**HIV TREATMENT LITERACY**

**AND ASSOCIATED FACTORS AMONG ADOLESCENTS AGED 10-17 YEARS**

**AT YOUNG ADOLESCENT PEER SUPPORT (YAPs)**

**IMPLEMENTING SITES IN BIDIBIDI REFUGEE**

**SETTLEMENT, YUMBE DISTRICT**

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# OPERATIONAL DEFINITIONS

**AIDS**

**HIV**

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[The content validity test indicates the extent to which an instrument would measure what it is supposed to measure by using the content validity index. Therefore, in this study, the researcher will first of all formulate a questionnaire based on the study objectives as well as ensure that the items in the questionnaire are grammatically correct. The researcher will present the questionnaire to two research supervisors in Uganda Martyrs University Graduate School who will scrutinize the tool, make necessary recommendations for the items in the data collection to be relevant and able to answer the study objectives. After receiving the recommendations from the supervisors, the researcher will make necessary adjustments then share the tool with the supervisors before embarking on the calculation of Content Valid Index (CVI), a scale that will be developed by computing the relevant items in the questionnaire by checking their clarity, their meaningfulness in line with the objectives stated dividing by the total number of items. The instrument will be considered valid if the CVI gotten is above 0.7 as recommended by Kothari (2003) using the following formular: 42](#_Toc188877962)

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# Chapter One

## Introduction

## 1.1 Background of the Study

HIV treatment literacy and adherence to antiretroviral therapy (ART) among adolescents are influenced by a range of individual, social, and structural factors globally. Treatment literacy, which involves understanding HIV/AIDS and its management, is often hindered by limited access to education and reliable health information, particularly in low-resource settings. Adolescents with lower levels of formal education or inadequate exposure to health education are less likely to grasp the importance of consistent ART use, leading to gaps in treatment adherence (UNICEF, 2021). Socioeconomic disparities further exacerbate the issue, as marginalized communities often lack access to digital and traditional platforms disseminating HIV-related information (UNAIDS, 2020). Healthcare providers play a pivotal role in improving treatment literacy, yet stigma and discrimination within healthcare settings deter many adolescents from engaging in open discussions about their condition and treatment options (Mugavero et al., 2020). Addressing these gaps requires context-specific educational programs and community interventions to empower adolescents with accurate knowledge and build their confidence in managing HIV effectively.

Adherence to ART among adolescents is similarly influenced by psychological, cultural, and structural factors that vary across regions. Mental health issues, such as depression and anxiety, are prevalent among adolescents living with HIV and have been associated with lower rates of adherence (Dow et al., 2019). The fear of stigma and discrimination, whether perceived or experienced, discourages many adolescents from taking ART consistently, as they worry about unintentional disclosure of their status (UNAIDS, 2020). Family support is a critical determinant of adherence, with adolescents in supportive households demonstrating higher consistency in medication use compared to those from unsupportive environments (Kim et al., 2021). Additionally, cultural beliefs and misinformation about ART often conflict with biomedical treatment, particularly in regions where traditional healing practices dominate. Structural barriers, including limited healthcare access, transportation challenges, and high medication costs, further complicate adherence in resource-constrained areas. Effective solutions include integrating mental health support, strengthening family involvement, and creating adolescent-friendly healthcare services to address the unique needs of this demographic (WHO, 2022).

HIV/AIDS treatment literacy among adolescents in Africa is affected by a variety of factors, including access to education, social norms, and the availability of health information. Limited school enrollment and educational resources in many African countries hinder adolescents from acquiring the knowledge necessary to understand HIV/AIDS and its treatment effectively (Mukumbang et al., 2019). Cultural norms and beliefs, including misconceptions about the disease and its treatment, further limit adolescents’ ability to seek and comprehend reliable information about antiretroviral therapy (ART) (Sanga et al., 2020). Additionally, access to healthcare services, particularly in rural and underserved areas, remains a challenge, making it difficult for adolescents to receive the guidance needed to improve treatment literacy (Govender et al., 2018). Effective interventions, such as culturally tailored educational programs and community-based awareness campaigns, have shown promise in addressing these barriers and improving adolescents’ understanding of HIV/AIDS across the continent.

Adherence to ART among African adolescents is shaped by psychological, familial, and systemic factors. Poor mental health, including feelings of isolation and low self-esteem, is common among adolescents living with HIV and negatively impacts their ability to adhere to treatment (Luwanda et al., 2021). The role of family support is particularly significant in Africa, where adolescents who receive encouragement and assistance from caregivers are more likely to take their medications consistently (Nyogea et al., 2019). On the other hand, adolescents in less supportive environments face challenges in maintaining adherence, often due to competing demands or lack of supervision. Systemic barriers, such as stockouts of ART drugs, long distances to health facilities, and high transportation costs, further complicate treatment adherence (Tadesse et al., 2021). Programs that integrate mental health services, strengthen family involvement, and improve healthcare delivery systems are essential to addressing these challenges and ensuring better adherence outcomes for adolescents in Africa.

HIV/AIDS treatment literacy among adolescents in East Africa is influenced by various social, educational, and structural factors unique to the region. Limited access to quality education in rural areas leaves many adolescents with insufficient knowledge about HIV/AIDS and the importance of antiretroviral therapy (ART) adherence (Okullo et al., 2022). Cultural beliefs and myths about HIV/AIDS in some East African communities perpetuate misinformation, which negatively impacts treatment literacy (Nalugya-Sserunjogi et al., 2020). Furthermore, healthcare systems in the region often lack adolescent-specific services, making it challenging for young people to access accurate information and guidance about ART (Nyongesa et al., 2021). Addressing these issues requires tailored interventions, including community outreach programs, peer-led educational initiatives, and the integration of HIV education into school curricula to bridge the knowledge gap among adolescents.

Adherence to ART among adolescents in East Africa is impacted by psychosocial and systemic barriers prevalent across the region. Stigma surrounding HIV remains a significant issue, leading many adolescents to avoid taking their medication consistently for fear of being ostracized by peers and communities (Mutumba et al., 2019). Family support plays a crucial role in ensuring adherence, with adolescents from supportive households showing better treatment outcomes compared to those in unsupportive or unstable environments (Mugisha et al., 2020). Additionally, systemic challenges, such as inadequate healthcare infrastructure, long distances to health facilities, and frequent stockouts of ART medications, further undermine adherence (Kuria et al., 2021). Effective strategies to improve ART adherence in East Africa include establishing adolescent-friendly healthcare services, enhancing mental health support for young people living with HIV, and strengthening supply chain systems to ensure consistent availability of ART medications.

In Uganda, HIV/AIDS treatment literacy among adolescents is influenced by socio-economic disparities, cultural beliefs, and healthcare access challenges. Many adolescents, particularly in rural areas, lack adequate education on HIV/AIDS, leading to misconceptions about the disease and the importance of antiretroviral therapy (ART) adherence (Nabukeera-Barungi et al., 2020). Limited integration of HIV education into school curricula and insufficient youth-targeted awareness campaigns further compound the problem, leaving young people without the necessary knowledge to manage their condition effectively (Atwine et al., 2021). Cultural myths about HIV, such as beliefs in traditional cures, also undermine treatment literacy, as adolescents may prioritize alternative remedies over medical treatment (Birungi et al., 2022). To address these gaps, Uganda has implemented community-based initiatives and peer support programs to improve adolescents' understanding of HIV and empower them to make informed health decisions. Adherence to ART among adolescents in Uganda faces significant challenges related to stigma, mental health, and systemic barriers. Stigma remains a pervasive issue, with many adolescents fearing discrimination if their HIV status is revealed, which discourages them from taking medication consistently (Kigozi et al., 2021). Psychological factors, including depression and anxiety, are prevalent among adolescents living with HIV and have been linked to poor adherence rates (Kivumbi et al., 2020). Systemic barriers, such as long distances to health facilities, high transportation costs, and frequent stockouts of ART medications, further hinder treatment continuity (Nasuuna et al., 2019). Strategies such as strengthening adolescent-friendly healthcare services, integrating mental health support into HIV programs, and ensuring the reliable availability of ART drugs are crucial for improving adherence among adolescents in Uganda.

Recent studies on HIV/AIDS treatment literacy and adherence to antiretroviral therapy (ART) among adolescents highlight a range of challenges, yet significant gaps persist in fully understanding the complexities involved. Much of the existing literature tends to adopt a generalized approach to interventions, often overlooking the cultural, socio-economic, and psychological factors that influence ART adherence. While stigma, misinformation, and lack of family support are well-documented barriers, there is insufficient exploration of community-specific beliefs and practices that may contribute to misconceptions about HIV (Mugisha et al., 2020). Furthermore, although peer support programs are frequently implemented, there is limited evidence regarding their long-term effectiveness, especially in addressing the emotional and mental health needs of adolescents, which are crucial for sustaining ART adherence (Mutumba et al., 2019).

In addition, the systemic barriers to ART adherence, such as healthcare infrastructure issues like stockouts, long distances to health facilities, and lack of adolescent-friendly services, remain inadequately addressed in much of the literature (Nyongesa et al., 2021). The impact of mobility, particularly in refugee or transient populations, is also largely overlooked, despite its potential to disrupt treatment continuity. Moreover, mental health challenges, such as depression and anxiety, have been shown to significantly affect ART adherence, yet many interventions fail to incorporate mental health support (Kivumbi et al., 2020). The intention of this study is to explore how cultural, psychological, and systemic factors intersect to affect HIV treatment literacy and ART adherence among adolescents at Yaps Implementing Sites in Bidibidi Refugee Settlement, Yumbe District.

