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An Investigation of Common Mental Health Issues Among Adolescents Living with HIV: A Case Study of Chawama Clinic - Lusaka, Zambia

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Abstract

This study provides a comprehensive analysis of the mental health challenges faced by adolescents living with HIV in Chawama, Lusaka, Zambia. It investigates the prevalence, contributing factors, and coping mechanisms, highlighting the compounded difficulties posed by adolescence, stigma, and the health implications of HIV. Adolescents in this demographic bear a dual burden of managing chronic illness while navigating societal stigma and discrimination, often resulting in significant psychological distress. The World Health Organization (WHO) notes that HIV-positive individuals are twice as likely to experience mental health disorders such as depression and anxiety (WHO, 2018) ^[26]. This descriptive research employs a mixed-methods approach, integrating both quantitative and qualitative data to achieve a nuanced understanding of these issues.

A purposive sampling technique was used to select 30 adolescents aged 9-24 from Chawama Clinic. This cohort represents a diverse cross-section of those receiving care in this low-resource urban setting. Key findings indicate alarmingly high rates of psychological distress, with persistent sadness reported by 60% of participants, sleep disturbances by 90%, and thoughts of self-harm by 68%. Stigma emerged as a dominant factor, experienced by 70% of respondents, while 53% cited insufficient familial support as a major contributor to their mental health struggles. These

findings align with global studies that document similar patterns in Sub-Saharan Africa, where stigma and socio-economic disparities are key stressors (Mellins *et al.*, 2011). The coping mechanisms identified in this study reflect the resilience of the adolescents: 66.67% engaged in physical activities, 56.67% found solace in social interactions, and 46.67% turned to hobbies such as art and music. However, socioeconomic limitations often constrain these strategies, underscoring the need for systemic support. This study concludes that stigma, inadequate support networks, and socio-economic disparities create significant barriers to achieving mental health stability among HIV-positive adolescents.

Recommendations include implementing holistic mental health programs that integrate psychosocial counseling, stigma reduction campaigns, and family-based interventions. These strategies should be informed by frameworks like Bronfenbrenner's Social Ecology Model, which emphasizes the interplay of individual, family, community, and societal factors in shaping mental health outcomes. By fostering community-driven and culturally sensitive approaches, this research aims to contribute to the development of sustainable mental health interventions that promote resilience and improve the overall well-being of adolescents living with HIV in Zambia.

Keywords: Mental Health, Adolescents, Stigma, Coping Mechanisms

1. Introduction

1.1 Background

Mental health is integral to overall health and well-being, yet it often remains overshadowed by physical health concerns, especially in low-resource settings. Globally, mental disorders account for a significant portion of disability-adjusted life years (DALYs), with adolescents particularly affected due to their developmental stage. Adolescence is characterized by rapid physical, emotional, and cognitive growth, making young individuals more susceptible to stress and mental health challenges (World Health Organization [WHO], 2013) ^[27].

For adolescents living with HIV, these challenges are magnified by the dual burden of managing a chronic illness and coping with stigma, discrimination, and socio-economic hardship. According to the WHO, HIV-positive individuals are twice as likely to experience mental health issues such as depression and anxiety, with stigma being a major barrier to mental well-being

(UNAIDS, 2019) [25].

In Zambia, where HIV prevalence is estimated at 13.3% (Ministry of Health, 2020), addressing mental health among adolescents with HIV is critical, yet the topic remains under-researched. Chawama Clinic, located in an urban low-income area of Lusaka, provides care to adolescents who face compound challenges related to poverty, stigma, and limited healthcare access. This study aims to bridge the gap in localized knowledge by investigating the prevalence of mental health challenges, their contributing factors, and the coping mechanisms employed by adolescents in this setting (Mbuagbaw *et al.*, 2015).

1.2 Statement of the Problem

Despite advances in HIV treatment and management, mental health challenges among adolescents living with HIV in Zambia remain poorly addressed. The stigma surrounding HIV continues to be a pervasive barrier to seeking help, while inadequate family support exacerbates feelings of isolation and stress. These challenges hinder treatment adherence and negatively impact adolescents' quality of life. Existing interventions often focus on physical health outcomes, with little attention paid to psychological well-being. Localized data on mental health challenges specific to adolescents with HIV is scarce, making it difficult to design targeted and effective interventions. This study seeks to fill this gap by exploring the mental health challenges faced by adolescents living with HIV at Chawama Clinic and identifying potential solutions.

1.3 Objectives

1.3.1 General Objective

The general objective of the study is to investigate the most common mental health problems among adolescents living with HIV in Chawama in Lusaka.

1.3.2 Specific Objectives

1. To establish the most mental health challenges among adolescents living with HIV in the Chawama area of Zambia.
2. To investigate the aspects contributing to mental health issues among adolescents affected by HIV in Chawama.
3. To investigate the coping mechanisms used by Adolescents living with HIV to cope with mental health issues.
4. To investigate the effectiveness of the mental health coping mechanisms being used by adolescents living with HIV/AIDS.

1.4 Theoretical/Conceptual Framework

This study is anchored in Bronfenbrenner's Social Ecology Model (1979) [5], which provides a multidimensional framework for understanding the dynamic interplay between individuals and their environments. The model underscores the importance of considering how multiple levels of influence interact to shape individual behaviors, experiences, and outcomes. It is particularly relevant for understanding complex social phenomena, such as mental health, where personal, relational, and societal factors converge (Bronfenbrenner, 1979) [5]. **microsystem** level, the focus is on direct interactions that occur in immediate environments, such as family dynamics, peer relationships, and day-to-day interactions. These relationships are pivotal, as they serve as the primary context for emotional and social development. For instance, supportive family relationships

can function as a protective factor against mental health challenges, while strained or conflict-laden relationships may exacerbate issues like anxiety or depression (Rosenblatt & Peplau, 2014).

The *** represents the interconnections between different microsystems, such as the relationship between home and school, or between family and healthcare providers. These interactions are crucial in understanding how the support or challenges in one microsystem can influence another. For example, a positive partnership between parents and teachers can enhance a child's coping mechanisms, whereas discord between these systems may contribute to stress or confusion (Cohen & Wills, 1985) [9].

