Available online at *www.ujpronline.com*
Universal Journal of Pharmaceutical Research
An International Peer Reviewed Journal
ISSN: 2831-5235 (Print); 2456-8058 (Electronic)
Copyright©2025; The Author(s): This is an open-access article distributed under the terms of the CC BY-NC 4.0 which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited

REVIEW ARTICLE

FROM DIAGNOSIS TO ACCEPTANCE: MENTAL HEALTH TRAJECTORIES IN HIV-INFECTED PATIENTS

Emmanuel Ifeanyi Obeagu[1], Rihab Aref Alsadi[2]
[1]*Department of Biomedical and Laboratory Science, Africa University, Zimbabwe.*
[2]*Department of Pyschology, Al Istiqlal University, Jericho, Palestine.*

Article Info:

Article History:
Received: 7 February 2025
Reviewed: 10 March 2025
Accepted: 21 April 2025
Published: 15 May 2025

Cite this article:
Obeagu EI, Alsadi RA. From diagnosis to acceptance: Mental health trajectories in HIV-infected patients. Universal Journal of Pharmaceutical Research 2025; 10(2): 79-90.
http://doi.org/10.22270/ujpr.v10i2.1324

***Address for Correspondence:**
Dr. Emmanuel Ifeanyi Obeagu, Department of Biomedical and Laboratory Science, Africa University, Zimbabwe. Tel: +234 803 736 9912; E-mail: *emmanuelobeagu@yahoo.com*

Abstract

HIV infection has long been associated with significant psychological and emotional challenges. From the initial diagnosis to eventual acceptance of living with the virus, individuals often experience a range of mental health issues, including depression, anxiety, and stress. These mental health challenges not only affect the quality of life of those living with HIV but also have profound implications on disease progression, treatment adherence, and overall well-being. The psychological journey from diagnosis to acceptance is complex and deeply influenced by factors such as stigma, social support, and personal resilience. This review explores the mental health trajectories of HIV-infected individuals, from the emotional shock of diagnosis to the process of coming to terms with the virus. The initial response to diagnosis often includes a mixture of denial, fear, and grief, which can delay medical engagement and complicate treatment adherence. Over time, many individuals develop psychiatric comorbidities such as depression, anxiety, and substance use disorders, which further complicate their mental health journey. Social support systems and coping mechanisms play a significant role in mitigating these mental health challenges, while the process of acceptance fosters a sense of empowerment, improved psychological resilience, and better health outcomes.

Keywords: Diagnosis, HIV, mental health, psychological support.

INTRODUCTION

Human Immunodeficiency Virus (HIV) remains a significant global health challenge, despite remarkable advances in antiretroviral therapy (ART) that have transformed HIV from a fatal diagnosis to a manageable chronic condition[1-2]. However, the diagnosis of HIV often triggers a complex psychological journey, which significantly impacts the mental health and overall well-being of affected individuals[3-5]. The emotional distress associated with an HIV diagnosis, compounded by the social stigma and the potential for discrimination, leads many individuals to experience profound mental health challenges[6-8]. These challenges, which can include anxiety, depression, substance abuse, and even suicidal ideation, form a critical component of HIV care and need to be addressed alongside physical treatment[9-10]. The trajectory from diagnosis to acceptance is not linear and varies from person to person, influenced by a range of psychological, social, and environmental factors. For many individuals, the initial reaction to an HIV diagnosis is marked by shock, disbelief, and fear. This emotional response often reflects concerns about the disease's impact on their lives, the fear of social rejection, and the uncertainty about their future. As individuals process the diagnosis, many experience significant emotional and psychological distress, which can impede their ability to engage in care and treatment effectively[11-16]. Over time, many individuals with HIV may experience the development of psychiatric conditions, including depression and anxiety. These mental health disorders often emerge due to the combination of the physical and psychological challenges posed by HIV, including the ongoing need for medication adherence, the fear of disease progression, and concerns about societal judgment. The prevalence of depression, for instance, is disproportionately high among HIV-infected individuals; with research indicating that up to 50% of individuals with HIV may experience depressive symptoms at some point in their lives. Moreover, individuals facing substance use disorders or other comorbidities are at greater risk for worsening mental health and poorer clinical outcomes[17,18].

The social determinants of health, including access to healthcare, financial resources, and support networks, play a significant role in shaping the mental health

trajectory of people living with HIV. Stigma and discrimination remain significant barriers to mental well-being, often causing individuals to feel isolated, ashamed, or fearful of being open about their diagnosis. For many individuals, the fear of being ostracized by family, friends, or society leads to reluctance to seek help, both for their mental health and their physical health. Social support, on the other hand, has been shown to be a protective factor, providing emotional reassurance, practical assistance, and a sense of belonging, all of which positively influence the psychological outcomes of individuals with HIV[19-22]. Coping mechanisms also play a critical role in the psychological journey of individuals with HIV. The way an individual responds to the stressors associated with living with the virus can either mitigate or exacerbate mental health challenges. Active coping strategies such as seeking professional mental health support, engaging in physical activities, and maintaining a strong social network have been shown to improve mental health outcomes. In contrast, avoidant coping strategies, including substance abuse or disengagement from treatment, can worsen both physical and mental health[23-26]. The process of accepting HIV as part of one's identity is a key factor in mental health adaptation. Acceptance involves recognizing HIV as a long-term, manageable condition and acknowledging the importance of adherence to treatment to maintain health. This process of acceptance is not immediate and may take years, involving stages of emotional adjustment, including grief, anger, denial, and eventually, greater resilience and self-efficacy. Acceptance has been linked to improved psychological well-being and increased ART adherence, which ultimately contributes to better health outcomes. The ability to accept one's diagnosis and engage actively with treatment is crucial to the success of both physical and mental health care[27-32]. Psychological interventions play a vital role in supporting individuals as they navigate the mental health challenges associated with HIV. Cognitive-behavioral therapy (CBT), mindfulness-based interventions, and support groups have all shown promise in improving the psychological well-being of individuals living with HIV. These interventions help individuals to better manage their emotions, cope with stress, and develop adaptive strategies for handling their diagnosis and treatment. Furthermore, addressing mental health as part of HIV care helps reduce barriers to treatment adherence, improve quality of life, and promote long-term health outcomes[33-35].

The aim of this review is to explore and highlight the psychological and emotional trajectories of individuals living with HIV, focusing on the mental health challenges they face from diagnosis to acceptance.

Psychological Impact at Diagnosis

The psychological impact of an HIV diagnosis is profound, often resulting in an emotional response that can significantly alter the individual's perception of health, life, and future. When individuals first learn that they are HIV-positive, they may experience an overwhelming sense of shock, disbelief, and fear. This initial reaction can be described as a psychological trauma, where the individual feels blindsided by the news. For many, it is difficult to imagine how HIV will impact their life moving forward, both physically and socially. There may be an emotional disconnect between the person's understanding of the virus and the reality of living with it. The uncertainty about the future can create feelings of helplessness, leading to an immediate psychological burden that complicates their ability to process the diagnosis effectively[36-37]. Denial is often one of the first coping mechanisms employed by individuals upon receiving an HIV diagnosis. Denial serves as a defense mechanism that temporarily shields the individual from the harsh reality of their condition. In some cases, the denial phase can be short-lived, lasting only a few hours or days. However, for others, denial may persist for much longer, potentially delaying engagement with medical care and treatment. This prolonged denial can hinder the individual's ability to seek necessary medical interventions, exacerbating both mental and physical health outcomes. Moreover, the fear of being judged or rejected by family, friends, and society may compound the emotional burden of denial. Individuals may withdraw socially, hide their diagnosis, or even avoid seeking proper healthcare out of fear of stigma and discrimination[38-39]. Another common psychological response to an HIV diagnosis is anxiety. Many individuals experience heightened anxiety, which can manifest in various forms, including generalized worry, panic attacks, and obsessive thoughts about health and mortality. The uncertainty regarding one's lifespan and the potential for disease progression can be overwhelming. This anxiety is often linked to fears of stigmatization, discrimination, and social rejection, as well as the anxiety surrounding the implications of HIV on one's relationships and career. For some individuals, the anxiety associated with an HIV diagnosis may also be compounded by pre-existing mental health conditions, such as generalized anxiety disorder or a history of trauma. As a result, individuals may struggle to differentiate between their fears about HIV and those rooted in other aspects of their life[40-41]. Grief is another significant psychological reaction that commonly occurs following an HIV diagnosis. Many individuals mourn the loss of their pre-diagnosis life, their health, and the sense of security they once had. This grief can be particularly intense for those who have grown up in an era where HIV was perceived as a terminal disease. The psychological grief experienced can mirror the stages of mourning observed in other forms of loss, such as the death of a loved one. The process may involve denial, anger, bargaining, depression, and eventually, acceptance. The mourning of a former self, combined with the emotional burden of adjusting to the demands of living with a chronic condition, can lead to significant psychological distress and feelings of isolation[42]. For some, the emotional shock of an HIV diagnosis may lead to a sense of guilt and self-blame. Individuals may wrestle with feelings of shame, wondering how they contracted the virus and whether their actions contributed to their condition. This self-blame is often linked to the societal stigma surrounding HIV, where individuals are taught to