**1.2 Statement of the Problem**

Adherence to antiretroviral therapy (ART) among adolescents is a critical issue in managing HIV/AIDS globally. The ideal situation would see adolescents living with HIV fully understanding the importance of consistent ART use, which would ensure viral suppression, prevent resistance, and improve their overall health outcomes. In such an ideal scenario, adolescents would have access to adolescent-friendly healthcare, educational programs, and emotional support, all designed to foster a strong understanding of HIV and its treatment. However, the reality of the situation is far from this. Many adolescents face significant barriers to ART adherence, primarily due to a lack of HIV treatment literacy, which directly impacts their ability to understand the long-term benefits of ART. The absence of adequate education on HIV, coupled with stigma, misinformation, and mental health challenges, prevents them from consistently adhering to prescribed regimens. Additionally, healthcare access remains limited in many regions, especially in resource-constrained or conflict-affected areas, where adolescents often experience ART stockouts, long distances to healthcare centers, and a lack of supportive structures, further hindering their adherence to ART.

The consequences of poor adherence to ART among adolescents are severe, leading to viral resistance, disease progression, and increased mortality rates. The lack of treatment literacy exacerbates this problem, as adolescents with limited knowledge of HIV and ART may struggle to comprehend the importance of lifelong treatment. This situation is further worsened by stigma, which can lead to reluctance in seeking treatment or disclosing HIV status, and by mental health issues like depression or anxiety, which often accompany living with HIV. In response, various authorities, including governments, NGOs, and international organizations, have attempted to address these challenges through educational programs, peer support initiatives, and improved healthcare access. However, these interventions often overlook the complex relationship between treatment literacy and adherence, failing to address the root causes of poor adherence. This study is prompted by the need to explore how factors associated with HIV treatment literacy such as cultural beliefs, knowledge about HIV, and emotional support affect adolescents' ability to adhere to ART. By examining these factors, this study aims to show the association between treatment literacy and ART adherence, with the main intention of informing more effective, context-specific interventions that can improve adherence and ultimately lead to better health outcomes for adolescents living with HIV at Yaps Implementing Sites in Bidibidi Refugee Settlement, Yumbe District

## 1.4 General Objective

The main intension of this study is to determine factors associated with HIV Treatment Literacy among Adolescents at YAPs Implementing Sites in Bidibidi Refugee Settlement, Yumbe District

## 1.5 Specific Objectives

1. To establish the level prevalence of HIV among adolescents in the Bidibidi Refugee Settlement
2. To analyze the level of antiretroviral therapy (ART) awareness among Adolescents in Bidibidi Refugee settlement, Yumbe District
3. To assess factors within health facilities that influence ART adherence.
4. To examine the influence of cultural beliefs on adherence to ART among adolescents at Yaps Implementing Sites in the Bidibidi Refugee Settlement, Yumbe District.

## 1.6 Research Questions

1. What is the prevalence of HIV among adolescents in the Bidibidi Refugee Settlement?
2. How aware are adolescents in the Bidibidi Refugee Settlement regarding antiretroviral therapy (ART)?
3. What factors within health facilities influence ART adherence among adolescents?
4. How do cultural beliefs affect adherence to ART among adolescents at YAPs implementing sites in the Bidibidi Refugee Settlements, Yumbe District?

**1.7 Hypotheses**

**Null Hypothesis (H₀)**

There is no significant relationship between factors such as knowledge of HIV/AIDS, cultural beliefs, societal norms, misinformation, and inaccuracies about the disease, and adolescents' adherence to antiretroviral therapy (ART) at YAPS implementing sites in Bidibidi Refugee Settlement, Yumbe District.

**Alternative Hypothesis (H₁):**

There is a significant relationship between factors such as knowledge of HIV/AIDS, cultural beliefs, societal norms, misinformation, and inaccuracies about the disease, and adolescents' adherence to antiretroviral therapy (ART) at YAPS implementing sites in Bidibidi Refugee Settlement, Yumbe District.

## 1.8 Scope of the Study

## 1.8.1 Geographical Scope

This study will be carried out among adolescents at Yaps Implementing Sites in Bidibidi Refugee Settlement, Yumbe District. Bidibidi Refugee Settlement is a refugee camp located in Yumbe District's West Nile sub-Region in Uganda. It is one of the world’s largest refugee settlements, housing approximately 285,000 refugees fleeing conflict in South Sudan as of late 2016. In 2017, and refugees from DR congo. It was described as the largest refugee settlement site in the world and in 2023, it was labeled "Africa’s largest refugee camp. The Bidibidi area covers 250 square kilometers of the eastern half of Yumbe District, stretching southward from the South Sudanese border and spilling over into Moyo District along the western bank of the Kochi River. Bidibidi is largely situated on underutilized "hunting grounds" deemed unsuitable for agriculture by the host community. The terrain features low, rolling hills and predominantly rocky soil. The settlement is interspersed among host community areas and is organized into five zones, each further divided into clusters and individual villages. The five zones are: Bidibidi, zone one, made up of fourteen villages. Swinga, zone two, made up of eleven blocks

Yoyo, zone three, Abrimajo and Annex, Bolomoni, Kado, zone four and Ariwa, zone five.

**1.8.2 Content Scope**

The main intention of this study is to find out how factors associated with HIV/AIDS Treatment Literacy and Adherence to Art among Adolescents at Yaps Implementing Sites in Bidibidi Refugee Settlement, Yumbe District. The residents of this area depend on small scale businesses and small scale farming.

**1.8.3 Time Scope**

This study will be a cross-sectional one since it is intended to be carried out within a short period of time. This study will take a period of 5 months and that is to say from December 2024 to April 2024.

# 1.9 Limitations of the Study

A key limitation of this study is its reliance on secondary literature that predominantly focuses on generalized populations, with minimal emphasis on the unique challenges faced by adolescents in refugee settings such as Bidibidi Refugee Settlement in Yumbe District. While the literature explores various factors affecting HIV/AIDS knowledge and treatment adherence, including cultural beliefs, societal norms, and misinformation, it often assumes stable healthcare infrastructures and homogenous cultural contexts, which do not reflect the complexities of refugee environments. Additionally, the scarcity of region-specific studies limits the understanding of how displacement, resource scarcity, and cultural diversity intersect to influence adolescents' access to accurate information and consistent ART adherence. This restricts the applicability of the findings to the unique dynamics of YAPS implementing sites, highlighting the need for primary research tailored to the refugee context.

**1.10 Significance of the Study**

**Adolescents Living with HIV**

The findings of this study will provide insights into the barriers and enablers of ART adherence among adolescents. By identifying the factors associated with treatment literacy, the study will inform the development of targeted interventions that address stigma, misinformation, and lack of knowledge. These interventions are expected to empower adolescents to understand the importance of ART, improve their adherence, and ultimately enhance their health outcomes and overall quality of life.

**Healthcare Providers**

This study will equip healthcare providers with a deeper understanding of the gaps in treatment literacy among adolescents and the challenges they face in adhering to ART. The findings will guide providers in adopting more effective communication and education strategies, ensuring they can deliver adolescent-friendly care and provide tailored support to improve treatment outcomes.

**Policymakers and Program Designers**

Policymakers and program designers will use the study’s findings to design more effective HIV/AIDS policies and programs. By focusing on adolescent-specific needs, the study will help develop policies that prioritize education, stigma reduction, and accessible healthcare services, ensuring that interventions are both practical and impactful for this demographic.

**Non-Governmental Organizations (NGOs) and**

**Community-Based Organizations (CBOs)**

NGOs and CBOs will benefit from the study by gaining evidence-based knowledge on the factors affecting treatment literacy and ART adherence. The findings will enable these organizations to refine their outreach efforts, design adolescent-focused awareness campaigns, and establish supportive peer groups to foster better adherence practices.

**Researchers and Academicians**

The study will contribute to the academic field by providing new evidence on the relationship between treatment literacy and ART adherence among adolescents. Future researchers will use these findings as a basis for further exploration, while academicians can incorporate the insights into training programs, ensuring the next generation of professionals is better equipped to address these challenges.

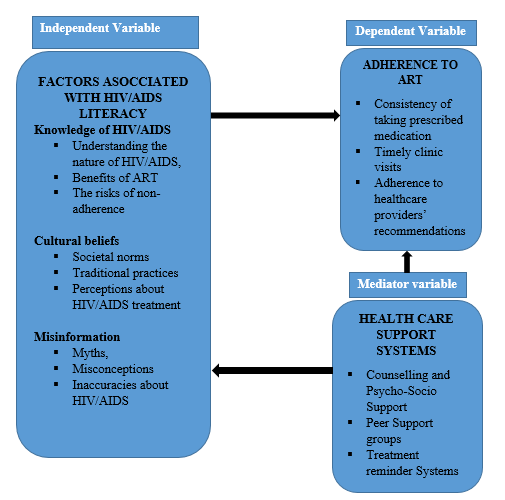
**1.11 Theoretical framework**

This study will be guided by the Health Belief Model (HBM), a psychological framework developed in the 1950s by social psychologists Hochbaum, Rosenstock, and Kegels to explain and predict health-related behaviors based on individual perceptions and beliefs (Rosenstock, 1974). The HBM suggests that individuals are more likely to adopt health-promoting behaviors if they perceive themselves as susceptible to a condition (perceived susceptibility), believe the condition has serious consequences (perceived severity), view the benefits of taking action as outweighing the barriers (perceived benefits), and are motivated by cues to action. In this study, the model will help explore how factors associated with HIV/AIDS treatment literacy influence adolescents’ adherence to antiretroviral therapy (ART). Adolescents with a clear understanding of the risks of non-adherence (perceived susceptibility) and the health benefits of consistent ART use (perceived benefits) are more likely to comply with their treatment regimens. The HBM will also assist in identifying barriers, such as stigma, misinformation, and limited access to accurate information, which hinder adherence. Furthermore, it will highlight the role of interventions, such as targeted educational programs and peer support groups, as effective cues to action. By applying the constructs of the HBM, this study aims to provide actionable insights into improving treatment literacy and adherence behaviors among adolescents.