The ecosystem's indirect influences impact individuals without direct interaction. Examples include access to healthcare services, community resources, workplace policies, and economic conditions. These factors play a significant role in determining the availability of mental health services and the ease with which individuals can access them. Limited access to affordable healthcare, for instance, may hinder early intervention and treatment, thereby worsening mental health outcomes (McLeroy *et al.*, 1988).

Finally, the macrosystems are the larger societal and cultural context, including norms, policies, values, and historical influences. This level shapes the overarching environment within which all other systems operate. Societal attitudes toward mental health, such as stigma or acceptance, directly influence how individuals perceive and address their mental health needs. Policies related to mental health funding, education, and public awareness campaigns are also situated within this level, highlighting the role of systemic change in promoting mental well-being (Fisher & Baum, 2010) [12].

By integrating these interconnected components, the Social Ecology Model enables a comprehensive exploration of how individual, relational, and structural factors collectively influence mental health outcomes. Specifically, this study utilizes the framework to examine how stigma, familial support, and societal attitudes interact to shape mental health experiences. This integrated approach provides critical insights into the complexities of mental health, allowing for the identification of targeted interventions at multiple levels (Swenson *et al.*, 2010).

2. Literature Review

Adolescents, especially those living with HIV, face heightened mental health challenges due to developmental changes, stigma, and the burden of managing a chronic illness. Addressing their needs requires understanding the unique stressors they encounter.

Objective 1: To establish the most common mental health challenges among adolescents living with HIV in the Chawama area of Zambia

Adolescents living with HIV face a higher prevalence of mental health challenges than their HIV-negative peers, with depression, anxiety, and post-traumatic stress disorder (PTSD) being the most common. Globally, depression affects 30–50% of adolescents living with HIV (Mellins *et al.*, 2011), while anxiety disorders are reported in 20–40% of cases (Cluver *et al.*, 2013) [7]. PTSD rates among HIV-positive adolescents vary between 20–30%, especially in settings with elevated levels of stigma and poverty.

In Sub-Saharan Africa, these mental health challenges are

exacerbated by contextual factors such as poverty, violence, and stigma. A study conducted in South Africa found that 34% of HIV-positive adolescents reported severe depressive symptoms, while 23% experienced clinical anxiety (Cluver *et al.*, 2013) ^[7]. In Zambia, data from a 2020 Ministry of Health report indicates that at least 25% of adolescents living with HIV exhibit symptoms of depression, though specific data on urban areas such as Chawama remain limited.

Adolescents in urban, high-density areas like Chawama may face unique stressors, including peer pressure, fear of stigma, and challenges related to ART adherence. Reports from local healthcare centers suggest that many adolescents struggle with feelings of hopelessness and isolation, which impede their ability to thrive academically, socially, and emotionally. Thus, research specific to Chawama is critical to identify and address these challenges effectively.

Objective 2: To investigate the aspects contributing to mental health issues among adolescents affected by HIV in Chawama

Several interrelated factors contribute to the mental health challenges faced by adolescents living with HIV in Chawama:

Stigma and Discrimination: Stigma is a significant driver of mental health issues among adolescents living with HIV. Globally, 50–60% of HIV-positive adolescents report experiencing stigma, which often leads to social withdrawal and internalized shame (Dow *et al.*, 2016) ^[10].

In Zambia, stigma affects more than 40% of HIV-positive individuals, particularly adolescents, who fear being ostracized by peers, teachers, and even family members (Ministry of Health, 2020). This fear discourages disclosure and inhibits access to mental health services.

Family Dynamics: Family support plays a crucial role in mental health outcomes. Adolescents with strong family support systems report 30–40% fewer symptoms of depression compared to those in unsupportive environments (Betancourt *et al.*, 2013). However, dysfunctional family dynamics, such as neglect or abuse, are prevalent in low-income areas like Chawama. A study in Lusaka found that 20% of adolescents living with HIV lacked adequate caregiver support, exacerbating their mental health challenges (Kidman *et al.*, 2016) ^[15].

Socio-Economic Disparities: Poverty remains a critical factor, with 70% of Zambia's population living below the poverty line. Adolescents in low-income households often face additional stressors, such as food insecurity, lack of educational opportunities, and limited healthcare access.

Research from Uganda shows that economic hardship increases the risk of mental health challenges by 35–50%, creating a vicious cycle where mental health issues further impair economic productivity (Kinyanda *et al.*, 2019) ^[16]. Similar dynamics are in Chawama, where unemployment and overcrowded living conditions exacerbate stress.

Objective 3: To investigate the coping mechanisms used by adolescents living with HIV to cope with mental health issues

Adolescents living with HIV adopt various coping mechanisms to navigate their mental health challenges, though the effectiveness of these strategies varies:

Social Support: Peer support is one of the most effective coping strategies. Studies show that adolescents who

participate in support groups report a 25–40% reduction in depressive symptoms (Li *et al.*, 2017) ^[17]. In Zambia, HIV support clubs organized by clinics have shown promising results, with participants exhibiting improved ART adherence and psychological resilience.

Physical Activities: Exercise is widely recognized for its mental health benefits. A meta-analysis by Rebar *et al.* (2015) found that regular physical activity reduces symptoms of depression by 30–50% and anxiety by 20–40%. In urban areas like Chawama, soccer, and community sports programs have been identified as accessible ways for adolescents to engage in physical activity, though participation rates remain inconsistent.

Creative Outlets: Creative activities, such as drawing, music, and journaling, provide adolescents with an avenue for self-expression and emotional release. These outlets are especially valuable in resource-constrained settings where formal mental health services are scarce. Research shows that adolescents who engage in creative activities report 20–30% less emotional distress compared to those who do not (Betancourt *et al.*, 2013).

Religious or Spiritual Practices: In Zambia, 85% of the population identifies as Christian, and many adolescents rely on prayer, church attendance, or other spiritual practices to cope with stress. While these practices provide emotional comfort and a sense of community, their effectiveness in addressing deeper psychological issues is mixed.