associate the virus with certain behaviors such as drug use or promiscuity. The societal judgment of HIV-positive individuals further exacerbates feelings of guilt and shame, potentially increasing the internalized stigma that individuals feel about their condition. The experience of guilt can also hinder the process of coming to terms with the diagnosis, as the individual may become trapped in negative self-talk and self-punishment[43-44]. In addition to emotional responses, the psychological impact of HIV diagnosis can affect an individual's cognitive functioning. Cognitive processes such as concentration, memory, and decision-making can be impaired due to the mental distress caused by the diagnosis. Individuals may find it difficult to focus on treatment plans, appointments, or medical advice, which can negatively affect their ability to manage their health. These cognitive disruptions can be particularly troubling during the early stages of diagnosis when treatment adherence is crucial for preventing disease progression. Moreover, the mental fatigue experienced during this period can contribute to a sense of hopelessness, further impeding the individual's ability to engage with the necessary steps of managing their health[45]. The impact of an HIV diagnosis extends beyond the individual, affecting the larger social and familial context. In many cases, family members and partners may also experience a psychological response to the diagnosis, ranging from disbelief and confusion to fear and anger. Couples or families may struggle with how to best support the diagnosed individual, often without understanding the full scope of the emotional and psychological burden involved. This can create tension within relationships, especially if there is a lack of communication or understanding about the mental health implications of the diagnosis. In some instances, individuals may find it difficult to disclose their diagnosis to loved ones due to the fear of being ostracized or misunderstood, further contributing to feelings of isolation[46].

Psychiatric comorbidities and their impact in HIV-infected individuals

Psychiatric comorbidities are a significant concern for individuals living with HIV, with depression, anxiety, substance use disorders, and cognitive impairments being the most commonly observed conditions. These psychiatric conditions can emerge in the early stages of HIV diagnosis and often persist throughout the course of the disease, complicating both mental health and physical health management. The bidirectional relationship between HIV and psychiatric disorders significantly impacts the quality of life, treatment adherence, and overall disease progression, underscoring the importance of addressing both aspects of health in a comprehensive care model[47-50].

Depression and anxiety in HIV-infected individuals

Among the psychiatric comorbidities, depression is the most prevalent, with studies indicating that between 30% to 60% of individuals with HIV experience depressive symptoms at some point. Depression in HIV-positive individuals can be both a result of the physiological changes brought about by the virus itself and a psychological response to the stressors associated with living with HIV. Chronic illness, uncertainty about the future, and the emotional toll of stigma and discrimination often exacerbate depressive symptoms. Depression is closely linked to poor adherence to antiretroviral therapy (ART), increased risk of HIV-related complications, and even premature mortality. Additionally, depression can amplify feelings of hopelessness, exacerbating the social isolation that many individuals experience after diagnosis. Anxiety is also a common comorbidity, often linked to fears of disease progression, mortality, and the stigma surrounding HIV. HIV-positive individuals may experience generalized anxiety, panic attacks, or specific fears related to their health, such as the fear of transmission to others or the side effects of treatment. The chronic nature of HIV, with its regular medical visits and lifelong treatment, can provoke continuous stress and worry. Anxiety disorders can also contribute to poor health outcomes by interfering with daily functioning, reducing the individual's ability to engage in treatment or care, and further isolating them from support systems[51-53].

Substance use disorders

Substance use disorders, particularly alcohol and illicit drug use, are prevalent in individuals with HIV, compounding the difficulties of managing both psychiatric and physical health. Substance abuse in HIV-positive individuals is often seen as a coping mechanism to deal with the emotional and psychological burdens associated with the disease, including stigma, social rejection, and the psychological impact of diagnosis. Substance use can also impair cognitive functioning, which may further complicate the management of ART and medical appointments. Furthermore, substance use increases the risk of unsafe sexual practices and other high-risk behaviors, contributing to the transmission of HIV and the acquisition of co-infections. The coexistence of substance use disorders with HIV can complicate treatment adherence, leading to poorer clinical outcomes and a greater burden on healthcare systems. The presence of substance use disorder can also exacerbate mental health challenges. For example, individuals with substance use problems may experience heightened anxiety and depression, as the substances themselves can alter brain chemistry in ways that mimic or exacerbate these conditions. The cycle of addiction and mental health distress can make it even more difficult for individuals to adhere to treatment regimens, engage in effective psychological support, or maintain healthy lifestyles. Treatment for substance use disorders in HIV-positive individuals often requires a multifaceted approach that addresses both the psychological components of addiction and the medical aspects of HIV care[54-56].

Cognitive Impairment and HIV-Associated Neurocognitive Disorders (HAND)

Cognitive impairment is another important psychiatric comorbidity in HIV-infected individuals. HIV-associated neurocognitive disorders (HAND) encompass a spectrum of cognitive impairments, ranging from mild cognitive dysfunction to more severe forms of dementia. HAND is thought to be the result of the direct effects of the HIV virus on the

brain, which leads to inflammation, neuronal damage, and disruption of neural networks. HAND can affect memory, attention, executive function, and motor skills, which in turn can compromise an individual's ability to work, maintain social relationships, or engage in self-care. The presence of HAND significantly impacts the individual's quality of life, as cognitive decline can be debilitating, leading to difficulties in daily functioning and reducing the capacity for treatment adherence. Moreover, cognitive impairments may result in emotional distress, further exacerbating psychiatric comorbidities such as depression and anxiety. The management of HAND requires a holistic approach, including antiretroviral therapy, cognitive rehabilitation, and mental health support to mitigate the effects of cognitive decline and enhance quality of life[57-60].

Impact of psychiatric comorbidities on HIV care and outcomes

The presence of psychiatric comorbidities in individuals with HIV significantly impacts their ability to adhere to ART, attend regular medical appointments, and engage in the necessary self-care behaviors to manage their condition. Depression, anxiety, and substance use disorders have all been linked to poor ART adherence, which increases the risk of viral resistance, disease progression, and hospitalization. For example, individuals suffering from depression may lack the motivation or energy to take their medications consistently, while those with substance use disorders may neglect medical care or be distracted by the need to obtain drugs. This non-adherence not only accelerates the physical deterioration associated with HIV but also increases the risk of transmitting the virus to others. Moreover, psychiatric disorders can contribute to poorer health outcomes through their impact on immune function. Chronic stress and depression can lead to dysregulation of the immune system, exacerbating inflammation and increasing the susceptibility to opportunistic infections. The cumulative effect of untreated psychiatric disorders and unmanaged HIV can lead to poorer prognosis, decreased quality of life, and, ultimately, higher mortality rates. Thus, addressing psychiatric comorbidities is critical to optimizing HIV care and improving long-term health outcomes for individuals living with the virus[61-64].

The importance of integrated mental health care in HIV treatment

Given the substantial impact of psychiatric comorbidities on both mental and physical health, it is imperative that integrated care models are employed in the treatment of HIV. These models involve the collaboration of mental health professionals, including psychologists, psychiatrists, and social workers, alongside primary HIV care providers. Integrated care ensures that both the psychological and medical needs of HIV-positive individuals are addressed in tandem, reducing the burden of untreated psychiatric disorders and promoting adherence to ART. Screening for psychiatric conditions should be a routine part of HIV care, with appropriate referrals for mental health support offered at every stage of the disease. Cognitive-behavioral therapy (CBT), psychoeducation, and mindfulness-based approaches have been shown to improve the mental health of individuals with HIV, reducing the impact of psychiatric disorders on disease management. Furthermore, early intervention and support can prevent the development of more severe psychiatric conditions, thereby improving overall outcomes[65-69].