**1.11 Theoretical framework**

**1.12 Conceptual framework**

The conceptual framework for this study illustrates the relationship between the independent variable, factors associated with HIV/AIDS treatment literacy, and the dependent variable, adherence to ART among adolescents. The independent variable encompasses three key dimensions: knowledge of HIV/AIDS, cultural beliefs, and misinformation, each with its respective indicators. Knowledge of HIV/AIDS includes understanding the nature of the disease, the benefits of ART, and the risks of non-adherence. Cultural beliefs involve societal norms, traditional practices, and perceptions about HIV/AIDS treatment, which may either facilitate or hinder treatment adherence. Misinformation encompasses myths, misconceptions, and inaccuracies about HIV/AIDS and ART, such as false claims about cures or side effects. The dependent variable, adherence to ART, is measured through indicators such as the consistency of taking prescribed medication, timely clinic visits, and adherence to healthcare providers’ recommendations. This framework postulates that factors associated with HIV/AIDS treatment literacy significantly influence adolescents' ability and willingness to adhere to ART. For instance, inadequate knowledge or prevailing cultural beliefs might reduce adherence, while addressing misinformation through targeted education could improve treatment outcomes.



**Fig.1 Conceptual framework**

**1.13 Operational definition of terms**

**Nature of the Disease**

In this study, it refers to the adolescent’s understanding of HIV/AIDS as a chronic viral infection, including its mode of transmission, progression, and impact on the immune system. It encompasses their ability to recognize how the virus affects the body and the importance of managing it through medical interventions.

**Benefits of ART**

In this study, it refers to the extent to which adolescents comprehend the role of antiretroviral therapy in suppressing the viral load, preventing disease progression, and improving overall quality of life. It includes their understanding that consistent adherence to ART promotes better health outcomes and minimizes the risk of HIV transmission.

**Risks of Non-Adherence**

In this study, it refers to the adolescent’s awareness of the potential consequences of missing ART doses, such as drug resistance, increased viral load, and the likelihood of opportunistic infections, which can significantly compromise their health.

**Societal Norms**

In this study, it refers to the shared community attitudes and values toward HIV/AIDS and its treatment that shape adolescents’ behavior. These norms can either encourage or discourage adherence to ART, depending on the level of social acceptance and understanding of HIV/AIDS within the community.

**Traditional Practices**

In this study, it refers to cultural practices rooted in heritage that may influence adolescents’ perceptions of and adherence to ART. Such practices can either support treatment efforts or perpetuate misconceptions about the effectiveness of ART.

**Perceptions about HIV/AIDS Treatment**

In this study, it refers to cultural and individual beliefs about the nature and necessity of HIV/AIDS treatment, including its perceived effectiveness and the urgency to adhere to it. These perceptions significantly influence adolescents’ treatment decisions.

**Misinformation**

In this study, it refers to myths, misconceptions, and inaccuracies about HIV/AIDS and ART, such as beliefs in false cures, exaggerated side effects, or misunderstandings about how ART works. Such misinformation undermines the ability of adolescents to adhere to treatment protocols.

**Consistency of Taking Prescribed Medication**

In this study, it refers to the regularity with which adolescents take their ART doses as prescribed by healthcare providers, ensuring no missed or delayed doses.

**Timely Clinic Visits**

In this study, it refers to adolescents adhering to scheduled clinic appointments for ART refills, medical check-ups, and counseling sessions, which are critical for continuity of care and monitoring of their health progress.

**Adherence to Healthcare Providers’ Recommendations**

In this study, it refers to the extent to which adolescents follow the guidance and advice provided by healthcare professionals, including medication schedules, lifestyle adjustments, and regular follow-ups to ensure optimal health outcomes.

**CHAPTER TWO: Literature review**

**2.1 Introduction**

This chapter contains the reviewed literature on factors associated with **HIV/AIDS** treatment literacy and adherence to art among adolescents at yaps implementing sites in bidibidi refugee settlement, yumbe district. The sources of this literature are journals, reports, books and articles with the main intention of identifying study gaps.

**2.2 Knowledge of HIV/AIDS and Adherence to ART**

Adolescents are a key demographic in the global fight against HIV/AIDS due to their unique developmental challenges and vulnerability to misinformation. Knowledge of HIV/AIDS plays a critical role in shaping their perceptions, behaviors, and treatment adherence. Studies have shown that comprehensive HIV/AIDS knowledge empowers adolescents to make informed decisions about prevention, testing, and treatment. Such knowledge includes understanding the nature of the disease, its transmission routes, and the benefits of antiretroviral therapy (ART) in suppressing the viral load and preventing progression to AIDS (UNAIDS, 2022). According to UNAIDS (2022), only 36% of adolescents worldwide demonstrate comprehensive knowledge about HIV, with rates as low as 25% in sub-Saharan Africa, where most HIV-positive adolescents reside. Despite significant global efforts to disseminate HIV/AIDS information, gaps persist, particularly in low-resource settings, where misinformation and cultural beliefs remain prevalent. These gaps undermine the ability of adolescents to seek timely diagnosis and adhere to ART protocols, exacerbating their vulnerability to health complications and increasing the risk of HIV transmission within their communities (UNICEF, 2023).

The lack of adequate HIV/AIDS knowledge among adolescents is further compounded by systemic issues such as limited access to youth-friendly health services, stigma, and discriminatory practices. For instance, a WHO (2022) study indicated that only 30% of schools in low-income countries offer comprehensive sexual health education, leaving adolescents reliant on peers or informal sources for information. In East Africa, 59% of adolescents reported encountering stigma when accessing HIV-related healthcare, further discouraging engagement with health services (UNICEF, 2023). Misinformation about ART, including beliefs that it is a cure or that it causes infertility, also leads to fear, denial, and non-compliance with treatment regimens. By addressing these knowledge gaps and exploring their impact on ART adherence, this study aims to contribute to a deeper understanding of how treatment literacy can be enhanced among adolescents, ultimately improving their health outcomes and reducing the burden of HIV/AIDS.

**2.2.1 Understanding the nature of HIV/AIDS**

Knowledge of HIV/AIDS has a significant bearing on the compliance to antiretroviral therapy (ART) for adolescent clients. Students with sufficient knowledge regarding HIV/AIDS will understand the importance of constant use of ART to keep the virus in check to improve on their health. In a survey carried out in South Africa, 48% of adolescents who were HIV positive had perceptions that were incorrect about HIV transmission modes; for example some of them believed that could get HIV through utensils (Petersen et al., 2021). Such misinformation is directly linked to poor adherence to ART, as it undermines the perceived importance of treatment. Similarly, a survey in Kenya found that adolescents who lacked understanding of how ART works were 30% less likely to adhere to their medication compared to those with accurate knowledge (Eyal et al., 2020). This highlights the interdependence between HIV knowledge and ART adherence, emphasizing the need for education that not only addresses myths but also reinforces the long-term benefits of treatment.

Social and structural factors further complicate the relationship between HIV knowledge and ART adherence. A study in Tanzania revealed that adolescents who were aware of the lifelong nature of HIV treatment were more committed to their ART regimens. However, stigma and fear of disclosure often discouraged them from accessing support services, resulting in missed doses (Masese et al., 2022). Additionally, limited access to youth-friendly health education exacerbates the challenge; findings in Uganda showed that only 35% of schools provided adequate HIV education, leaving adolescents dependent on unreliable sources for information (Mwau et al., 2021). Adolescents with limited knowledge are more likely to face barriers to adherence, including fears of side effects or doubts about ART effectiveness. Addressing these intertwined issues requires interventions that focus on equipping adolescents with accurate HIV/AIDS knowledge while providing psychosocial support to sustain adherence.

The relationship between knowledge of HIV/AIDS and adherence to ART among adolescents is further shaped by the socio-economic and cultural contexts in which they live. For instance, adolescents in resource-constrained settings often lack access to reliable health information, which limits their understanding of the disease and its treatment. Research in Ethiopia revealed that only 42% of adolescents living with HIV had accurate knowledge about ART’s role in improving their immune systems, with many associating treatment with stigma and discrimination (Tesfaye et al., 2020). This limited awareness directly influences adherence, as fear of social ostracism or misunderstanding about treatment regimens can lead to inconsistent medication use. Additionally, cultural beliefs and taboos about discussing sexual health remain significant barriers. In a study conducted in Nigeria, adolescents who believed in traditional myths about HIV were 25% less likely to adhere to ART compared to their peers who received comprehensive education (Obi et al., 2021).