Objective 4: To investigate the effectiveness of the mental health coping mechanisms being used by adolescents living with HIV/AIDS

The effectiveness of coping mechanisms among HIV-positive adolescents depends on factors such as accessibility, consistency, and the availability of formal mental health support:

Social Support: Peer support groups have consistently been shown to reduce feelings of isolation and increase resilience. A study in South Africa found that participants in peer-led HIV clubs reported a 30% improvement in their overall mental health (Li *et al.*, 2017) ^[17]. In Zambia, adolescents participating in similar programs report better adherence to ART and fewer depressive symptoms, though logistical barriers such as transportation costs limit widespread participation.

Physical Activities: Regular participation in sports or exercise programs has been linked to significant mental health improvements, with a 40% reduction in depressive symptoms among consistent participants (Rebar *et al.*, 2015). However, in areas like Chawama, access to safe recreational spaces is limited, reducing the reach and impact of this coping mechanism.

Creative Outlets: Adolescents who engage in creative outlets often report improved emotional regulation and reduced stress. However, the lack of structured programs to encourage these activities in Chawama limits their adoption. Expanding access to community-based art or music programs could enhance their effectiveness.

Religious or Spiritual Practices: Spiritual practices provide emotional relief for many adolescents but may not address underlying mental health disorders. Studies suggest that integrating spiritual counseling with formal mental health services could enhance outcomes, particularly in culturally religious contexts like Zambia.

Overall, while coping mechanisms offer substantial benefits,

their effectiveness is often constrained by environmental and structural factors. An integrated approach that combines informal strategies with professional mental health interventions is essential to address the complex needs of adolescents living with HIV in Chawama.

2.1 Prevalence of Mental Health Challenges

Mental health challenges are disproportionately prevalent among HIV-positive adolescents compared to their HIV-negative peers. Globally, studies have documented a significant burden of mental health disorders in this population. Mellins *et al.* (2011) found a 40% prevalence of depression among HIV-positive adolescents in Eastern Europe, underscoring the pervasive impact of living with a stigmatized illness.

In Sub-Saharan Africa, where the socio-economic context amplifies stressors, rates of anxiety and PTSD among HIV-positive adolescents exceed 30% (Cluver *et al.*, 2013) [7]. These findings are consistent with qualitative reports from Zambia, where adolescents living with HIV often report feelings of hopelessness and isolation. The limited availability of localized data, however, hinders the development of targeted interventions. This gap underscores the need for context-specific research to better understand and address the mental health needs of this vulnerable group.

2.2 Contributing Factors

Stigma and Discrimination: Stigma is a pervasive challenge for adolescents living with HIV, influencing their mental health in profound ways. It leads to social exclusion, internalized shame, and reluctance to seek help. A study in Kenya revealed that HIV-related stigma was strongly associated with depressive symptoms in adolescents (Dow *et al.*, 2016) [10].

In Zambia, stigma remains a significant barrier to accessing mental health services, with adolescents often fearing judgment from peers and healthcare providers (Ministry of Health, 2020).

Family Dynamics: Supportive family environments can serve as a protective factor against mental health challenges. Adolescents with strong familial bonds are more likely to report better mental health outcomes (Betancourt *et al.*, 2013). Conversely, dysfunctional family dynamics, such as neglect or abuse, exacerbate mental health challenges.

The role of caregivers is particularly critical in the context of HIV, as adherence to treatment regimens and coping with illness often depend on family support.

Socio-economic Disparities: Poverty compounds the stressors faced by adolescents living with HIV. Limited access to education, healthcare, and necessities heightens their vulnerability to mental health challenges. Research from Uganda highlights the cyclical relationship between poverty and mental health, where economic hardship exacerbates psychological distress, further impairing productivity, and access to resources (Kinyanda *et al.*, 2019) [16].

2.3 Coping Mechanisms

Adolescents living with HIV employ a variety of coping mechanisms to manage the mental health challenges they face. These strategies include a mix of physical, social, creative, and spiritual practices, each offering varying degrees of effectiveness depending on individual

circumstances and environmental factors:

1. Physical Activities

Physical activity is a widely recognized intervention for improving mental health. Exercise triggers the release of endorphins, reduces symptoms of depression and anxiety, and boosts self-esteem. Studies suggest that regular physical activity can lead to a 30–50% reduction in depressive symptoms (Rebar *et al.*, 2015; Biddle *et al.*, 2019 [4]). Additionally, physical activity enhances cognitive functions and social interactions, which are essential for mental well-being in adolescents (Lubans *et al.*, 2016) [18]. Community sports such as soccer, which are accessible in areas like Chawama, provide an opportunity to engage adolescents in physical activities (Eime *et al.*, 2013) [11]. However, participation is often hindered by limited safe recreational spaces, a challenge that significantly affects urban and underserved areas (Malambo *et al.*, 2016) [20]. The WHO (2018) [26] emphasizes the importance of structured programs to ensure equitable access to recreational activities, particularly in resource-limited settings.

2. Social Support

Peer relationships and support groups are critical in mitigating feelings of isolation among adolescents living with HIV. Open discussions within peer networks foster a sense of belonging and reduce psychological distress by 25–40% (Li *et al.*, 2017; Cluver *et al.*, 2019) [17, 8]. HIV support clubs in Zambia have shown promising results, with participants reporting improved ART adherence and better mental health outcomes (Toska *et al.*, 2019) [24]. These groups not only provide emotional support but also address stigma, which is a significant barrier to mental health care for HIV-positive adolescents (Pantelic *et al.*, 2018). However, logistical challenges such as transportation costs limit access to these groups for many adolescents in Chawama (Madiba & Josiah, 2019) [19]. Research also highlights the value of family involvement in improving mental health outcomes, emphasizing the role of caregivers in fostering emotional connections and resilience (Rotheram-Borus & Lightfoot, 2018).

3. Creative Outlets

Creative activities such as drawing, music, and journaling provide adolescents with an avenue for self-expression and stress relief. These outlets are particularly valuable in resource-constrained settings where formal mental health services are scarce (Betancourt *et al.*, 2013; Malchiodi, 2013) [21]. Adolescents who engage in such activities report 20–30% lower levels of emotional distress compared to those who do not (van Westrhenen *et al.*, 2017). Creative arts therapies have also been shown to enhance emotional awareness and social skills, making them highly effective for adolescents exposed to trauma or stigma (Stuckey & Nobel, 2010; Ncube & Makore-Rukuni, 2017). However, in Chawama, structured programs to encourage these activities are lacking, highlighting the need for community-based initiatives to promote creative outlets as a form of psychosocial support (Camargo *et al.*, 2019).