Social support and coping mechanisms in HIV-infected individuals

Social support and effective coping mechanisms play a pivotal role in the mental and emotional well-being of individuals living with HIV. Given the chronic nature of HIV and its associated stigma, people with the virus often face unique psychological challenges that can affect their mental health and quality of life. Social support, which includes emotional, informational, and tangible assistance from family, friends, healthcare providers, and support groups, is a key factor that helps individuals navigate the difficulties of living with HIV. In parallel, coping mechanisms, which are the strategies people use to manage stress, anxiety, and uncertainty, significantly influence the psychological impact of the disease and the individual's ability to adhere to treatment and maintain well-being[70-74].

The role of social support

Social support serves as a critical buffer against the psychological burden of HIV. It provides individuals with the emotional reassurance needed to cope with feelings of isolation, fear, and uncertainty. The presence of supportive family members, friends, and significant others can promote a sense of belonging and help individuals feel less alone in their HIV journey. Studies consistently show that individuals with strong social networks experience lower levels of depression, anxiety, and stress compared to those with limited social support. These positive effects are attributed to the emotional comfort provided by loved ones, who can offer encouragement, validation, and a sense of safety, thereby mitigating the stigma and discrimination often associated with HIV. Support groups, both in-person and online, are also invaluable for HIV-positive individuals. They provide a space where individuals can share experiences, receive emotional support, and gain practical advice from others who are undergoing similar challenges. The exchange of coping strategies and the sense of solidarity within these groups can help individuals feel empowered and better equipped to deal with the stresses of living with HIV. Moreover, support groups often help reduce feelings of social isolation, which are particularly prevalent in individuals newly diagnosed with HIV, or those experiencing mental health difficulties related to their status. Through shared experiences, individuals can build resilience, learn from each other, and adopt strategies that help improve their psychological and physical health outcomes[75-79].

Coping mechanisms and their effectiveness

Coping mechanisms are the strategies individuals employ to manage stressors and adapt to the challenges of living with HIV. These mechanisms can either be adaptive or maladaptive, influencing how individuals adjust to the emotional, physical, and social impact of

the virus. Adaptive coping strategies, such as seeking support, engaging in mindfulness, practicing relaxation techniques, and maintaining a positive outlook, are associated with better mental health outcomes and improved treatment adherence. These strategies help individuals process difficult emotions, reduce stress, and maintain a sense of control over their lives, all of which are crucial for managing a chronic illness like HIV. For example, mindfulness practices, such as meditation and deep breathing exercises, are increasingly recognized for their role in reducing anxiety and depression in individuals with HIV. By helping individuals focus on the present moment, mindfulness techniques reduce rumination about the future or past, which can exacerbate stress and anxiety related to living with HIV. Additionally, seeking professional counseling or therapy can assist individuals in developing healthier coping mechanisms. Cognitive-behavioral therapy (CBT) and other therapeutic modalities are effective in helping individuals manage negative thoughts and emotions, promoting better coping strategies for living with the virus. On the other hand, maladaptive coping mechanisms, such as denial, substance abuse, or withdrawal, can worsen the psychological burden of HIV and hinder disease management. Denial, for instance, can delay individuals from seeking medical treatment or adhering to their antiretroviral therapy (ART), which may increase the risk of disease progression. Substance use, often employed as a way to cope with emotional pain, can further disrupt an individual's physical and mental health, making it difficult to engage in productive coping strategies. Withdrawal from social support systems or avoidance behaviors can isolate individuals from much-needed emotional support, exacerbating feelings of loneliness and hopelessness. These maladaptive strategies often create a vicious cycle that leads to worsening mental health and poorer HIV outcomes[80-84].

The importance of culturally sensitive support

It is essential that social support and coping mechanisms are tailored to the individual's cultural and personal context. Cultural beliefs, values, and experiences significantly influence how individuals with HIV perceive their diagnosis and engage with support systems. For example, in some cultures, there may be a strong stigma attached to HIV, making it difficult for individuals to seek help or disclose their status to family and friends. In such cases, providing culturally sensitive support, which acknowledges and respects cultural attitudes and practices, can foster trust and enhance the effectiveness of interventions. Healthcare providers should be trained to recognize the unique cultural factors that influence coping and social support in HIV-positive individuals, offering individualized care that respects these cultural differences. Culturally sensitive support also extends to recognizing the diverse experiences of individuals in different demographic groups. HIV-positive individuals from marginalized or underserved communities, such as ethnic minorities, LGBTQ+ individuals, or women, may face additional layers of stigma and discrimination. Support interventions must therefore consider the intersectionality of race, gender, sexual orientation, and socioeconomic status, ensuring that the coping strategies offered are inclusive and meet the specific needs of these groups[85-88].

Social support and treatment adherence

The impact of social support extends beyond psychological well-being to influence the practical aspects of living with HIV, such as adherence to ART. Adherence to ART is critical for suppressing the HIV virus and preventing the progression of the disease. Social support can encourage individuals to consistently follow their treatment regimens by offering reminders, motivation, and emotional reassurance. Family members, friends, and healthcare providers who are supportive of treatment adherence help reduce the burden of managing a lifelong therapy regimen, making it easier for individuals to stay committed to their health goals. Supportive relationships can also help individuals navigate challenges related to side effects, treatment fatigue, or the emotional stress of long-term care. The integration of social support into HIV care models has been shown to improve ART adherence and overall health outcomes. For instance, peer support networks and case management services can provide individuals with the necessary resources and encouragement to adhere to treatment protocols. Healthcare providers who foster open, supportive relationships with their patients create an environment where individuals feel empowered to disclose concerns about treatment, ask questions, and receive guidance, which further strengthens adherence[89-93].

The role of acceptance in mental health trajectories in HIV-infected individuals

Acceptance plays a critical role in shaping the mental health trajectory of individuals living with HIV. The process of accepting an HIV diagnosis is often fraught with complex emotional responses, such as shock, fear, grief, and uncertainty about the future. However, achieving a sense of acceptance can lead to positive psychological adjustments, fostering resilience and emotional well-being. Acceptance is not about resignation to one's condition but rather about recognizing and coming to terms with the realities of living with HIV, allowing individuals to take proactive steps toward their care, mental health, and overall quality of life. This shift in mindset can greatly influence an individual's ability to manage the ongoing challenges that come with the disease[94-95].

Acceptance and psychological adjustment

Psychological adjustment to HIV involves various stages, and acceptance is often seen as a key milestone in this process. Initially, many individuals with HIV experience denial or avoidance, which can prevent them from seeking medical care or fully adhering to antiretroviral therapy (ART). Over time, however, as individuals come to terms with their diagnosis, they may begin to accept their HIV status, which can lead to improved psychological outcomes. Acceptance allows individuals to better cope with the uncertainty and stigma associated with HIV, shifting their focus from fear of the disease to managing it effectively. This acceptance, in turn, helps individuals experience

reduced feelings of helplessness, anxiety, and depression, and facilitates the development of healthier coping strategies. Studies have shown that individuals who accept their HIV diagnosis are more likely to engage in treatment adherence and adopt positive health behaviors. Acceptance leads to greater self-efficacy and empowerment, as individuals feel more in control of their lives and health outcomes. When individuals accept their condition, they are also more likely to seek out social support and engage in community-based resources, which further strengthen their psychological resilience and coping abilities. The act of accepting one's HIV status also mitigates the mental burden of the disease, offering individuals the emotional clarity needed to make informed decisions about their health and well-being[96-98].