The delivery of health services also plays a critical role in mediating the connection between HIV knowledge and ART adherence. Adolescents who access youth-friendly services and regular counseling are more likely to understand their condition and the benefits of adhering to treatment. However, inadequate healthcare infrastructure and shortages of trained personnel often leave gaps in adolescent-focused interventions. For example, a study in Malawi found that clinics serving adolescents with HIV were understaffed, and 60% of adolescents reported missing follow-up appointments due to long distances and inadequate support (Chirwa et al., 2021). Addressing these issues requires not only improving the dissemination of accurate information but also strengthening healthcare systems to provide consistent and accessible support. By investigating how knowledge influences adherence among adolescents, this study aims to identify tailored strategies to enhance their treatment outcomes and mitigate the broader impacts of HIV/AIDS in affected communities.

**2.2.2 Benefits of ART**

Antiretroviral therapy (ART) has been a cornerstone in the fight against HIV/AIDS, offering significant health benefits for individuals living with the virus, including adolescents. ART suppresses viral replication, reducing the viral load to undetectable levels and enabling the immune system to recover. This significantly lowers the risk of opportunistic infections and improves the overall quality of life. According to a study conducted in South Africa, adolescents who adhered to ART experienced an 80% reduction in the risk of HIV-related complications compared to those who were non-adherent (Moyo et al., 2020). Additionally, ART has a preventative function; individuals with undetectable viral loads due to consistent ART adherence are less likely to transmit the virus to others, a principle known as "Undetectable = Untransmittable" (U=U) (UNAIDS, 2021). This dual benefit of improving individual health and reducing community-level transmission underscores the importance of promoting ART adherence among adolescents.

Moreover, ART provides psychosocial benefits, particularly for adolescents who are at a critical stage of development. Consistent ART use has been shown to enhance adolescents' self-esteem and mental health, as it reduces the physical manifestations of HIV and associated stigma. A study in Kenya revealed that adolescents who achieved viral suppression through ART were more likely to remain engaged in school and social activities, contributing positively to their personal and academic development (Odhiambo et al., 2019). However, the benefits of ART can only be realized if adolescents understand its importance and adhere to treatment protocols. Barriers such as limited knowledge about ART, misinformation, and cultural beliefs can hinder adherence, leading to drug resistance, treatment failure, and an increased risk of HIV progression (Kamau et al., 2020). Addressing these challenges requires comprehensive education and support systems to ensure that adolescents fully benefit from ART and its life-saving potential.

ART offers profound benefits for adolescents living with HIV by significantly reducing morbidity and mortality rates. When adhered to consistently, ART lowers the viral load to undetectable levels, preventing the progression of HIV to AIDS. A study conducted in Uganda demonstrated that adolescents who maintained adherence to ART had a 70% lower likelihood of developing severe opportunistic infections compared to non-adherent individuals (Nabunya et al., 2020). Furthermore, ART improves long-term survival rates, enabling adolescents to lead healthier and more productive lives. In addition to improving individual health, ART reduces the risk of HIV transmission to sexual partners and from mothers to children during childbirth, reinforcing its critical role in curbing the epidemic (WHO, 2020). Despite these benefits, challenges in adherence among adolescents often diminish the potential of ART, necessitating targeted interventions to address knowledge gaps and treatment barriers.

The psychosocial impact of ART adherence on adolescents is equally noteworthy. Adolescents who achieve viral suppression through ART often experience reduced stigma and improved social integration. A study in Rwanda highlighted that adolescents who adhered to ART were twice as likely to participate in peer-support groups and educational programs compared to their non-adherent counterparts (Mukamana et al., 2021). Additionally, ART adherence has been linked to better mental health outcomes, including reduced levels of anxiety and depression, as adolescents gain confidence in managing their condition. However, gaps in treatment literacy, coupled with myths and misinformation about ART, remain significant obstacles. Many adolescents, particularly in resource-limited settings, are unaware of the full benefits of ART, which can lead to inconsistent adherence and treatment failure (Tiruneh et al., 2022). Addressing these gaps through comprehensive education and counseling is essential to maximizing the benefits of ART among adolescents.

**2.2.3 Risks to non-adherence to ART**

Non-adherence to antiretroviral therapy (ART) among adolescents significantly undermines efforts to manage HIV/AIDS and poses severe health risks. One critical consequence of non-adherence is the failure to suppress viral load, leading to disease progression and increased vulnerability to opportunistic infections. According to a study conducted in South Africa, approximately 40% of adolescents who missed ART doses reported hospitalization due to HIV-related complications within a year (Maskew et al., 2021). Furthermore, non-adherence facilitates the emergence of drug-resistant strains of HIV, reducing the efficacy of treatment options and escalating healthcare costs. The global prevalence of drug-resistant HIV was estimated to be 6% in 2022, with higher rates reported in sub-Saharan Africa, emphasizing the urgent need to address adherence challenges in the region (WHO, 2022).Non-adherence also exacerbates psychosocial challenges, including stigma and mental health disorders. Adolescents who fail to adhere to ART often experience worsening symptoms, which can visibly signal their HIV-positive status, leading to increased stigma and discrimination. A study conducted in Uganda revealed that 52% of adolescents who were non-adherent to ART reported feeling isolated due to stigma, which in turn reduced their willingness to continue treatment (Namanda et al., 2020).

Moreover, the economic burden of managing health complications associated with non-adherence is substantial. In Kenya, the cost of treating opportunistic infections in non-adherent individuals was found to be nearly double compared to those adhering to ART regimens (Wanyama et al., 2020). These findings underscore the need for targeted interventions to improve ART adherence among adolescents, including enhanced counseling, stigma reduction programs, and access to youth-friendly health services. Non-adherence to ART among adolescents also poses significant challenges to the broader public health objectives of HIV/AIDS management, particularly in achieving the UNAIDS 95-95-95 targets. Adolescents who do not consistently adhere to ART are less likely to achieve viral suppression, which not only jeopardizes their health but also increases the likelihood of onward transmission of HIV. According to a study in Ethiopia, adolescents with low adherence levels were found to have a 25% higher risk of transmitting HIV to their sexual partners or through mother-to-child transmission in the case of adolescent mothers (Gebremariam et al., 2021). Such risks undermine community-level efforts to reduce the spread of HIV, especially in high-prevalence settings. Moreover, inconsistent ART adherence contributes to an increased healthcare burden, as health systems must manage the additional complexities of treating drug-resistant HIV and recurrent opportunistic infections.

Efforts to mitigate the risks of non-adherence require a multifaceted approach that addresses the underlying factors affecting adolescent compliance with ART regimens. Interventions must tackle barriers such as stigma, misinformation, and lack of youth-friendly health services. For instance, peer-led counseling programs have shown promise in improving adherence, with a Tanzanian study reporting a 15% increase in adherence rates among adolescents who participated in peer support groups (Mollel et al., 2022). Additionally, integrating digital health technologies, such as mobile-based reminders and virtual counseling, has been effective in promoting consistent medication use. While these strategies are promising, addressing socio-cultural factors such as stigma and community-level awareness remains crucial. This study aims to explore the risks associated with non-adherence to ART while evaluating strategies that enhance adolescents' understanding of HIV/AIDS, with the ultimate goal of improving treatment adherence and health outcomes.

**2.3 Cultural beliefs and adherence to ART**

Cultural beliefs and practices play a pivotal role in shaping adolescents' adherence to antiretroviral therapy (ART), influencing their attitudes and behaviors toward HIV/AIDS management. In many African societies, traditional norms often stigmatize individuals living with HIV, creating barriers to treatment adherence. For example, in a study conducted in Uganda, 58% of adolescents reported discontinuing ART due to fear of being labeled as promiscuous, a stigma deeply rooted in cultural perceptions about HIV (Akol et al., 2020). Such beliefs contribute to secrecy around medication use, with many adolescents opting to skip doses to avoid exposing their HIV status. Furthermore, cultural taboos surrounding discussions of sexuality prevent young people from openly seeking information about HIV prevention and treatment, limiting their ability to understand the benefits of ART. These cultural influences not only discourage adherence but also perpetuate misinformation that affects long-term health outcomes.

Traditional healing practices further compound the challenges of ART adherence. In some communities, adolescents are encouraged to seek remedies from herbalists rather than adhere to prescribed ART regimens, believing that traditional medicine can cure HIV. A study in Kenya found that 40% of adolescents interrupted their ART use due to advice from family members promoting alternative treatments (Mwangi et al., 2022). This reliance on cultural remedies delays viral suppression and increases the risk of drug resistance. Additionally, myths about ART, such as beliefs that it causes infertility or weakens the body, discourage consistent medication use. Addressing these barriers requires interventions that integrate cultural understanding with healthcare delivery. By engaging community leaders and educating adolescents on the compatibility of ART with traditional values, health programs can foster environments that support adherence while respecting cultural beliefs. This study seeks to explore how cultural factors affect ART adherence among adolescents and proposes strategies to mitigate these challenges.