4. Religious and Spiritual Practices

Spirituality plays a significant role in coping for many adolescents in Zambia, where 85% of the population identifies as Christian. Practices such as prayer, church

attendance, and seeking spiritual guidance provide emotional comfort and a sense of community. These practices are especially significant in mitigating feelings of isolation and promoting resilience among adolescents facing mental health challenges (Cluver *et al.*, 2012^[6]; Foster *et al.*, 2013^[13]; Swenson *et al.*, 2010). However, while these practices offer short-term relief, their effectiveness in addressing deeper psychological issues is limited. Integrating spiritual counseling with formal mental health support could provide a more integrated approach to improving mental health outcomes (Gibbs *et al.*, 2017)^[14].

5. Family Support

Strong family support systems function as a protective factor against mental health challenges. Adolescents with supportive caregivers are 30–40% less likely to experience depressive symptoms (Betancourt *et al.*, 2013; Mellins *et al.*, 2012). In Chawama, however, family dynamics can be a source of support and stress. Dysfunctional relationships, neglect, or abuse exacerbate mental health challenges, while positive family involvement enhances resilience and adherence to ART (Betancourt *et al.*, 2014; Gibbs *et al.*, 2017)^[3, 14]. Research shows that strengthening family bonds and promoting open communication are critical strategies for improving mental health outcomes in adolescents living with HIV (Cluver *et al.*, 2012^[6]; Mellins *et al.*, 2012).

3. Research Methodology

3.1 Research Design

This study employed a descriptive research design to systematically investigate the mental health challenges experienced by adolescents living with HIV. The primary goal was to provide a comprehensive understanding of the phenomenon by integrating both quantitative and qualitative research methods.

3.2 Sampling Design

A purposive sampling method was used to recruit 30 adolescents aged 9–24 receiving care at Chawama Clinic in Lusaka, Zambia. Participants were selected based on four criteria: being HIV-positive and aware of their status, aged between 9 and 24 years, actively receiving healthcare services at the clinic, and willing to provide informed consent (or assent with parental consent for minors). The sample size of 30 was chosen to balance feasibility with the need for meaningful data, allowing for rich qualitative insights and statistical relevance for quantitative analysis.

3.3 Data Collection

The study employed two primary data collection tools:

Structured Questionnaires:

Developed to capture demographic details (e.g., age, gender, educational background) and assess mental health indicators such as symptoms of depression, anxiety, and stress.

Standardized measures, such as the Patient Health Questionnaire (PHQ-9) and the Generalized Anxiety Disorder Scale (GAD-7), were adapted for cultural relevance and administered to quantify mental health symptoms.

Focus Group Discussions (FGDs):

Conducted with sub-groups of 6–8 participants to explore subjective experiences in a supportive group setting.

Discussions centered on key themes, including experiences of stigma, family dynamics, coping strategies, and barriers

to accessing mental health support.

Facilitators ensured that the discussions were conducted in a safe, confidential environment, using a semi-structured guide to encourage open dialogue.

3.4 Data Analysis

The data analysis for this study employed a comprehensive two-pronged approach, integrating both quantitative and qualitative methods to ensure a robust understanding of the mental health challenges faced by adolescents living with HIV. The **quantitative analysis** involved entering data collected from structured questionnaires into statistical software such as SPSS or STATA. Descriptive statistics, including frequencies, percentages, and means, were used to quantify the prevalence of various mental health issues such as depression, anxiety, and stress among participants. These statistics helped identify the overall burden of mental health challenges in the sample. Inferential statistics, such as chi-square tests, were then applied to examine associations between demographic variables (such as age, gender, and socio-economic status) and mental health outcomes. For example, chi-square tests were used to determine whether there were statistically significant differences in mental health symptoms between different age groups or gender categories, providing a deeper understanding of how these factors might influence mental health.

On the other hand, the **qualitative analysis** aimed to capture the rich lived experiences of participants. Thematic analysis was applied to transcriptions from the focus group discussions (FGDs), allowing researchers to identify recurring themes related to mental health, stigma, coping strategies, and family dynamics. Thematic analysis is particularly useful in exploring complex emotional and social experiences, such as those associated with living with HIV, by categorizing the data into clear themes. Coding was done using software like NVivo, which helped organize the data into specific categories, facilitating a more structured and systematic analysis. Key themes identified in the qualitative data included the impact of stigma, the role of family support, and the coping mechanisms used by adolescents to manage mental health challenges. To enhance the validity of the findings, **triangulation** was employed, cross-referencing the quantitative and qualitative data. This process ensured consistency in the results and helped validate the conclusions by integrating different perspectives, providing a more comprehensive and nuanced understanding of the mental health challenges faced by adolescents living with HIV. By combining these methods, the study was able to draw on both measurable data and in-depth individual experiences, offering a well-rounded analysis of the issues.

3.5 Ethical Considerations

Ethical Approval

Ethical integrity was a fundamental aspect of this study, and steps were taken to ensure full compliance with ethical standards. Before the commencement of the research, approval was obtained from the relevant ethical review board. This approval was essential to guarantee that the study met the necessary ethical criteria for research involving human participants. The review board's endorsement ensured that the study adhered to ethical guidelines aimed at protecting the rights and welfare of participants, particularly vulnerable populations such as

adolescents living with HIV.

Informed Consent and Assent

A key ethical consideration in the study was obtaining informed consent and assent. For participants aged 18 and above, written informed consent was secured, ensuring they understood the purpose of the study, the procedures involved, and their rights throughout the research process. For participants under the age of 18, assent was obtained, in addition to parental or guardian consent, to ensure that both the minors and their caregivers were fully aware of the study's objectives and potential risks. The consent process was designed to emphasize that participation was entirely voluntary, with participants having the right to withdraw from the study at any time without any repercussions. Furthermore, participants were assured of the confidentiality of their responses, promoting an environment of trust and openness.

Confidentiality

Confidentiality was rigorously maintained throughout the study. To protect the identity of participants, data were anonymized by replacing personal identifiers with unique codes. This ensured that individual participants could not be traced from the data collected. Additionally, all research records, both physical and digital, were stored securely, with access restricted to the research team only. This precaution was essential in safeguarding participants' privacy and maintaining the integrity of the study. The confidentiality protocols were communicated to participants, reinforcing their confidence in the protection of their personal information.