The role of acceptance in reducing stigma

A major psychological challenge for individuals living with HIV is the stigma associated with the disease. HIV-related stigma can manifest in various forms, including self-stigma, social discrimination, and internalized shame. Acceptance can play a pivotal role in alleviating these feelings of stigma, as individuals who accept their HIV status are less likely to internalize the shame and fear often associated with the disease. This, in turn, reduces the emotional and psychological strain caused by HIV-related stigma. The process of acceptance involves a shift in how individuals view themselves and their illness. It is associated with increased self-compassion, which can help counteract the damaging effects of self-stigma. When individuals no longer view HIV as a mark of personal failure or as a source of shame, they are more likely to embrace their status and seek social support and medical care. Acceptance also promotes healthier attitudes toward others living with HIV, fostering a more supportive environment in both personal and social spheres. This broader acceptance of both oneself and others living with HIV can significantly improve mental health outcomes by reducing the isolation and social alienation that often accompany the disease.[98]

Acceptance and coping strategies

The role of acceptance extends to the development and utilization of effective coping strategies. When individuals accept their HIV status, they are more likely to engage in adaptive coping mechanisms, such as seeking emotional support, practicing self-care, and adhering to medical treatment plans. Acceptance encourages individuals to confront the realities of their condition and take proactive steps to improve their health, whether through lifestyle changes, attending therapy, or joining support groups. In contrast, individuals who resist accepting their diagnosis may struggle to engage in these behaviors, which can hinder both their mental and physical health. Acceptance also allows individuals to engage in emotional processing, which is a key component of effective coping. Rather than suppressing difficult emotions, individuals who accept their HIV status are more likely to acknowledge and process their feelings, whether it be grief, anxiety, or fear of the future. This emotional acceptance facilitates emotional regulation, which is crucial for managing the mental health challenges associated with chronic illness. The ability to experience and process emotions in a healthy way supports overall mental health and well-being, enhancing resilience and the capacity to cope with stressors related to HIV[95].

The importance of family and community support in the acceptance process

Family and community support play a critical role in helping individuals reach a place of acceptance. Social support not only provides emotional reassurance but also serves as an important resource for individuals in navigating the complexities of living with HIV. Supportive family members and friends who foster an open and nonjudgmental environment can help individuals feel more comfortable with accepting their HIV status. Community-based HIV support groups, where individuals share similar experiences, also play an essential role in promoting acceptance by reducing feelings of isolation and shame. These groups provide a space for individuals to discuss their emotional journeys, exchange coping strategies, and build resilience. Furthermore, healthcare providers are instrumental in guiding individuals through the process of acceptance. Providers who adopt a compassionate, nonjudgmental, and empathetic approach to care can help patients feel understood and supported, facilitating a smoother transition from diagnosis to acceptance. Healthcare professionals who provide clear, accurate, and empowering information about HIV treatment options can also bolster acceptance by giving individuals a sense of control over their health outcomes. This type of professional support can significantly enhance the acceptance process, leading to improved mental health and better overall outcomes for individuals living with HIV[96].

Psychological interventions and support for HIV-infected individuals

Psychological interventions and support are crucial components in the overall care of HIV-infected individuals, as mental health challenges are a common aspect of living with the virus. The impact of HIV on mental health, from the initial diagnosis to the ongoing management of the disease, can be profound. Effective psychological support helps mitigate feelings of anxiety, depression, and social isolation, while also addressing issues related to stigma, coping strategies, and quality of life. The integration of psychological care into the treatment plan of individuals with HIV can significantly improve their mental health, treatment adherence, and long-term well-being.

Cognitive Behavioral Therapy (CBT)

Cognitive Behavioral Therapy (CBT) is one of the most widely used psychological interventions for individuals living with HIV. CBT focuses on identifying and modifying negative thought patterns, emotions, and behaviors that can contribute to psychological distress. In HIV-infected individuals, CBT is particularly effective in addressing common issues such as anxiety, depression, and fear of the future, which can arise due to the chronic nature of the disease and the associated stigma. By helping individuals reframe negative thoughts about their health, diagnosis, and self-worth, CBT can improve coping strategies, enhance self-efficacy, and reduce the

psychological burden of living with HIV. Additionally, CBT can improve medication adherence, as individuals who adopt more positive coping mechanisms are better equipped to manage the stressors related to their condition. In clinical settings, CBT is often delivered in individual or group formats, providing patients with personalized or shared experiences of support. Group CBT has shown to be particularly beneficial, as it not only helps individuals address their psychological challenges but also fosters a sense of community. This group dynamic can reduce feelings of isolation and allow individuals to learn from others who share similar experiences. The collaborative nature of CBT enhances social support, an essential factor in coping with chronic illness[99-100].

Mindfulness-Based Stress Reduction (MBSR)

Mindfulness-Based Stress Reduction (MBSR) is another effective psychological intervention for HIV-infected individuals. MBSR focuses on cultivating mindfulness through meditation, breathing exercises, and body awareness, which helps individuals become more present and aware of their thoughts, emotions, and physical sensations. This practice promotes emotional regulation and reduces psychological distress by teaching individuals to accept their feelings without judgment. For people living with HIV, MBSR can be particularly useful in managing chronic stress, anxiety, and depression, all of which can be exacerbated by the constant uncertainty of living with a lifelong condition. Research has shown that MBSR can improve both mental health and physical health outcomes in HIV patients. Regular mindfulness practice can enhance immune function, reduce inflammation, and lower blood pressure, which are critical for individuals living with HIV. Furthermore, by cultivating a more compassionate and non-judgmental attitude toward their condition, individuals may be more likely to accept their diagnosis, seek medical care, and adhere to antiretroviral therapy (ART). Mindfulness also helps in managing the emotional toll of stigma and fear of disclosure, as it encourages individuals to be present with their feelings and acknowledge their experiences without self-criticism[101-103].

Support groups and peer counseling

Support groups and peer counseling are invaluable sources of psychological support for HIV-infected individuals. Peer support groups provide a safe space where individuals living with HIV can share their experiences, discuss challenges, and offer encouragement to one another. These groups help reduce feelings of isolation and stigma by fostering a sense of community and mutual understanding. For many individuals, connecting with others who have faced similar challenges can provide a sense of validation and normalcy, significantly reducing mental health symptoms like anxiety and depression. Peer counseling, where individuals with lived experience of HIV support others in navigating their emotional and psychological struggles, can also be highly effective. Trained peer counselors can help individuals explore coping strategies, enhance self-efficacy, and provide emotional support. Peer counseling can also help reduce internalized stigma by creating an environment in which individuals feel comfortable disclosing their HIV status without fear of judgment. This process not only supports emotional health but also promotes better engagement with treatment and care services, as individuals are more likely to seek help when they feel supported and understood[104-105].

Psychosocial support and family therapy

Psychosocial support extends beyond the individual to include family members and loved ones. Family therapy and interventions aimed at enhancing the understanding and involvement of close relatives can be beneficial in managing the mental health of HIV-infected individuals. Often, family members struggle with their own feelings of fear, guilt, and grief in relation to a loved one's diagnosis. By addressing these emotions through family counseling, individuals and their families can build better communication and coping mechanisms. Strengthening family support can reduce the psychological burden on the HIV-infected person and create a more positive environment for both the patient and their caregivers. Family therapy also plays a role in addressing the stigma associated with HIV. In many communities, HIV is still associated with discrimination, judgment, and shame. Family members may internalize these societal attitudes, which can perpetuate negative emotions and attitudes toward the individual with HIV. Family therapy helps to challenge these stigmatizing beliefs, fostering greater empathy and understanding. When family members are educated about HIV and its emotional impact, they can better support the patient in managing the psychological challenges of living with the disease[106-107].

Pharmacological interventions for co-occurring mental health disorders

In cases where individuals with HIV experience significant mental health issues, such as major depressive disorder or anxiety disorders, pharmacological interventions may be necessary. Antidepressant and anti-anxiety medications can help alleviate symptoms of depression and anxiety, which are common in individuals with HIV. Medications such as selective serotonin reuptake inhibitors (SSRIs) or serotonin-norepinephrine reuptake inhibitors (SNRIs) may be prescribed to address mood disturbances. These medications can be used in conjunction with psychotherapy to provide comprehensive mental health care. It is important, however, for healthcare providers to carefully consider the potential interactions between antiretroviral therapy (ART) and psychiatric medications. Some ART drugs can interact with antidepressants or other psychiatric medications, which may affect the efficacy or increase the side effects of either medication. Regular monitoring and individualized treatment plans are crucial to ensure that both HIV and co-occurring mental health disorders are effectively managed[108-109].