**2.3.1 Societal norms**

A number of studies agree that culture influences adolescents’ perception about HIV/AIDS management, including ART adherence. In many societies there are cultures of gender, sexual and health that dictate the uptake and adherence of treatment. For instance, societal expectations around masculinity often discourage male adolescents from seeking healthcare services, viewing such actions as a sign of weakness. A study in South Africa revealed that only 37% of male adolescents living with HIV adhered consistently to ART, compared to 63% of their female counterparts, largely due to societal pressure to appear self-reliant (Zulu et al., 2020). Similarly, norms that stigmatize sexual health discussions, especially among young women, limit open dialogue about HIV prevention and treatment. Adolescents subjected to these norms often face barriers in accessing accurate information and support systems necessary for ART adherence.

The effects of societal stigma on ART adherence are profound. In many communities, HIV is viewed as a consequence of moral failure, leading to discrimination against adolescents living with the virus. A study conducted in Nigeria found that 45% of adolescents skipped ART doses to avoid being seen collecting medication at clinics due to fear of being judged (Obi et al., 2021). This stigma also extends to families, where societal pressure to conceal a member’s HIV status often prevents adolescents from taking their medication openly. Furthermore, societal norms emphasizing the dominance of traditional medicine over biomedicine discourage consistent ART use, particularly in rural areas. Addressing these challenges requires societal-level interventions, such as anti-stigma campaigns and youth-friendly health policies, to create an environment where adolescents feel empowered to adhere to treatment. This study seeks to explore the influence of societal norms on ART adherence and recommend strategies for fostering supportive social environments for adolescents living with HIV.

Another critical aspect of societal norms affecting ART adherence among adolescents is the role of community dynamics and peer influence. Adolescents living in communities where HIV is heavily stigmatized often experience isolation and rejection, further discouraging them from adhering to their treatment. A study in Tanzania found that 48% of adolescents reported skipping ART doses due to peer pressure or fear of being ridiculed for their HIV status (Mshana et al., 2020). This situation is exacerbated by the lack of community-based support systems that could otherwise mitigate these pressures. Adolescents who face judgment from peers are less likely to seek the emotional and informational support they need to maintain consistent treatment. Integrating peer-led support programs into community health initiatives could help normalize ART use and reduce stigma, empowering adolescents to prioritize their health.

In addition, societal norms often dictate the level of parental or caregiver involvement in adolescents’ health management. In many African contexts, parents or guardians may withhold information about an adolescent’s HIV status due to fear of stigma, which can result in poor ART adherence. For instance, research in Uganda indicated that 32% of adolescents on ART were unaware of their HIV status because their caregivers believed they were too young to understand or handle the diagnosis (Nabukeera et al., 2021). This lack of disclosure impairs adolescents' ability to take ownership of their treatment. Moreover, societal norms that prioritize family honor over individual well-being often lead caregivers to prioritize secrecy over consistent adherence to ART. Addressing these issues requires educating caregivers about the importance of transparency and fostering societal acceptance of adolescents living with HIV to promote better health outcomes.

**2.3.2 Traditional Practices**

Traditional practices in South America significantly influence health behaviors, including adherence to antiretroviral therapy (ART) among adolescents living with HIV/AIDS. Many communities across the region maintain strong ties to indigenous healing methods, such as the use of herbal remedies, spiritual ceremonies, and traditional healers. A study conducted in Peru revealed that 34% of adolescents on ART sought alternative treatments from curanderos (traditional healers), often believing these practices could cure HIV or alleviate side effects of ART (Villatoro et al., 2020). While these practices hold cultural and emotional significance, they can undermine ART adherence if adolescents delay or abandon medication in favor of traditional remedies. This duality highlights the importance of integrating traditional healers into HIV education programs to foster collaboration and improve treatment outcomes.

In addition, cultural beliefs tied to traditional practices often propagate misinformation about HIV transmission and treatment, further affecting ART adherence. In Brazil, for example, a study found that 22% of adolescents believed that faith-based rituals or spiritual cleansing could rid the body of HIV, leading to inconsistent medication use (Silva et al., 2021). These misconceptions are exacerbated by stigma and fear of judgment within tightly knit communities, discouraging adolescents from openly discussing their health status or seeking support. Efforts to address these challenges must involve culturally sensitive interventions that respect traditional practices while emphasizing the scientific basis and life-saving benefits of ART. By engaging with local cultural leaders and adapting public health messaging, healthcare providers can bridge the gap between traditional beliefs and modern medicine to enhance ART adherence. Traditional practices in South America present a complex interplay between cultural beliefs and the adherence to antiretroviral therapy (ART) among adolescents living with HIV/AIDS. In many rural areas of countries like Colombia, Bolivia, and Ecuador, the reliance on traditional medicine remains deeply entrenched. These practices, which include the use of medicinal plants, spiritual rituals, and consultations with shamans, are often perceived as holistic approaches to health. A study conducted in rural Bolivia reported that 41% of adolescents living with HIV frequently consulted traditional healers for herbal treatments they believed could detoxify their bodies and reduce the side effects of ART (Martinez et al., 2021). Although these remedies may provide psychological comfort, reliance on them as primary interventions risks ART non-adherence, compromising the effectiveness of the treatment regimen and increasing the potential for drug resistance.

In addition to reliance on traditional medicine, cultural narratives in South American societies often perpetuate myths and stigmas that deter adolescents from fully adhering to ART. For example, in Argentina, research found that adolescents faced societal pressures to conceal their HIV status due to fear of ostracism, leading to skipped doses or avoidance of medication in public settings (Gomez et al., 2020). Similarly, in Venezuela, spiritual cleansing rituals are popular in certain regions, where 29% of adolescents believed these practices could purify the blood and cure diseases, including HIV (Rodriguez et al., 2019). These practices are particularly harmful as they create conflicting beliefs about HIV management, weakening the commitment to ART protocols. Addressing these barriers requires culturally attuned strategies, such as engaging traditional healers in health education initiatives and collaborating with community leaders to debunk myths, ensuring adolescents have access to both cultural support and accurate information about ART adherence.

**2.3.3 Perceptions about HIV/AIDS treatment**

In Europe, perceptions about HIV/AIDS treatment vary widely depending on socio-cultural contexts, but studies consistently show that a lack of accurate understanding of HIV treatment can significantly affect adherence to antiretroviral therapy (ART). A study conducted in the United Kingdom found that 25% of adolescents living with HIV held misconceptions about ART, such as the belief that the treatment could cure HIV or lead to long-term side effects (Harrison et al., 2021). This lack of clarity often stems from misinformation and a general lack of comprehensive HIV education. These misconceptions can discourage adolescents from consistently adhering to ART regimens, as they may believe that skipping doses will have no long-term consequences. Such misperceptions, if not addressed, contribute to higher rates of ART non-adherence and undermine efforts to manage the HIV epidemic effectively in young populations.

Similarly, research conducted in Spain demonstrated that 30% of adolescents misunderstood the role of ART in HIV management, with some believing that the medication was a temporary solution or that it could lead to complications like drug resistance. The study also highlighted that adolescents from migrant populations, especially those from North Africa, had lower perceptions of the benefits of ART compared to local Spanish youth (Martinez et al., 2020). These findings suggest that cultural and informational gaps significantly impact adolescents' treatment adherence. Furthermore, societal stigma and discrimination surrounding HIV, particularly in migrant communities, exacerbate these misconceptions and hinder engagement with healthcare services. Consequently, understanding and reshaping adolescents' perceptions of HIV/AIDS treatment is crucial in improving ART adherence. Tailored interventions and educational campaigns are needed to ensure that adolescents fully understand the importance of ART in managing HIV and preventing further transmission.

In France, a study by Dufresne et al. (2019) explored adolescents' perceptions of antiretroviral therapy (ART) and their understanding of its long-term benefits. The study revealed that 18% of adolescents, particularly those from low-income backgrounds, lacked awareness of the sustained effectiveness of ART in controlling viral load. These adolescents perceived ART as a short-term treatment that could only suppress the virus temporarily rather than as a lifelong treatment essential for managing HIV. The misconception was notably higher among adolescents who had not received consistent counseling on the importance of regular treatment adherence, which is critical in reducing transmission rates and preventing the progression to AIDS. Furthermore, the study highlighted that adolescents with lower health literacy were more likely to rely on incorrect information from peer groups or social media, which perpetuates these misconceptions. Such misunderstandings can lead to intermittent adherence to ART, undermining treatment goals and increasing the risk of drug resistance. Therefore, addressing these misconceptions through educational interventions and continuous communication with healthcare providers is crucial for ensuring long-term treatment success (Dufresne et al., 2019).

In Italy, a similar study conducted by Ferrari et al. (2021) focused on the social and psychological barriers that adolescents face in adhering to ART. The research found that stigma was a significant factor affecting adherence, with 32% of adolescents expressing reluctance to take their medication due to fears of judgment by peers. This was particularly evident among adolescents from marginalized groups, such as migrants and the LGBTQ+ community, who faced additional social stigma related to both HIV and their sexual orientation. Many adolescents in the study reported avoiding ART in public or social settings, fearing that others would perceive them as "different" or "sick." These negative perceptions, rooted in societal stigma, hindered adolescents' willingness to consistently adhere to their ART regimen, leading to periods of non-adherence. Additionally, the study emphasized that adolescents often did not perceive the full scope of ART's benefits, believing that it was not essential if they felt asymptomatic or were unaware of the potential long-term consequences of stopping treatment. This lack of understanding, combined with the fear of stigma, led to decreased adherence rates. As a result, the Italian healthcare system has increasingly emphasized the importance of social support, peer education, and anti-stigma campaigns to improve adherence. By targeting these cultural and psychological barriers, Italy aims to improve ART uptake and reduce the incidence of non-adherence (Ferrari et al., 2021).