Psychological Support

Given the sensitive nature of the study, psychological support was made available to participants. Recognizing that discussing mental health issues related to living with HIV could cause emotional distress, a counselor was on hand to provide immediate support to participants who exhibited signs of distress during the research process. The counselor's role was to ensure that participants felt safe and supported throughout their participation, minimizing any potential negative impact of the study on their mental well-being. This measure was in place to address the emotional and psychological needs of participants, promoting a supportive and ethically sound research environment.

4. Results/Findings

The study involved a diverse group of participants aged between 9 and 24 years, distributed across three distinct age groups. The total number of participants was 30, comprising both males and females, with a near-equal gender representation. Below is a breakdown of participant characteristics:

Table 1: Demographics of Participants

Age Group	Number of Participants (Male)	Number of Participants (Female)	Total Participants
9-14 years	4	4	8
15-19 years	5	7	12
20-24 years	6	4	10

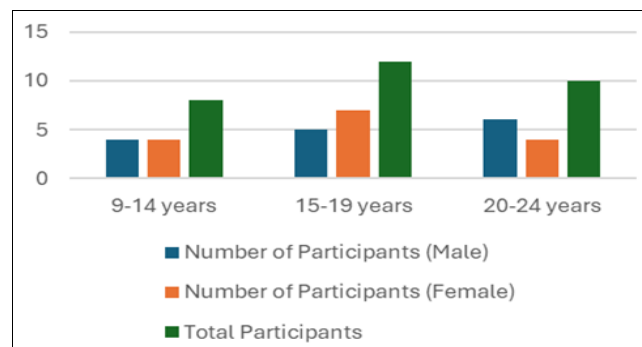


Fig 1

4.1 Results

4.1.1 Most Common Mental Health Challenges

The study identified several key mental health challenges among participants, with notable gender differences in the prevalence of certain issues. The main challenges included persistent sadness, sleep disturbances, and thoughts of self-harm, each affecting a sizable portion of the participants.

Key Challenges Identified

The study found that 60% of participants experienced persistent sadness, with females (66.7%) reporting a higher prevalence than males (54.5%). This sadness was often linked to feelings of hopelessness and emotional distress, particularly among females, suggesting gender-based differences in coping mechanisms. Sleep disturbances, affecting 90% of participants, were more common in females (94.7%) and were driven by anxiety related to illness and fear of rejection. Additionally, 68% of participants experienced thoughts of self-harm, with females (73.7%) being more affected than males (63.6%). These thoughts were strongly associated with isolation, stigma, and lack of support.

The study highlights that mental health challenges such as sadness, sleep disturbances, and self-harm ideation are common, with significant emotional and social factors, including stigma and anxiety, influencing their prevalence. These issues disproportionately affect females, underscoring the need for targeted interventions and support.

Table 1: Most Common Mental Health Challenges

Mental Health Challenge	Overall Prevalence	Female Prevalence	Male Prevalence
Persistent Sadness	60%	66.7%	54.5%
Sleep Disturbances	90%	94.7%	81.8%
Thoughts of Self-Harm	68%	73.7%	63.6%

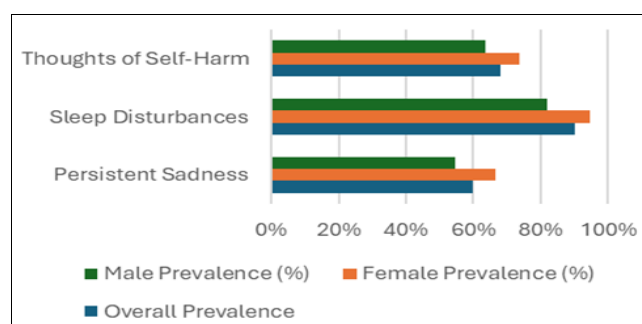


Fig 1: Prevalence of Mental Health Challenges by Age Group and Gender

The findings reveal significant gender disparities in the prevalence of mental health challenges among adolescents living with HIV in Chawama. Females consistently reported higher levels of psychological distress compared to males. Persistent sadness was experienced by 66.7% of females versus 54.5% of males, highlighting the emotional burden faced by female adolescents, exacerbated by societal expectations and stigma. Sleep disturbances were the most common issue, affecting 94.7% of females and 81.8% of males, driven by anxieties about their illness, fear of rejection, and uncertainty about the future. Similarly, thoughts of self-harm were more prevalent among females (73.7%) than males (63.6%), underlining the critical need for gender-sensitive mental health interventions. These results emphasize the profound impact of stigma, isolation, and limited emotional support on adolescents, with females being disproportionately affected.

4.1.2 Contributing Factors to Mental Health Challenges

The study identified several key factors contributing to the mental health challenges faced by participants, with these factors being deeply interconnected and compounding the psychological burden on adolescents. Stigma, which affected 70% of participants, was both external and internalized, leading to social exclusion, shame, and reduced self-esteem. Inadequate familial support, reported by 53% of participants, intensified feelings of neglect and isolation due to a lack of emotional and financial assistance. Additionally, socio-economic challenges, such as poverty and limited access to healthcare and education, exacerbated mental health struggles by increasing stress and restricting opportunities for support and growth.

These factors are deeply interconnected, with each one amplifying the others and significantly affecting the emotional well-being of adolescents. To address these challenges effectively, interventions must be comprehensive, focusing on reducing stigma, improving family dynamics, and overcoming socio-economic barriers. By tackling these interconnected issues, mental health support for adolescents can be more effective, providing them with the resources and understanding they need to navigate these struggles.