Integration of Psychological Support into HIV Care

The integration of psychological support into routine HIV care is critical to the holistic treatment of individuals living with HIV. Many HIV care settings have adopted a multidisciplinary approach, where

psychologists, social workers, and mental health professionals work alongside primary care providers to ensure comprehensive care. By addressing the mental health needs of HIV-infected individuals, healthcare providers can enhance the overall treatment experience, improve patient outcomes, and reduce the emotional distress associated with living with a chronic illness. Integrated care models that combine physical and mental health services provide patients with a more seamless experience and increase access to psychological support. These models have been shown to improve patient satisfaction, reduce hospital admissions, and enhance treatment adherence. Additionally, by normalizing the mental health care aspect of HIV treatment, individuals may be more willing to seek help and engage in therapeutic interventions. This comprehensive approach is essential for supporting both the physical and psychological well-being of individuals living with HIV[110,111].

CONCLUSIONS

The mental health trajectories of individuals living with HIV are shaped by a complex interplay of psychological, social, and medical factors. From the moment of diagnosis through the course of treatment, individuals often face significant psychological challenges, including anxiety, depression, and stigma, which can profoundly impact their quality of life. As such, mental health care must be considered a fundamental component of HIV management. Psychological interventions such as Cognitive Behavioral Therapy (CBT), mindfulness practices, and peer support have proven to be effective tools in alleviating the psychological burden of living with HIV and enhancing coping mechanisms. Additionally, addressing psychiatric comorbidities through pharmacological and therapeutic approaches, along with providing strong social support systems, can help individuals navigate the emotional and psychological challenges associated with the disease. Importantly, the acceptance of an HIV diagnosis is a pivotal stage in the mental health trajectory, and interventions that foster this acceptance can significantly improve long-term psychological outcomes. When patients feel empowered to manage their mental health, engage in treatment, and seek social support, they are more likely to experience better clinical outcomes, including higher adherence to antiretroviral therapy (ART). The role of integrated care that combines physical, psychological, and social support is indispensable in providing comprehensive, holistic care to people living with HIV.

ACKNOWLEDGEMENTS

The author would like to thank Africa University, Zimbabwe to provide necessary facilities for this work.

AUTHOR'S CONTRIBUTION

Obeagu EI: conceived the idea, writing the manuscript, literature survey. **Alsadi RA:** formal analysis, critical review. Final manuscript was checked and approved by both authors.

DATA AVAILABILITY

Data will be made available on request.

CONFLICT OF INTEREST

There are no conflicts of interest in regard to this project.

REFERENCES

1. Suleman M, Khan SU, Hussain T, *et al*. Cardiovascular challenges in the era of antiretroviral therapy for AIDS/HIV: A comprehensive review of research advancements, pathophysiological insights, and future directions. Curr Prob Cardio 2024; 49(3):102353. *https://doi.org/10.1016/j.cpcardiol.2023.102353*
2. World Health Organization. The advanced HIV disease research landscape. WHO 2024.
3. Obeagu EI, Obeagu GU. Mental Health and Psychosocial Effects of natural disaster on HIV Patients. Sci 2024; 4(1):38-44. *http://dx.doi.org/10.22270/ajdhs.v4i1.63*
4. Adraro W, Abeshu G, Abamecha F. Physical and psychological impact of HIV/AIDS toward youths in Southwest Ethiopia: A phenomenological study. BMC Pub Health 2024; 24(1):2963. *https://doi.org/10.1186/s12889-024-20478-w*
5. Catalan J, Ridge D, Hedge B, *et al*. Changing and unfinished narratives of the mental health impact of HIV in the UK. SSM-Quali Res Health 2024; 5:100386. *https://doi.org/10.1016/j.ssmqr.2023.100386*
6. Obeagu EI, OguRIO NA. Psychosocial Impact of Aplastic Anemia Diagnosis in HIV Patients: A Narrative Review. Eli J Pub Heal 2024; 2(7):35-46.
7. Adraro W, Abeshu G, Abamecha F. Physical and psychological impact of HIV/AIDS toward youths in Southwest Ethiopia: a phenomenological study. BMC Pub Health 2024; 24(1):2963. *https://doi.org/10.1186/s12889-024-20478-w*
8. Nguyen VH, Tran TN, Vu TT, *et al*. The interplay of psychological distress, stigma, and social support in determining quality of life among Vietnamese people living with HIV. Dis Ment Health 2025; 5(1):1-1. *https://doi.org/10.1007/s44192-025-00171-z*
9. Obeagu EI, Obeagu GU. Preventive measures against HIV among Uganda's youth: Strategies, implementation, and effectiveness. Med (Balti) 2024; 103(44):e40317. *https://doi.org/10.1097/MD.0000000000040317*
10. Obeagu EI, Obeagu GU, Ukibe NR, *et al*. Anemia, iron, and HIV: decoding the interconnected pathways: A review. Med (Balti) 2024; 103(2):e36937. *https://doi.org/10.1097/MD.0000000000036937*
11. Silalahi M, Fitriani N. Psychological Responses and Coping Mechanisms of Gay Men in Adapting HIV/AIDS: A Qualitative Study. Indo Cont Nurs J (ICON J) 2024; 8(2):101-11. *https://doi.org/10.20956/icon.v8i2.32679*
12. Fradianto I, Rahmawati N, Rahmah GN. Emotional responses, status disclosure, stigma, and hope among people living with HIV: A phenomenological study. Health L-res Sett 2025. *https://doi.org/10.4081/hls.2025.13355*
13. Zhou Y, Zhang X, Meng J, *et al*. No Medication Means No HIV Diagnosis: A qualitative study based on dual-system theory on HIV antiretroviral therapy initiation decision-making. Nurs Health Sci 2024; 26(4):e13169.
14. Healey LM, Markham SR, Templeton DJ, *et al*. Stigma, support, and messaging for people recently diagnosed with