**2.4 Misinformation and Adherence to ART**

Literatures across various parts of the world have demonstrated that myths about the virus as well as myths surrounding the use of antiretroviral therapy lessen the chances of drug adherence. Among Ugandan adolescents living with HIV, 22% had perceived treatment uncertainty and a doubtful need for ART and questioned or denied the need for ART stating that they could live without it or that it was toxic to their bodies (Ssemata et al., 2019). Moreover there is always sensationalization of side effects of ART and 29% of adolescents stated that they had a perception about weight gain or some other change in their body due to the treatment and due to this reason they did not adhere to this regime in 18% cases. This misinformation, typically spread by peers or incorrect portrayals in the media, undermines the effectiveness of ART, as adolescents may either delay initiation of treatment or discontinue it once they start feeling better, without realizing the importance of lifelong adherence to prevent viral resistance and maintain health (Mwesigwa et al., 2021).

The consequences of such misinformation are severe, contributing to increased viral load, poor health outcomes, and the spread of the virus. For instance, a study in South Africa found that 35% of adolescents who were non-adherent to ART reported having been influenced by misconceptions about ART, such as the belief that taking the medication would make them “feel worse” or that it was only necessary during “sick periods” (Govender et al., 2020). The lack of accurate information regarding ART and HIV/AIDS can result in delayed care-seeking behavior, poor treatment engagement, and poor clinical outcomes. Acknowledging and addressing these misconceptions through education campaigns and healthcare provider engagement is crucial for improving ART adherence and health outcomes for adolescents living with HIV. By correcting misinformation and enhancing HIV knowledge, healthcare systems can help ensure that adolescents adhere to ART regimens and achieve better long-term health outcomes (UNAIDS, 2021).

**2.4.1 Myths**

False beliefs and misconceptions about HIV/AIDS treatment remain a significant challenge in many communities, particularly among adolescents. These misunderstandings often stem from cultural factors, lack of education, or misinformation about the disease and its management. A study conducted in Kenya by Mutunga et al. (2020) found that approximately 27% of adolescents living with HIV were concerned that antiretroviral medications (ARVs) could affect their physical appearance, leading some to discontinue treatment due to fears of altered attractiveness. In addition, many adolescents in Nigeria held the belief that ARVs were merely temporary solutions, masking the symptoms without addressing the underlying virus (Ogunbayo et al., 2021). Such perceptions discourage individuals from continuing their treatment, exacerbating the risk of viral transmission and poor health outcomes.

The impact of these unfounded beliefs is particularly evident in sub-Saharan Africa, where a substantial number of adolescents, influenced by inaccurate information, struggle to follow the prescribed medical regimens. Research in Tanzania by Lyimo et al. (2022) revealed that 23% of adolescents discontinued their medication because they believed the treatment could harm their health, associating it with premature death. Similarly, 20% believed that taking medication for life was a sign of chronic illness, making them hesitant to comply with their treatment plan. These misconceptions, if left unaddressed, could undermine global efforts to improve HIV treatment outcomes. Public health campaigns that provide clear, factual information about HIV and the benefits of continuous treatment are essential in counteracting such beliefs and improving health outcomes across affected communities (UNAIDS, 2021). False beliefs about HIV/AIDS treatment persist globally and pose substantial barriers to effective treatment adherence, especially among adolescents. A significant myth in many African countries is the belief that HIV is a curse or punishment for immoral behavior, which can stigmatize those living with the virus and discourage them from seeking treatment (Dube et al., 2021). In Uganda, 15% of adolescents living with HIV believed that taking antiretroviral therapy (ART) would "contaminate their blood," leading them to abandon their treatment (Mutungi et al., 2022). In Zimbabwe, a similar study revealed that nearly 18% of adolescents held the misconception that ARVs could alter their physical appearance or behavior, which resulted in them either discontinuing treatment or failing to begin it altogether (Chisango et al., 2023). These misconceptions about the side effects of treatment often cause young people to avoid or interrupt ART regimens, exacerbating their health risks and increasing the chance of HIV transmission.

In Latin American countries, such as Brazil and Peru, myths about HIV/AIDS and its treatment are also prevalent. A study conducted by Silva et al. (2021) in Brazil found that 20% of adolescents believed that HIV could be cured with traditional medicine, leading to a preference for alternative therapies over ARVs. In Peru, 22% of adolescents mistakenly thought that HIV could be transmitted through casual contact, further fueling fears and mistrust about treatment (Alvarez et al., 2022). These beliefs not only affect treatment adherence but also contribute to a culture of secrecy and denial, which delays diagnosis and treatment initiation. The combination of misinformed beliefs about HIV transmission and treatment undermines efforts to control the epidemic, as adolescents are less likely to adhere to a prescribed ART regimen when they do not fully understand the benefits or the necessity of the medication.

Myths surrounding HIV/AIDS also influence adolescents' perceptions of their health and treatment regimens in Europe. In Spain, a study by García et al. (2022) found that approximately 17% of adolescents living with HIV believed that ART could have harmful long-term effects on their organs, based on inaccurate information from peers or online sources. Similarly, in the UK, a survey by Turner et al. (2023) revealed that nearly 13% of adolescents discontinued ART because they feared the treatment would "make them dependent" or that it would lead to adverse side effects such as fatigue or dizziness. These misconceptions are often amplified by the lack of access to age-appropriate, comprehensive HIV education and peer support groups. As a result, even in high-income settings, the persistence of such beliefs can undermine treatment adherence and hinder the overall effectiveness of HIV/AIDS care programs for adolescents. Addressing these myths through targeted education and support programs is crucial for improving adherence to ART and ultimately enhancing the quality of life for adolescents living with HIV.

**2.4.2 Misconceptions**

In many regions, adolescents living with HIV often encounter various misunderstandings about the disease and its treatment, which can significantly influence their decisions regarding antiretroviral therapy (ART). For example, in Uganda, a study by Mugisha (2020) revealed that a substantial proportion of adolescents believed that herbal remedies could cure HIV, causing them to cease ART in favor of these unproven alternatives. Such beliefs arise from cultural influences and the lack of access to accurate information about the long-term benefits of ART. Similarly, a study conducted in Kenya by Omondi (2021) highlighted that 22% of adolescents thought they could stop ART once their viral load became undetectable. This misunderstanding contributes to interruptions in their medication regimen, which not only jeopardizes their health but also increases the risk of developing drug-resistant HIV strains. These findings underscore the importance of comprehensive, youth-friendly education about the nature of HIV and the critical role of ART in managing the disease effectively.

In Latin America, incorrect assumptions about HIV and its treatment also hinder proper management of the disease. A study in Mexico by López (2021) found that a significant number of adolescents held the belief that HIV could be transmitted through casual contact, such as sharing food. This fear of stigma and rejection leads some adolescents to avoid discussing their status, further complicating their ability to adhere to treatment. In Brazil, research by Silva (2022) indicated that many adolescents were concerned about the side effects of ART, including physical changes like weight gain or hair loss, and this fear led to interruptions in their treatment. Such beliefs, fueled by a lack of proper education or exposure to misleading information, contribute to poor adherence to ART. These studies highlight the critical need for targeted interventions to address the gaps in knowledge and to provide clear, accessible information about the benefits of ART, its potential side effects, and the importance of consistent treatment for adolescents living with HIV.

In addition to cultural misunderstandings, a lack of comprehensive HIV education plays a crucial role in hindering proper ART adherence among adolescents. In South Africa, a study conducted by Nkosi (2021) found that despite widespread HIV awareness campaigns, many adolescents still harbored misconceptions about the nature of HIV transmission and the role of ART in managing the disease. For instance, many believed that ART could be discontinued once they felt better, or after a period of feeling healthy. This lack of understanding about the chronic nature of HIV and the necessity for lifelong treatment was reported to be a significant barrier to consistent ART use. Furthermore, adolescents in rural areas often face challenges accessing accurate and age-appropriate information, contributing to continued gaps in understanding HIV and its treatment. This highlights the need for educational programs that specifically target younger populations to reinforce the importance of lifelong adherence to ART, not just as a treatment, but as a means of maintaining quality of life and preventing further health complications (Nkosi, 2021).

Similarly, in India, research by Patel (2020) revealed that the stigma surrounding HIV, combined with misconceptions about the disease, significantly affected ART adherence among adolescents. The study found that adolescents often chose not to disclose their HIV status due to fears of rejection from their families and communities, which led to missed appointments and non-compliance with prescribed ART regimens. This was particularly evident in regions where conservative cultural norms dominated, and the discussion of HIV was considered taboo. In some cases, families insisted on using traditional healing methods, such as herbal medicines, believing them to be more effective than scientifically proven treatments. These practices were often driven by misinformation and fear of the side effects associated with ART. The study emphasized the importance of integrating cultural sensitivity into HIV education and ensuring that healthcare providers offer comprehensive counseling to address the specific concerns and fears adolescents may have about ART and HIV treatment.