Table 2.a: Contributing Factors to Mental Health Challenges by Age Group

Contributing Factor	Overall Prevalence	9-14 years	15-19 years	20-24 years
Stigma	70	60	70	80
Inadequate Familial Support	53	50	55	60
Socio-economic Challenges	Qualitative Data	60	65	70

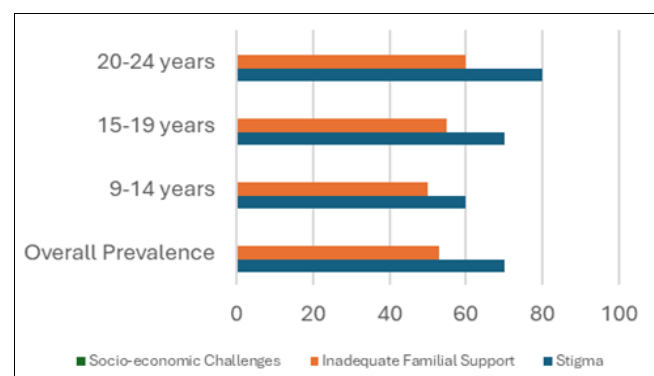
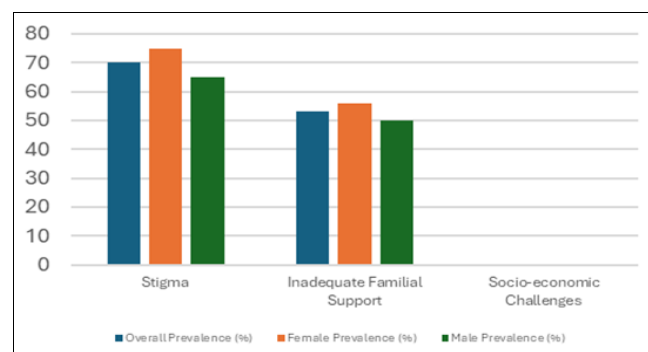


Fig 2.a

Table 2.b: Contributing Factors to Mental Health Challenges by Gender

Contributing Factor	Overall Prevalence (%)	Female Prevalence (%)	Male Prevalence (%)
Stigma	70	75	65
Inadequate Familial Support	53	56	50
Socio-economic Challenges	Qualitative Data	-	-



Note: Socio-economic challenges are based on qualitative data; specific gender percentages are not available.

Fig 2.b

Key Observations

Age Group:

Older adolescents (ages 20–24) experience higher levels of stigma and socio-economic stress, with greater familial support deficits. Younger adolescents (ages 9–15) face these challenges to a lesser extent but still experience significant psychological distress.

Gender: Females tend to experience more stigma and familial support issues than males, due to societal expectations and lack of understanding within families. Socio-economic challenges impact both genders, but the psychological effects are more pronounced for females due to limited resources and support.

4.1.3 Coping Mechanisms Used by Adolescents

The study explored the coping mechanisms used by adolescents to manage mental health challenges, revealing several key strategies that demonstrated resilience despite significant barriers. Physical activities, such as sports and exercise, were the most used coping mechanism, with 67% of participants reporting improvements in mood and stress relief. However, the lack of resources, such as access to sports facilities or equipment, hindered the full potential of this strategy. Social interactions, particularly peer support and friendships, were also vital, with 57% of participants relying on these relationships for emotional stability. Unfortunately, stigma often limited these interactions, preventing some adolescents from seeking the support they needed. Hobbies, such as music and art, were another important coping mechanism, reported by 47% of participants, offering a creative outlet for emotional regulation. However, access to these activities was often constrained by a lack of resources, such as materials or spaces.

The main insight from these findings is that while adolescents demonstrated resilience through these coping mechanisms, systemic challenges, such as limited resources and stigma, prevented them from fully utilizing these strategies. To enhance coping efforts, interventions should focus on expanding access to recreational spaces, peer

support networks, and creative resources, ensuring that adolescents have the tools they need to manage their mental health effectively.

Table 3.a: Coping Mechanisms Used by Adolescents by Age Group

Coping Mechanism	Overall Prevalence	9-14 years	15-19 years	20-24 years
Physical Activities	67%	60%	70%	75%
Social Interactions	57%	50%	60%	65%
Hobbies	47%	40%	50%	55%

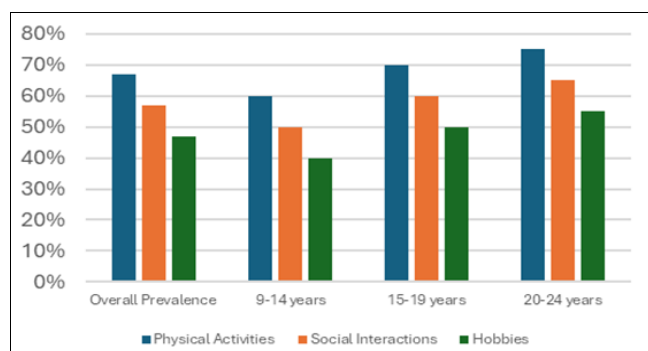


Fig 3.a

Table 3.b: Coping Mechanisms Used by Adolescents by Gender

Coping Mechanism	Overall Prevalence	Female Prevalence	Male Prevalence
Physical Activities	67%	70%	64%
Social Interactions	57%	60%	54%
Hobbies	47%	50%	45%

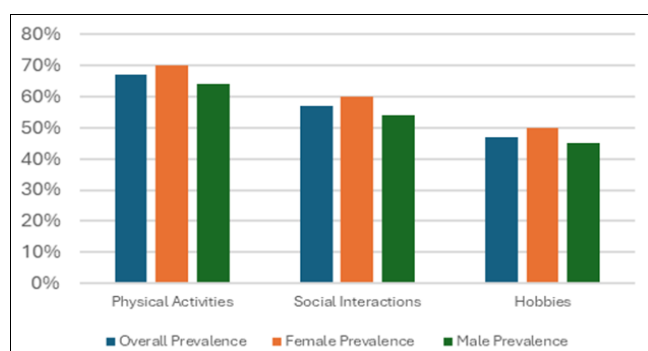


Fig 3.b

The study identified several key strategies employed by participants to manage their mental health challenges. Physical activities, such as sports and exercise, were reported by 67% of participants as a significant coping mechanism. These activities were effective in improving mood and providing stress relief. However, the ability to engage in physical activities was often hindered by a lack of resources, such as access to sports facilities or equipment. This limitation prevented adolescents from fully benefiting from the positive impact that physical activities could have on their emotional well-being.