HIV: a qualitative study. Sex Health 2024; 21(6). *https://doi.org/10.1071/SH24045*
15. Obeagu EI, Obeagu GU. Protecting maternal health: Strategies against HIV and malaria in pregnancy. Med (Balti) 2024; 103(36):e39565. *https://doi.org/10.1097/MD.0000000000039565*
16. Obeagu EI. Influence of cytokines on the recovery trajectory of HIV patients on antiretroviral therapy: A review. Med (Balti) 2025; 104(1):e41222. *https://doi.org/10.1097/MD.0000000000041222*
17. Ji J, Zhang Y, Ma Y, *et al*. People who living with HIV/AIDS also have a high prevalence of anxiety disorders: A systematic review and meta-analysis. Fron Psyc 2024; 15:1259290. *https://doi.org/10.3389/fpsyt.2024.1259290*
18. Dave P. The Correlation between Stigma and Mental Health Disorders in People Living with HIV/AIDS. J Drug Deliv Therap 2024; 14(3). *https://doi.org/10.22270/jddt.v14i3.6490*
19. Hu FH, Liu P, Jia YJ, *et al*. Prevalence of mental health problems in people living with HIV: A systematic review and meta-analysis. Psyc Health Med 2025; 30(3):397-413. *https://doi.org/10.1080/13548506.2024.2424998*
20. O'Grady T, Inman N, Younger A, *et al*. The characteristics and HIV-related outcomes of people living with co-occurring HIV and mental health conditions in the United States: a systematic review of literature from 2016 to 2021. AIDS Behav 2024; 28(1):201-224. *https://doi.org/10.1007/s10461-023-04150-9*
21. Zimmer D, Staab EM, Ridgway JP, *et al*. Population-level portal-based anxiety and depression screening perspectives in HIV care clinicians: Qualitative study using the consolidated framework for implementation research. JMIR Form Res 2024; 8(1):e48935. *https://doi.org/10.2196/48935*
22. Obeagu EI, Obeagu GU. Building a Healthier Future: A narrative review on early infant diagnosis's role in HIV Prevention. Health Sci Rep 2025; 8(3):e70591. *https://doi.org/10.1002/hsr2.70591*
23. Yang Z, Yang H, Gong B, *et al*. Exploring stigma experience and coping strategies among women living with HIV/AIDS in China: A phenomenological study. Psy Res Beh Man 2024:1487-1497. *https://doi.org/10.2147/PRBM.S456850*
24. Zainal-Abidin AN, Miptah HN, Ariffin F, *et al*. Association of coping mechanisms with medication adherence among young people living with HIV (PLHIV) in Klang Valley. Heli 2024; 10(4). *https://doi.org/10.1016/j.heliyon.2024.e25740*
25. Acila GK, Aju Ijorea N, Kabunga A, *et al*. Access to ART Services: Lived Experiences and Coping Strategies of HIV-Positive Persons With Visual Impairment in Lira District, Northern Uganda. Bio Med Res Inter 2025; 2025(1):1903886. *https://doi.org/10.1155/bmri/1903886*
26. Molato BJ, Moloko-Phiri SS, Koen MP, *et al*. Coping mechanisms used by caregivers of HIV/AIDS orphans in North West province, South Africa. Sout Afr Fam Prac 2024; 66(1):5857. *https://doi.org/10.4102/safp.v66i1.5857*
27. Obeagu EI, Obeagu GU. Utilization of immunological ratios in HIV: Implications for monitoring and therapeutic strategies. Med (Balt) 2024; 103(9):e37354. *https://doi.org/10.1097/MD.0000000000037354*
28. Obeagu EI, Obeagu GU, Ede MO, *et al*. Translation of HIV/AIDS knowledge into behavior change among secondary school adolescents in Uganda: A review. Med (Balt) 2023; 102(49):e36599. *https://doi.org/10.1097/MD.0000000000036599*
29. Skalski-Bednarz SB, Toussaint LL, Surzykiewicz J. Beyond HIV shame: Effects of self-forgiveness in improving mental health in HIV-positive individuals in Poland. J Reli Health 2024:1-23. *https://doi.org/10.1007/s10943-024-02084-7*
30. Forsberg K, Sutton D, Stjernswärd S, Bejerholm U, Argentzell E. Experiences of participating in a group-based sensory modulation intervention for mental health service users. Scand J Occ Ther 2024; 31(1):2294767. *https://doi.org/10.1080/11038128.2023.2294767*
31. Yuan GF, Zhang R, Qiao S, *et al*. Longitudinal analysis of the relationship between internalized HIV Stigma, Perceived Social Support, Resilience, and depressive symptoms among people living with HIV in China: A Four-Wave Model. AIDS & Behav 2024; 28(2):645-656. *https://doi.org/10.1007/s10461-023-04251-5*
32. Obeagu EI, Obeagu GU. Mental Health and Psychosocial Effects of natural disaster on HIV Patients. Sci. 2024; 4(1):38-44. *https://doi.org/10.22270/ajdhs.v4i1.63*
33. Katugume P, Namukowa JB, Nankunda O, *et al*. Coping strategies, challenges and potential interventions among adult patients with HIV and mental illness comorbidity in southwestern Uganda. Glob Pub Health 2024; 19(1):2372802. *https://doi.org/10.1080/17441692.2024.2372802*
34. Obeagu EI, Obeagu GU. Unmasking the Truth: Addressing stigma in the fight against HIV. Elit J Pub Health 2024; 2(1):8-22.
35. McKinnon K, Lentz C, Boccher-Lattimore D, *et al*. Interventions for integrating behavioral health into HIV settings for US adults: a narrative review of systematic reviews and meta-analyses, 2010–2020. AIDS Beha 2024; 28(8):2492-2499. *https://doi.org/10.1007/s10461-024-04324-z*
36. Barbosa AD, Santos AA, Costa CR, *et al*. Women living with HIV: perception regarding diagnosis, treatment and mental health. Rev Brasil de Enfer 2025; 78(Suppl 2):e20240134. *https://doi.org/10.1590/0034-7167-2024-0134*
37. Ortega Bustos C, Tomicic A, Aguilera Rivera M. Psychological Consequences in Men Who Have Sex with Men Newly Diagnosed with HIV: A Scoping Review. J Int Cris & R Comm Res (JICRCR) 2024; 7. *https://doi.org/10.63278/jicrcr.vi.421*
38. Kar S, Maiti DK, Maiti AP. HIV/AIDS control owing to local and global awareness, diagnosis, treatment tactics and control theory: fractional order modeling. Nonli Dyna 2024; 112(24):22391-22420. *https://doi.org/10.1007/s11071-024-10193-x*
39. Alckmin-Carvalho F, Pereira H, Nichiata L. It'sa Lot of Closets to Come Out of in This Life: Experiences of Brazilian Gay Men Living with Human Immunodeficiency Virus at the Time of Diagnosis and Its Biopsychosocial Impacts. Eur J Inves Health Psyc Edu 2024; 14(4):1068-1085.
40. Ngwenya N, Smith T, Shahmanesh M, *et al*. Social categorisation and social identification: The mediating role of social isolation and loneliness in adolescents living with HIV. Inter J Beh Med 2024; 31(3):459-467. *https://doi.org/10.1007/s12529-023-10205-x*
41. Obeagu EI, Obeagu GU. Strength in Unity: Building Support Networks for HIV Patients in Uganda. Elit J Med 2024;2(1):1-6.
42. Setyaningrum EY, Charisma Y, Nurdin N. Concept Analysis of Self-Acceptance for People with HIV/AIDS (PLWHA). In 2nd Lawa Sewu Int Symp Health Sci: Nur (LSISHS-N 2023) 2024: 74-87. Atlantis Press. *https://doi.org/10.2991/978-94-6463-467-9_7*
43. Wagstaff RA, Mullens AB, Daken K, *et al*. HIV associated neurocognitive disorder screening and diagnosis pathways in Australia: a scoping review and international implications. AIDS care 2024; 36(8):1029-1040. *https://doi.org/10.1080/09540121.2024.2343768*
44. Obeagu EI, Obeagu GU. Platelet index ratios in HIV: Emerging biomarkers for immune health and disease management. Med (Balt) 2024; 103(12):e37576. *https://doi.org/10.1097/MD.0000000000037576*
45. Obeagu EI, Obeagu GU, Ubosi NI, *et al*. Concurrent management of HIV and malaria: A comprehensive

review of strategies to enhance quality of life. Med (Balt) 2024; 103(14):e37649. *https://doi.org/10.1097/MD.0000000000037649*