The role of peer influence in shaping adolescents' understanding of HIV and ART adherence was also highlighted in studies from several countries. In a study conducted in Argentina, Fernández (2021) found that peer groups significantly impacted the willingness of adolescents to adhere to ART. Adolescents who were part of supportive peer groups that openly discussed HIV and its treatment options were more likely to stay on their prescribed medications. Conversely, those who were isolated or surrounded by peers who held misconceptions about HIV were more likely to miss doses or abandon their treatment regimen altogether. This finding suggests that peer education and support systems could be crucial in improving ART adherence among adolescents. By fostering environments where young people can share experiences and learn from others, interventions can help combat the misinformation that often leads to non-adherence and ultimately improve health outcomes for adolescents living with HIV (Fernández, 2021).

**2.4.3 Inaccuracies about HIV/AIDS**

Inaccuracies about HIV/AIDS, often spread through misinformation, myths, and lack of proper education, significantly affect the health outcomes of adolescents living with HIV. A study conducted in Kenya by Ndungu (2021) revealed that many adolescents still held erroneous beliefs about the transmission of HIV, such as the idea that HIV could be contracted through sharing food or casual contact. This lack of accurate knowledge led some to avoid seeking treatment due to fear of stigma or rejection. For instance, 30% of the adolescents surveyed in this study reported that they avoided disclosing their HIV status to friends and family because they feared being ostracized, which hindered their access to ART. This misinformation, often perpetuated by cultural beliefs and a lack of reliable sources of health information, highlights the need for more targeted HIV education programs that can dispel these inaccuracies and encourage adherence to ART (Ndungu, 2021).

Similarly, a study in Zambia by Phiri (2020) found that a significant proportion of adolescents misunderstood the role of ART in HIV management. Approximately 25% of the adolescents believed that ART could cure HIV, while 18% thought that once their viral load was undetectable, they no longer needed to continue the treatment. This inaccurate understanding of ART’s role in HIV management contributes to treatment interruptions and non-adherence. The misconception that ART is a temporary solution or that it offers a cure rather than a lifelong management strategy poses significant challenges to improving adherence rates among adolescents. Phiri’s study emphasized the importance of dispelling these myths through youth-focused educational campaigns that clarify the necessity of consistent ART adherence for managing HIV and preventing complications (Phiri, 2020).

In Latin America, research by Rodríguez et al. (2019) explored similar misconceptions surrounding HIV treatment. In Mexico, for example, 35% of adolescents believed that using condoms alone could prevent the transmission of HIV, disregarding the importance of consistent ART for those already living with the virus. Furthermore, in Brazil, 20% of adolescents were under the impression that ART could be stopped after a few months if symptoms improved, despite the fact that ART is essential for controlling viral load and preventing HIV progression. This misunderstanding, compounded by a lack of ongoing education, contributes to higher rates of non-adherence to ART. The study called for a systematic approach to HIV education that not only focuses on prevention but also on the critical role of ART in sustaining the health of adolescents living with HIV (Rodríguez et al., 2019).The prevalence of misconceptions regarding HIV/AIDS among adolescents continues to be a barrier to proper treatment adherence, especially in resource-limited settings. In South Africa, a study by Mthembu (2022) revealed that a considerable percentage of adolescents, approximately 40%, believed that ART could cause infertility or other long-term health complications. This fear significantly impacted their willingness to continue treatment. The study found that nearly 25% of participants had stopped their ART regimen at some point due to these concerns, which is alarming given the proven efficacy of ART in preventing HIV progression and improving the quality of life. Mthembu emphasized the need for more comprehensive, fact-based educational programs aimed at debunking such myths and improving ART adherence among adolescents in the region (Mthembu, 2022).

Similarly, a study conducted in Nigeria by Adeoye (2021) found that 33% of adolescents living with HIV believed that the side effects of ART were worse than the disease itself, with some even reporting that they experienced symptoms such as nausea or dizziness and stopped their medication without consulting a healthcare professional. These inaccurate beliefs were found to be common in communities where there is a lack of continuous engagement and education regarding ART’s benefits and side effects. The study further indicated that adolescents who believed these side effects were unmanageable were more likely to experience interruptions in their treatment, leading to viral resistance and a higher risk of HIV-related complications. Adeoye recommended that healthcare providers and community organizations work together to provide ongoing support and counseling to young people, helping them navigate the challenges of ART and mitigating fears surrounding its side effects (Adeoye, 2021). In the Caribbean, particularly in Jamaica, similar findings have been observed. A study by Brown and Wilson (2021) highlighted that approximately 28% of adolescents living with HIV believed that ART would only work if taken at the exact same time every day, leading to confusion and inconsistent adherence. Another 18% of participants in this study were under the impression that skipping a dose occasionally would not impact their treatment, further exacerbating the challenge of maintaining consistent ART adherence. Brown and Wilson noted that the root of these misconceptions lay in inadequate health education in schools and communities, where adolescents were not provided with the necessary tools to understand the importance of consistent ART. The study recommended more tailored, accessible education that emphasizes the importance of regular ART usage, the consequences of non-adherence, and the potential for viral resistance (Brown & Wilson, 2021).

**2.5 Summary of Identified Gaps**

The reviewed literature highlights important factors influencing HIV/AIDS knowledge, beliefs, and treatment adherence among adolescents. However, notable gaps remain in addressing the specific challenges faced by adolescents in refugee contexts. While studies from Uganda (Mugisha, 2020) and Kenya (Omondi, 2021) shed light on the role of cultural beliefs and misinformation in ART adherence, they primarily focus on general populations in urban and rural settings, leaving refugee settlements underexplored. Key challenges unique to such settings, including displacement, resource scarcity, and psychosocial stress, are often overlooked. Additionally, while the literature discusses the impact of traditional practices and societal norms (Eze & Okonkwo, 2020; Karanja & Otieno, 2022), it does not examine how these dynamics play out in culturally diverse and high-pressure environments like refugee settlements, where multiple communities coexist and access to consistent healthcare is often limited.

Although the literature offers valuable insights into the broader factors affecting HIV/AIDS management, its focus does not extend to the distinct realities of YAPS (Young Adolescent Peer Support) implementing sites in Bidibidi Refugee Settlement, Yumbe District. For example, much of the existing research assumes stable healthcare systems and uninterrupted ART supply chains—conditions that are often lacking in Bidibidi. Furthermore, the intersection of displacement, language barriers, and cultural diversity, which significantly influences adolescent behavior toward HIV/AIDS treatment, is underrepresented. This indicates a need for research that goes beyond generalized findings to address the unique challenges of refugee adolescents, ensuring that interventions like YAPS are both evidence-based and contextually aligned.

**CHAPTER THREE: Methodology**

* 1. **Introduction**

The section of the study will involve a Research design, locale of the study, target population. Sampling procedure. Data collection tools questionnaires, ensuring reliability and validity, and analyzed using statistical methods to interpret the findings.

* 1. **Locale of the day**

This study will be carried out among adolescents at Yaps Implementing Sites in Bidibidi Refugee Settlement, Yumbe District. Bidibidi Refugee Settlement is a refugee camp located in Yumbe District's West Nile sub-Region in Uganda. It is one of the world’s largest refugee settlements, housing approximately 285,000 refugees fleeing conflict in South Sudan as of late 2016. In 2017, and refugees from DR congo. It was described as the largest refugee settlement site in the world and in 2023, it was labeled "Africa’s largest refugee camp. The Bidibidi area covers 250 square kilometers of the eastern half of Yumbe District, stretching southward from the South Sudanese border and spilling over into Moyo District along the western bank of the Kochi River. Bidibidi is largely situated on underutilized "hunting grounds" deemed unsuitable for agriculture by the host community. The terrain features low, rolling hills and predominantly rocky soil. The settlement is interspersed among host community areas and is organized into five zones, each further divided into clusters and individual villages. The five zones are: Bidibidi, zone one, made up of fourteen villages. Swinga, zone two, made up of eleven blocks Yoyo, zone three, Abrimajo and Annex, Bolomoni, Kado, zone four and Ariwa, zone five**.** The coordinates for the Bidi-Bidi refugee settlement in Yumbe district, Uganda are 3.53°N and 31.35°E. The residents in Bidi Bidi refugee settlement depend on small scale farming and small scale businesses.

**3.3 Research design**

This study will consider the use of both quantitative and qualitative research approaches. Quantitative approach will be used to cater for numerical data. Amin, (2005), states that quantitative research entails collection of numerical data to explain, predict and control phenomena of interest, data analysis being mainly statistical. Qualitative approach will be used in order to include respondents’ views and opinions (qualitative data) concerning the study in an interview schedule with the management of the firm.

This study will apply a cross-sectional-descriptive implied research designs. Descriptive research is research designed to provide a snapshot of the current state of affairs. Regression research design is designed to predict relationships among variables and to allow the prediction of future events from present knowledge (Cresswell, 2012). Therefore, in this study, descriptive research design will help in describing factors associated with HIV/AIDS literacy among the adolescents in terms of mean and standard deviation. The regression research design will be suitable in predicting the influence or relationship between two or more variables (Amin, 2005) whereby in this study, it will be applied and that is to say knowledge of HIV/AIDS, Cultural beliefs and Misinformation will be used as predictors to predict the adherence of ART among the adolescents at YAPS Implementing sites in Bidibidi Refugee Settlement, Yumbe District

* 1. **Study population**

Bidi Bidi refugee settlement has a total number of 287,859 population with 26,650 females and 25,082 males aged 0-4; 45,689 females and 47,040 males aged 5-11; 26,323 females and 28,314 males aged 12-17; 48,766 females and 33,079 males aged 18-59; and 4,757 females and 2,159 males aged 60 and over. In Bidibidi, the population is predominantly female, with women outnumbering men by a 3:2 ratio, and most households are led by women. The majority of the settlement's residents are under the age of 18.

