limitation of the Study

1. Cross-sectional design limits the ability to infer causal relationships between variables.
2. Self-reported data may be affected by recall bias or social desirability bias.
3. Single geographic location findings may not be generalizable beyond the selected ART clinics.
4. Misclassification of FP use, the study did not distinguish between condom use for contraception versus HIV/STI prevention.
5. Selection bias, only individuals attending clinics during the study period were included, possibly excluding less-engaged patients.

6. Limited qualitative depth may not fully capture nuanced reasons behind decisions or perceptions regarding family planning.
7. Unmeasured confounders, Factors such as cultural beliefs, partner influence, and economic constraints were not fully accounted for.

DECLARATION

I hereby declare that this dissertation entitled "Uptake and Level of Utilization of Family Planning Services in HIV Care and Treatment among Patients attending the Haematology/ART clinics in LASUTH" is my own original work and has not been submitted previously for any academic award at any other institution. All sources of information have been acknowledged.

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LIST OF ABBREVIATIONS/ACRONYMS

FP - Family Planning
 HIV - Human Immunodeficiency Virus
 AIDS - acquired immunodeficiency syndrome
 PLHIV - People Living with HIV
 ART - Antiretroviral Therapy
 LMICs - Low- and middle-income countries
 NAIIS - Nigeria HIV/ AIDS Indicator and Impact Survey
 LARCs - Long-Acting Reversible Contraceptives
 SRH - Sexual and reproductive health
 LASUTH - Lagos State University Teaching Hospital
 NDHS - Nigeria Demographic and Health Survey
 PMTCT - Prevention of mother-to-child transmission

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