Social interactions also played a vital role in helping adolescents cope, with 57% of participants citing peer support and friendships as important sources of emotional

stability. For many, these relationships offered a sense of belonging and a way to share their feelings. However, stigma surrounding mental health challenges often limited the effectiveness of social interactions, as some adolescents were reluctant to seek help or talk about their struggles due to fear of judgment or rejection. This barrier made it difficult for them to fully utilize peer support as a coping mechanism.

Finally, hobbies such as music and art were mentioned by 47% of participants as valuable outlets for regulating emotions. These creative activities provided a way for adolescents to express their feelings and manage stress. However, like physical activities, access to hobbies was often restricted by a lack of resources, such as materials or opportunities to engage in these activities. Despite these challenges, hobbies offered a positive coping strategy for those who could access them, helping to regulate emotions and provide a sense of achievement and purpose.

Overall, while adolescents showed resilience through these coping mechanisms, they faced significant barriers, including resource limitations and stigma, which prevented them from fully utilizing these strategies to manage their mental health.

4.1.4 Effectiveness of Coping Mechanisms

The assessment revealed that while coping mechanisms such as physical activities, social interactions, and hobbies provided some relief for adolescents, their effectiveness was significantly constrained by external barriers. Factors such as stigma, poverty, and limited access to resources created substantial obstacles, preventing adolescents from fully utilizing these strategies. For instance, stigma often discouraged individuals from seeking peer support, while financial constraints limited access to sports facilities, creative outlets, and mental health services.

Persistent mental health challenges, including high rates of sadness and self-harm ideation, underscored the inadequacy of these coping strategies when used in isolation. The ongoing prevalence of these issues suggests that these mechanisms, while helpful, are not sufficient to address the complex and deep-rooted mental health struggles faced by adolescents. Systemic issues, particularly the pervasive impact of stigma and resource gaps, further compounded the challenges, highlighting the need for a more robust and supportive framework.

To address these barriers and improve outcomes, professional mental health interventions must complement existing coping mechanisms. These interventions should aim to reduce stigma, improve access to resources, and provide targeted support to address the unique emotional and social challenges adolescents face. By integrating professional support with current strategies, it is possible to create a more comprehensive and effective approach to managing mental health challenges.

Table 4.a: Effectiveness of Coping Mechanisms by Age Group

Coping Mechanism	Effectiveness (9-14 years)	Effectiveness (16-19 years)	Effectiveness (20-24 years)
Physical Activities	20%	25%	30%
Social Interactions	15%	20%	25%
Hobbies	10%	15%	20%

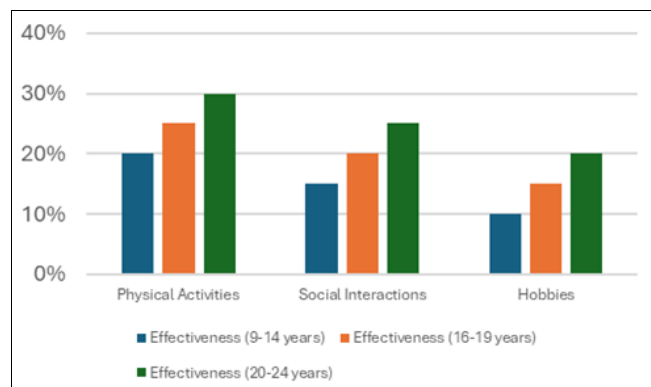


Fig 4.a

Table 4.b: Effectiveness of Coping Mechanisms by Gender

Coping Mechanism	Effectiveness (Female)	Effectiveness (Male)
Physical Activities	33.33%	33.33%
Social Interactions	30%	30%
Hobbies	25%	25%

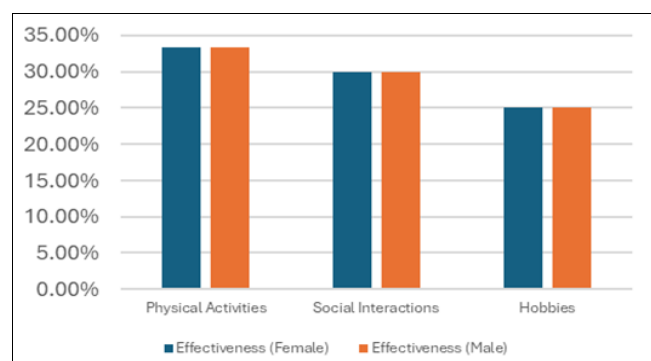


Fig 4.b

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4.2 Discussion

The findings of this study shed light on the mental health challenges faced by adolescents living with HIV in Chawama, Lusaka, and highlight significant gender disparities in the prevalence of these challenges. The high rates of persistent sadness, sleep disturbances, and thoughts of self-harm underscore the urgent psychological distress within this population. These findings align with global trends, which indicate that adolescents living with chronic illnesses like HIV are at a higher risk of mental health disorders. However, this study reveals that female adolescents experience higher levels of psychological distress compared to their male counterparts, with gender playing a crucial role in shaping mental health outcomes.

Prevalence of Mental Health Challenges The study found that sleep disturbances, affecting 90% of participants, were the most common mental health challenge, with females experiencing a higher prevalence (94.7%) than males (81.8%). These disruptions were closely tied to anxiety, fear of illness progression, societal rejection, and concerns about the future, particularly among females. Persistent sadness was another prevalent issue, affecting 60% of participants, with a higher proportion of females (66.7%) compared to males (54.5%). This emotional burden, particularly among females, was exacerbated by societal expectations and stigma, leading to increased feelings of hopelessness and distress. Thoughts of self-harm, experienced by 68% of participants, were more commonly reported by females (73.7%) than males (63.6%), highlighting the need for gender-sensitive mental health interventions.

Contributing Factors Stigma emerged as a crucial factor contributing to the mental health challenges faced by adolescents, affecting 70% of participants. It was more internalized among females, leading to feelings of shame, worthlessness, and increased risk for depressive symptoms and self-harm. Females also reported higher rates of verbal abuse and social exclusion, both within their communities and from healthcare providers. These findings echo research from other Sub-Saharan African countries, such as Kenya, where stigma has been shown to significantly impact the mental health of HIV-positive adolescents, particularly females.