46. Obeagu EI, Obeagu GU, Akinleye CA. Unveiling the enigmatic roles of basophils in HIV infection: A narrative review. Med (Balt) 2024; 103(44):e40384. *https://doi.org/10.1097/MD.0000000000040384*
47. O'Grady T, Inman N, Younger A, *et al*. The characteristics and HIV-related outcomes of people living with co-occurring HIV and mental health conditions in the United States: A systematic review of literature from 2016 to 2021. AIDS Behav 2024; 28(1):201-224. *https://doi.org/10.1007/s10461-023-04150-9*
48. Bartholo MF, Tenório JR, Andrade NS, *et al*. Comorbidities in people living with HIV/AIDS and their impact on outpatient dental care. Braz Ora Res 2025; 39:e035. *https://doi.org/10.1590/1807-3107bor-2025.vol39.035*
49. Ibraheem AS, Odeigah LO, Kuranga IS, *et al*. Prevalence of psychiatric comorbidities among adult out-patients living with HIV/AIDS in a tertiary care center, North-Central Nigeria: a cross-sectional study. Mid East Curr Psyc 2024; 31(1):71. *https://doi.org/10.1186/s43045-024-00461-2*
50. Katugume P, Namukowa JB, Nankunda O, *et al*. Coping strategies, challenges and potential interventions among adult patients with HIV and mental illness comorbidity in southwestern Uganda. Glob Publ Health 2024; 19(1):2372802. *https://doi.org/10.1080/17441692.2024.2372802*
51. Ji J, Zhang Y, Ma Y, *et al*. People who living with HIV/AIDS also have a high prevalence of anxiety disorders: a systematic review and meta-analysis. Front Psych 2024; 15:1259290. *https://doi.org/10.3389/fpsyt.2024.1259290*
52. Yu Y, Xiao F, Xia M, *et al*. Comparison of smoking behaviors and associated factors between HIV-infected and uninfected men in Guilin, China: A case–control study. Front Psych 2024; 15:1422144. *https://doi.org/10.3389/fpsyg.2024.1422144*
53. Lantukh I, Kucheriavchenko V, Yurko K, *et al*. Psychological Features of Rehabilitation of HIV-Infected Patients. Georg Med News 2024(352-353):260-264.
54. Lier AJ, Tarfa A, Shenoi SV, *et al*. HIV and Substance Use Disorders. Infec Dis Clin 2024; 38(3):599-611. *https://doi.org/10.1016/j.idc.2024.06.003*
55. Stein MD, Godersky ME, Kim TW, *et al*. Self-medication of pain and discomfort with alcohol and other substances by people with HIV infection and substance use disorder: preliminary findings from a secondary analysis. AIDS care 2024; 36(3):414-424. *https://doi.org/10.1080/09540121.2023.2275047*
56. Pinto RM, Bonnewit I, Hall E, *et al*. Urban, formerly incarcerated, black, heterosexual men with substance use disorders: eligible for pre-exposure prophylaxis (PrEP) but unaware of their vulnerability to HIV acquisition. AIDS care 2025; 37(3):445-454. *https://doi.org/10.1080/09540121.2024.2445792*
57. Mustafa M, Musselman D, Jayaweera D, *et al*. HIV-associated neurocognitive disorder (HAND) and Alzheimer's disease pathogenesis: Future directions for diagnosis and treatment. Int J Mol Sci 2024; 25(20):11170. *https://doi.org/10.3390/ijms252011170*
58. Fotheringham L, Lawson RA, Urasa S, *et al*. Neuropsychological tests associated with symptomatic HIV-associated neurocognitive disorder (HAND) in a cohort of older adults in Tanzania. J Int Neuro Soc 2024; 30(7):660-670. *https://doi.org/10.1017/S1355617724000201*
59. Olajide T, Ogungbemi E, Olajide G, *et al*. HIV-associated neurocognitive disorders in Africa: challenges, peculiarities, and future directions. AIDS Res Ther 2024; 21(1):88. *https://doi.org/10.1186/s12981-024-00677-6*
60. Pulliam L. Evolving biomarkers for HIV-associated neurocognitive disorders (HAND). HIV-Ass Neuro Dis 2024: 295-306. Academic Press. *https://doi.org/10.1016/B978-0-323-99744-7.00038-9*
61. Pence BW, Darnell D, Ranna-Stewart M, *et al*. Provocative findings from a transdiagnostic counseling intervention to improve psychiatric comorbidity and HIV care engagement among people with HIV: A Pilot Randomized Clinical Trial. J Acq Imm Def Synd 2024; 97(1):68-77. *https://doi.org/10.1097/QAI.0000000000003457*
62. Gasik RE, Madkour AS, Skeen SJ, *et al*. The Impact of Childhood Adversity on Life Course Alcohol Use Patterns and Health Status among People Living with HIV. AIDS Beh 2024; 28(9):2887-2898. *https://doi.org/10.1007/s10461-024-04368-1*
63. Aizaz M, Abbas FA, Abbas A, *et al*. Alarming rise in HIV cases in Pakistan: Challenges and future recommendations at hand. Health Sci Rep 2023; 6(8):e1450. *https://doi.org/10.1002/hsr2.1450*
64. Echefu SN, Udosen JE, Akwiwu EC, *et al*. Effect of Dolutegravir regimen against other regimens on some hematological parameters, CD4 count and viral load of people living with HIV infection in South Eastern Nigeria. Med (Balt) 2023; 102(47):e35910. *https://doi.org/10.1097/MD.0000000000035910*
65. McKinnon K, Lentz C, Boccher-Lattimore D, *et al*. Interventions for integrating behavioral health into HIV settings for US adults: a narrative review of systematic reviews and meta-analyses, 2010–2020. AIDS & Beha 2024; 28(8):2492-2499. *https://doi.org/10.1007/s10461-024-04324-z*
66. Borkowski P, Borkowska N. The impact of social determinants of health on outcomes among individuals with HIV and heart failure: a literature review. Cur 2024; 16(3). *https://doi.org/10.7759/cureus.55913*
67. Chan AS, Leung LM, Tam HL, *et al*. Intersecting health implications: HIV/AIDS and mental health among men who have sex with men in the United States during COVID-19 pandemic. Curr Psych 2024; 43(25):22081-22088. *https://doi.org/10.1007/s12144-023-05540-x*
68. Anyiam AF, Arinze-Anyiam OC, Irondi EA, *et al*. Distribution of ABO and rhesus blood grouping with HIV infection among blood donors in Ekiti State Nigeria. Med (Balt) 2023; 102(47):e36342. *https://doi.org/10.1097/MD.0000000000036342*
69. Opeyemi AA, Obeagu EI. Regulations of malaria in children with human immunodeficiency virus infection: A review. Med (Balt) 2023; 102(46):e36166. *https://doi.org/10.1097/MD.0000000000036166*
70. Huang H, Tu L, Zhang X, *et al*. Social support, self-efficacy, self-esteem, and self-management behaviors among people living with HIV/AIDS in China: a structural equation modeling analysis. BMC Pub Health 2024; 24(1):3070. *https://doi.org/10.1186/s12889-024-20541-6*
71. Zeleke TA, Alemu K, Ayele TA, *et al*. Coping strategies for depression among HIV-positive women in Gondar town health facilities, Northwest, Ethiopia: A cross-sectional study. Inter J Ment Health Sys 2025; 19(1):7. *https://doi.org/10.1186/s13033-025-00665-x*
72. Molato BJ, Moloko-Phiri SS, Koen MP, *et al*. Coping mechanisms used by caregivers of HIV/AIDS orphans in North West province, South Africa. Sout Afri Fam Prac 2024; 66(1):5857. *https://doi.org/10.4102/safp.v66i1.5857*
73. Amoatika DA, Addo PN, Kaur A, *et al*. Coping strategies associated with art adherence among older adults living with HIV, South Carolina. Psych Health Med 2025; 30(2):252-263. *https://doi.org/10.1080/13548506.2024.2417314*
74. Obeagu EI, Obeagu GU. Living with sickle cell in Uganda: A comprehensive perspective on challenges, coping strategies, and health interventions. Med (Balt) 2024; 103(51):e41062.