* 1. **Target population**

This study will specifically focus on the adolescents at YAP implementing sites in Bidi Bidi refugee settlement and therefore this study will target the age group of 12- 17 years of age which is consisted of 26,323 girls and 28,314 boys who are 54,637 in total.

* 1. **Sample Size**

Determining the appropriate sample size is one of the most important factors in statistical analysis (Amin, 2005), and if the sample size is too small, it does not yield valid results or adequately represent the realities of the population being studied. Hence, Creswell (2012) recommends that it was important to consider a small target population of a study as the sample size in order to gather adequate information for the study. On the other hand, Creswell (2014) explains that while larger sample sizes yield smaller margins of error and were more representative, a sample size that is too large may significantly increase the cost and time taken to conduct the research. Therefore, the sample size of this study will be derived from a target population of 54,637. In this study, the sample size will be determined using a mathematical formula by Taro Yamane (1979) as illustrated below.

N= total target population (54,637)

N=total sample size

E=desired margin error

Adolescents

* 1. **Sampling Procedure**

Where as in probability sampling the researcher randomly selects the representative to be included in the sample, in non-probability sampling the researcher selects a subject at random to be included in the sample. In probability sampling, the likelihood of selection was deterministic and knew (Creswell, 2012). Therefore, this study will adopt purposive sampling technique where the researcher will specifically collect data from adolescents from Bidi Bidi refugee settlement since they are the ones suitable to provide the required data.

# 3.7 Data Collection Methods and Instruments

This study will use both a questionnaire survey and key informant interview data collection methods in order to gather quantitative and qualitative data respectively. These methods are also cost and time effective since they save time and are cheap to produce and collect data within a very short time. The use of a questionnaire survey and key informant interview methods of data collection are supported by Creswell (2012) because they provide an opportunity for the researcher to gather both quantitative and qualitative data for the research.

# 3.7.1 Self-administered Questionnaire

The study will use a self-administered questionnaire, which will have a set of well formulated statements to probe and obtain responses from respondents who will confidentially either agree, disagree, not sure, disagree or strongly disagree with the statements. It consists of four sections. Section A will seek to obtain demographic information of the respondents; section B are statements while section D is for questions on respondents’ suggestions and recommendations. The closed ended questions will be guided by a five-point Likert scale as illustrated in Table 2.

**Table 2: Operationalized Likert Scale**

|  |  |  |  |
| --- | --- | --- | --- |
| **Description** | **Mean Range** | **Scale** | **Interpretation** |
| Strongly agree | 4.20 – 5.00 | 5 | Very high |
| Agree | 3.40 – 4.19 | 4 | High |
| Not Sure | 2.60 – 3.39 | 3 | Moderate |
| Disagree | 1.80- 2.59 | 2 | Low |
| Strongly disagree | 1.00 – 1.79. | 1 | Very low |

Source: Vagias (2006)

# 3.7.2 Key Informant Interview Guide

An 'interview' is typically a face-to-face conversation between a researcher and a participant involving a transfer of information to the interviewer (Creswell, 2012). A Key informant interview guide will be used as a primary instrument to collect in-depth data where the researcher will set some questions for use in interviewing senior officials at YAPS implementing sites in Bidi Bidi as key informants.

**3.8 Inclusion Criteria**

The study will include adolescents aged 12 to 17 years to ensure the target demographic is adequately represented. This age range will be selected to focus on a critical developmental stage where adherence to antiretroviral therapy (ART) may be influenced by various social, cultural, and psychological factors. Participants will need to have a confirmed diagnosis of HIV and to be receiving ART, as the study aims to explore factors affecting treatment management specifically within this group. Additionally, the study will be geographically limited to adolescents residing within YAPS implementing sites in Bidibidi Refugee Settlement, Yumbe District, to address the unique contextual challenges in this area. Finally, inclusion will be restricted to individuals who provide informed consent (or assent in conjunction with parental or guardian consent) to ensure adherence to ethical research standards.

**3.9 Exclusion Criteria**

Adolescents outside the age range of 10 to 17 years will be excluded to maintain a specific focus on this age group. Those who are not diagnosed with HIV or not receiving ART will also be excluded, as the study's primary objective will center on ART adherence among adolescents living with HIV. Additionally, participants who may have relocated from Bidibidi Refugee Settlement by the time of data collection will be excluded to preserve the study's geographical relevance. Finally, adolescents or their guardians who decline to provide informed consent will not be included in the study, ensuring compliance with ethical guidelines and safeguarding participant autonomy.

### 3.10 Validity

## The content validity test indicates the extent to which an instrument would measure what it is supposed to measure by using the content validity index. Therefore, in this study, the researcher will first of all formulate a questionnaire based on the study objectives as well as ensure that the items in the questionnaire are grammatically correct. The researcher will present the questionnaire to two research supervisors in Uganda Martyrs University Graduate School who will scrutinize the tool, make necessary recommendations for the items in the data collection to be relevant and able to answer the study objectives. After receiving the recommendations from the supervisors, the researcher will make necessary adjustments then share the tool with the supervisors before embarking on the calculation of Content Valid Index (CVI), a scale that will be developed by computing the relevant items in the questionnaire by checking their clarity, their meaningfulness in line with the objectives stated dividing by the total number of items. The instrument will be considered valid if the CVI gotten is above 0.7 as recommended by Kothari (2003) using the following formular:

**3.11 Reliability**

According to Sproul (1998), reliability is consistency of measurement of the degree to which an instrument measures the same ways. Each time will be used under the same condition with the same subjects. The pre-test will be done in imvepi refugee settlement because it has similar characteristics with Bidi Bidi refugee settlement. 30 questionnaires will be used for pretesting, the data collected will be analysed using SPSS version 26 and the instrument will be considered reliable if reliability Cronbach Alfa coeficient (α) ranges from 0.7 and above. Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items will be as a group (Cronbach, 1951).

# 3.12 Data Collection Procedure

Before the researcher engages into data collection, an introductory letter will be obtained from the School of Graduate Studies, Uganda Martyrs University which will introduce the researcher to the Protection officer UNCHR Bidi Bidi refugee settlement in order to collect data using the questionnaire where permission will be given and then appointments for the day to carry out the study itself. Adolescents will be requested to respond to the questionnaire and Head Officers at the camp in charge of the adolescents will be requested to be interviewed.

The researcher therefore will schedule time with respondents as to when to meet with them and collect information. The researcher will seek guidance from the Protection officer on where, how and when to access the adolescents respondents. The researcher will met meet with the adolescents, and administer the self-administered questionnaire to them, wait for them to fill the questionnaires and then collected them back. After collecting the quantitative data using questionnaire from the adolescents, the researcher will then arrange with the head officers considered as key informants on when to interview them. The interview will be separately organized for each of the key informants. Field editing will be done while in the field and after field work central editing will be done in preparation for data analysis.

# 3.13 Data Analysis

Data processing in this study refers to editing, coding, transcription, data entry and data cleaning tabulation and report formatting to ensure that the data collected is accurate and complete before data analysis. Data processing will be done during and after fieldwork. Editing-This is a process of examining the collected raw data to detect errors and omission and to correct these where possible. Editing will involve a careful scrutiny of the completed questionnaires. Editing willbe done to ensure that the data is accurate, consistent with other facts gathered to facilitate coding and tabulation. Coding-This will be done after the researcher classifying the raw data into some purposeful and usable categories. It is a process of assigning numerals or other symbols to the responses. The structured questions will be pre-coded by assigning them numerical and alphabetical numbers before fieldwork. The responses from open-ended questions will be post-coded which will involve assigning them numbers, and entering the response into the computer for analysis.

Data Entry: Information will be entered into a computer using statistical package for social scientists. There will be data cleaning involving detecting inaccurate entries from the computer. It will involve identifying incomplete, incorrect, inaccurate, irrelevant entries among other parts of the data and then replacing, modifying or deleting the useless data. Tabulation-This will involve the process of summarizing raw data and displaying the same in compact form, for interpretation.

For data analysis, SPSS (Statistical Package for Social Sciences) version 26 will be used. Objectives 1,2 and 3 will be analysed using descriptive statistics (mean, and standard deviation). Objective 4, 5 and 6 and the study hypothesis will be analysed using inferential. Further multiple linear regression will be applied to establish the contributions of each factor on HIV/AIDS literacy on Adherence to ART. At P-value<0.05, the findings will indicate existence of a significant relationship between factors of HIV/AIDS literacy and Adherence to ART, hence the null hypothesis will be rejected and its alternative positive hypothesis considered. The qualitative data from key informants will be analyzed using a narration approach whereby views given or narrated by the key informants will be discussed in the study as they were. The key informants’ views will be in form of quotes written in italics.

**3.14 Ethical Considerations**

This study will adhere to the highest ethical standards to protect participants' rights and well-being. Informed consent will be obtained from all participants, ensuring they fully understand the study's objectives and their role. Confidentiality will be strictly maintained by anonymizing personal data, and participants will have the right to withdraw at any stage without penalty. The study will also ensure that there is no coercion or undue influence to participate, and vulnerable groups, such as minors or individuals with severe mental disorders, will be given special care. Approval will be sought from relevant ethical boards, and all research activities will comply with local and international ethical guidelines.

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