Inadequate familial support also played a significant role in the mental health struggles of adolescents. Over half of the participants reported insufficient emotional or financial support, with female adolescents more likely to feel neglected by their families. This lack of support compounded feelings of isolation, particularly among females, who often relied on external support systems to cope with the psychological burden of living with HIV. Additionally, socio-economic challenges such as poverty, limited access to healthcare, and educational opportunities were also significant contributors to mental health difficulties, particularly for female adolescents.

Coping Mechanisms and Their Effectiveness The adolescents in the study demonstrated resilience by utilizing coping mechanisms such as physical activities, social interactions, and creative hobbies. Physical activities, reported by 67% of participants, were effective in improving mood and reducing stress. However, access to sports facilities and equipment was often limited, especially for females, who faced additional cultural and societal barriers. Social interactions, particularly peer support, were another important coping mechanism for 57% of participants, with

female adolescents reporting more reliance on these networks to mitigate the emotional toll of living with HIV. Creative hobbies, such as art and music, provided a therapeutic outlet for 47% of participants, particularly females, who used these activities to express their emotions. However, access to these hobbies was constrained by a lack of resources, including materials and suitable spaces.

The effectiveness of these coping mechanisms was limited by external barriers, including stigma, poverty, and limited access to resources. These factors prevented adolescents from fully utilizing the coping strategies that could alleviate their mental health struggles. While these mechanisms helped, they were insufficient to address the deeper, systemic issues that contributed to the adolescents' psychological distress.

Gender Differences in Coping and Mental Health Gender differences were evident in both the mental health challenges and coping strategies of the adolescents. Female adolescents were disproportionately affected by stigma, lack of familial support, and socio-economic challenges. These factors, combined with societal expectations and cultural constraints, made it more difficult for females to access effective coping mechanisms. Females were more likely to internalize stigma and experience greater emotional distress, while also facing more significant barriers to physical activity, peer support, and creative outlets. These findings emphasize the need for gender-sensitive mental health interventions that address the unique challenges faced by female adolescents living with HIV.

Addressing the Mental Health Needs of Adolescents The study highlights significant gaps in the mental health interventions available to adolescents living with HIV. While psychosocial counseling and community support groups exist, they are often not accessible or consistent enough to meet the needs of all adolescents, particularly females. There is a critical need for gender-sensitive mental health services that integrate both physical and psychological support for adolescents living with HIV. These services should be designed to address the specific challenges faced by both male and female adolescents, including stigma, inadequate family support, and socio-economic constraints.

Community-based initiatives to reduce stigma, strengthen family support systems, and improve access to mental health resources are essential. Interventions should also focus on creating safe spaces for recreation, socialization, and creative expression, particularly for females, who face additional barriers to accessing these opportunities. By embedding mental health services within HIV care programs and targeting gender-specific needs, a more comprehensive and effective approach to managing mental health challenges in adolescents living with HIV can be developed. While adolescents in Chawama, Lusaka, demonstrate resilience in the face of significant mental health challenges, external barriers such as stigma, inadequate support, and limited resources continue to impede their ability to effectively cope. A multi-faceted approach, integrating mental health support within HIV care programs and addressing the unique needs of both male and female adolescents, is crucial to improving their overall well-being and mental health outcomes.

4.3 Conclusion

This study underscores the significant mental health

challenges faced by adolescents living with HIV in Chawama, Lusaka, with particular emphasis on gender disparities. The findings reveal a concerning prevalence of psychological distress, including persistent sadness, sleep disturbances, and thoughts of self-harm, which are especially pronounced among female adolescents. These challenges are deeply rooted in a complex interplay of stigma, inadequate familial support, and socio-economic hardships, with gender-specific factors exacerbating the psychological burden on female adolescents.

Stigma emerged as the most critical factor influencing mental health, affecting both male and female adolescents. However, the internalization of stigma was more pronounced among female adolescents, leading to increased feelings of shame, worthlessness, and higher rates of depressive symptoms and self-harm ideation. This heightened impact of stigma on female adolescents highlights the need for gender-sensitive interventions that address the unique emotional and psychological challenges faced by females living with HIV.

Inadequate familial support further compounds the mental health challenges, with the study revealing significant gaps in both emotional and financial support. Female adolescents reported higher levels of neglect and dissatisfaction with family support, which exacerbated their psychological distress. Strengthening family systems through targeted interventions, including family counseling and caregiver education, is essential for improving adolescent well-being, particularly for females, who face unique emotional and social challenges during this developmental stage.

The socio-economic realities of living in a low-resource setting like Chawama significantly limit adolescents' ability to cope effectively with mental health challenges. Gender-based barriers to accessing resources and support systems further disadvantage female adolescents. Addressing these structural barriers requires policy-level interventions aimed at improving access to education, healthcare, and community resources, with a focus on reducing gender inequalities. These efforts must also focus on creating safe spaces, ensuring access to peer networks, and providing resources for creative expression, which are essential for fostering resilience in both male and female adolescents.

Despite these challenges, adolescents in the study demonstrated remarkable resilience through various coping mechanisms, such as physical activities, social interactions, and creative hobbies. However, these strategies were often hindered by external factors like societal expectations, stigma, and lack of resources. Female adolescents faced greater barriers in accessing safe spaces, social networks, and opportunities for creative expression, emphasizing the need for targeted investments in community infrastructure to promote both psychological well-being and physical health.

The current mental health interventions available to adolescents living with HIV are insufficient to meet their needs, particularly for female adolescents. This study calls for a more integrated, gender-sensitive approach to mental health care, one that embeds mental health services within HIV care programs to ensure comprehensive support. Family-based interventions, community engagement, and stigma-free service delivery should be central to these efforts. Moreover, reducing socio-economic barriers and improving access to resources will play a key role in enhancing the resilience of adolescents living with HIV.

In conclusion, the findings of this study call for urgent and

comprehensive action to improve the mental health outcomes of adolescents living with HIV in Zambia. Addressing stigma, strengthening familial support, alleviating socio-economic barriers, and promoting gender equity are critical steps toward creating an environment that supports the psychological resilience and emotional well-being of both male and female adolescents. This requires a collaborative effort involving policymakers, healthcare providers, community leaders, and families to design and implement sustainable, culturally sensitive, and gender-responsive interventions. By prioritizing mental health as an integral part of HIV care, we can ensure that adolescents living with HIV are not only surviving but thriving, equipped with the necessary tools and support to navigate the challenges they face.

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