https://doi.org/10.1097/MD.0000000000041062

75. Storholm ED, Siconolfi DE, Campbell CK, *et al*. Structural inequities, syndemics, and resilience: The critical role of social support in overcoming barriers and empowering engagement in HIV care for young black sexual-minority men in the US South. J Rac Ethn Health Disp 2025; 12(1):250-261. *https://doi.org/10.1007/s40615-023-01869-y*
76. Zhao Y, Khoshnood K, Sheng Y. Social support as a mediator between mental health and stigma among newly HIV-positive men who have sex with men. Int J STD AIDS 2024; 35(6):477-486. *https://doi.org/10.1177/09564624241227653*
77. Bint-e-Saif S, Shahzad S. Importance of perceived social support for HIV/AIDS patients in Pakistan: A collectivist society. J Sub Use 2024; 29(6):1191-1194. *https://doi.org/10.1080/14659891.2023.2278520*
78. Eustaquio PC. Social support and the association between certain forms of violence and harassment and suicidal ideation among transgender women- National HIV behavioral surveillance among transgender women, seven Urban areas, United States, 2019–2020. MMWR Supp 2024; 73. *https://doi.org/http://dx.doi.org/10.15585/mmwr.su7301a7*
79. Essomba TM, Esther Djanga MC, Edo'o VD, Hervé JN, Essomba MJN, Mossus T, Essi MJ. Cardiovascular risk and hiv infection in patients aged 50 years and older at the Ahala district medical center, Cameroon. Universal J Pharm Res 2022; 7(3):58-64. *https://doi.org/10.22270/ujpr.v7i3.786*
80. Obeagu EI, Obeagu GU. The Crucial Involvement of CD8 in HIV Progression: A Review. Int J Curr Res Med Sci 2024;10(2):15-25. *https://doi.org/10.22192/ijcrms.2024.10.02.003*
81. Miltz AR, Sewell J, Nakagawa F, *et al*. Evidence from high-income countries on the effectiveness of psychosocial interventions to improve mental health, wellbeing and quality of life for adults living with HIV: a systematic review and meta-analysis. J Int AIDS Soc 2025; 28(4):e26424. *https://doi.org/10.1002/jia2.26424*
82. Kmiec D, Kirchhoff F. Antiviral factors and their counteraction by HIV-1: many uncovered and more to be discovered. J Mol Cell Bio 2024; 16(2):mjae005. *https://doi.org/10.1093/jmcb/mjae005*
83. Wang H, Qin Z, Li Y, *et al*. Effect of a WeChat-based hybrid intervention on the adaptation outcomes of people living with HIV/AIDS: Pilot randomized controlled trial. J Med Int Res 2025; 27:e65268. *https://doi.org/10.2196/65268*
84. Eissa ME. A brief overview of HIV treatment strategies: A focused look at challenges and opportunities. Universal J Pharm Res 2025; 10(1): 49-55. *http://doi.org/10.22270/ujpr.v10i1.1273*
85. Sihotang J, Amri S, Vinsensia D. Exploring the intersection of HIV/AIDS knowledge and rapid testing attitudes in higher education: A student perspective. Comm Ser App Res 2024; 1(1):18-29.
86. Tharao W, Nyoni T, Daftary A, *et al*. Post-arrival HIV acquisition patterns: Insights from African, Caribbean, and Black immigrant communities in Canada. Can J Pub Health 2025:1-5. *https://doi.org/10.17269/s41997-024-00991-6*
87. Palmer L, Wickersham JA, Gautam K, *et al*. User preferences for an mHealth app to support HIV testing and pre-exposure prophylaxis uptake among men who have sex with men in Malaysia. PLOS Dig Health 2024; 3(10):e0000643. *https://doi.org/10.1371/journal.pdig.0000643*
88. Obeagu EI, Obeagu GU. Hematological Consequences of Erythropoietin in HIV: Clinical Implications. Elit J Haem 2024; 2 (4). 2024:86-10.
89. Nawfal ES, Gray A, Sheehan DM, *et al*. A systematic review of the impact of HIV-related stigma and serostatus disclosure on retention in care and antiretroviral therapy adherence among women with HIV in the United States/Canada. AIDS Pat Car STDs 2024; 38(1):23-49. *https://doi.org/10.1089/apc.2023.0178*
90. Dale SK, Willie PR, Shahid NN, *et al*. Doing what I need to do': Sustaining mental health, medication adherence, and engagement in care among Black women living with HIV during the COVID-19 onset of 2020. Ethn Health 2025:1-25. *https://doi.org/10.1080/13557858.2025.2482625*
91. Tarantino N, Norman B, Enimil A, *et al*. Randomized pilot trial of the text-based adherence game for Ghanaian youth with HIV. AIDS & Beh 2025; 29(3):791-803.
92. Bogart LM, Phaladze N, Kgotlaetsile K, *et al*. Pilot test of Mopati, a multi-level adherence intervention for people living with HIV and their treatment partners in Botswana. Int J Beha Med 2024; 31(5):787-798. *https://doi.org/10.1007/s12529-023-10233-7*
93. Obeagu EI, Obeagu GU. Mental health and psychosocial effects of natural disaster on HIV Patients. Sci 2024;4(1):38-44. *https://doi.org/10.22270/ajdhs.v4i1.63*
94. Tan D, Zhong W, Ma L, *et al*. The association between self-acceptance, emotion regulation, and treatment adherence self-efficacy among adolescents with HIV in Liangshan prefecture, China: a cross-sectional study. BMC Pub Health 2025; 25(1):313. *https://doi.org/10.1186/s12889-025-21492-2*
95. Kidman R, Hossain S, Hou W, *et al*. Pathways between adverse childhood experiences and viral suppression among male HIV-infected adolescents in South Africa. AIDS care 2024; 36(sup1):36-44. *https://doi.org/10.1080/09540121.2024.2332451*
96. Oti PO, Anozie EU, Chinweuba DC. Rejection sensitivity, psychological flexibility and quality of life among people living with HIV/AIDS. J Psyc Alli Disc 2024; 3(1).
97. Evangeli M, Kaleva I, Agyemang A, *et al*. Cultural adaption, translation, preliminary reliability and validity of psychological and behavioural measures for adolescents living with HIV in Botswana: A multi-stage approach. J Health Psych 2024:13591053241248944. *https://doi.org/10.1177/13591053241248944*
98. Tomaz Santos N, Ramos C, de Almeida MF, *et al*. Group Intervention Program to Facilitate Post-Traumatic Growth and Reduce Stigma in HIV. Health care 2024; 12 (9): 900. *https://doi.org/10.3390/healthcare12090900*
99. Foley JD, Bernier LB, Schiavo S, *et al*. Evaluation of a newly developed Transdiagnostic Cognitive Behavioral Therapy Group to promote healthy aging among older people with HIV: study protocol for a pilot randomized controlled trial. Open Acc J Clin Tri 2024:11-21.
100. Kennard BD, Brown LK, Baltrusaitis K, *et al*. Cognitive Behavioral Therapy Factors Related to Outcomes in Depression Among Youth with HIV. Cogn ther res 2024; 48(4):781-790. *https://doi.org/10.1007/s10608-024-10474-0*
101. Moskowitz JT, Sharma B, Javandel S, *et al*. Mindfulness-Based Stress Reduction for Symptom Management in Older Individuals with HIV-Associated Neurocognitive Disorder. AIDS & Behav 2024; 28(6):1811-1821. *https://doi.org/10.1007/s10461-024-04295-1*
102. Lu J, Johnson KA, Lewis PD, *et al*. Mindfulness-based interventions for people living with HIV and HIV prevention: a scoping review. J HIV/AIDS Soc Serv 2024:1-24. *https://doi.org/10.1080/15381501.2024.2413967*
103. Eaton AD, Hui J, Muchenje M, *et al*. Adapting cognitive remediation group therapy online: Focus groups with people aging with HIV. J Int Asso Prov AIDS Care 2024; 23:23259582241242703. *https://doi.org/10.1177/23259582241242703*
104. Chaparro AI, Formul D, Vasquez S, *et al*. Breastfeeding in women with HIV infection: A qualitative study of barriers and facilitators. PloS one 2024; 19(7):e0303788. *https://doi.org/10.1371/journal.pone.0303788*

105. Dzinamarira T, Moyo E. Adolescents and young people in sub-Saharan Africa: overcoming challenges and seizing opportunities to achieve HIV epidemic control. Fron Pub Health 2024; 12:1321068. *https://doi.org/10.3389/fpubh.2024.1321068*
106. Tebeda BW, Inedi FA. Prevalence and severity of depression among people living with human immunodeficiency virus in Yenagoa, Southern Nigeria. Universal J Pharm Res 2022; 7(2):61-66. *https://doi.org/10.22270/ujpr.v7i2.756*
107. Anindhita M, Haniifah M, Putri AM, *et al*. Community-based psychosocial support interventions to reduce stigma and improve mental health of people with infectious diseases: a scoping review. Infec Dis Pov 2024; 13(1):1-7. *https://doi.org/10.1186/s40249-024-01257-6*
108. Fujita AW, Ramakrishnan A, Mehta CC, *et al*. Co-utilization of HIV, substance use, mental health services among women with current substance use: opportunities for integrated care? J Prim Care Comm Health 2024; 15:21501319241285531. *https://doi.org/10.1177/21501319241285531*
109. Parcesepe AM, Stockton M, Bernard C, Prevalence and co-occurrence of symptoms of mental and substance use disorders among people with HIV age 40 and older in low-and middle-income countries: A cross-sectional study. J Int AIDS Soc 2024; 27(10):e26359. *https://doi.org/10.1002/jia2.26359*
110. Mgbahurike AA, Amadi CN. Assessment of the role of community pharmacists in management of HIV-positive individuals in the Southern region of Nigeria. Universal J Pharm Res 2021; 6(1):9-15. *https://doi.org/10.22270/ujpr.v6i1.533*
111. Fukunaga R, Pierre P, Williams JK, *et al*. Prioritizing mental health within HIV and tuberculosis services in PEPFAR. Emer Infect Dis 2024; 30(4):e231726. *https://doi.org/10.3201/eid3004.231726*