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Coping Strategies for Depression, Stress, and Anxiety in Adolescent Living with HIV/AIDS: A Systematic Review

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Abstract

Adolescents with HIV/AIDS face elevated mental health risks from stigma, discrimination, and social pressure, yet effective strategies to strengthen their coping remain underdeveloped. This systematic review explored coping strategies used by HIV-positive adolescents to manage depression, stress, and anxiety, aiming to identify the most adaptive and effective approaches. A total of 360 articles were retrieved from PubMed and screened using Rayyan AI, followed by targeted keyword searches and manual selection based on inclusion criteria (English-language studies on coping with stress, depression, or anxiety among HIV-positive adolescents) and exclusion criteria (studies unrelated to HIV/AIDS, adolescents, or coping, and literature reviews). This yielded 18 relevant studies from the USA, South Africa, Tanzania, Uganda, Kenya, Zambia, Botswana, and China, which underwent qualitative analysis. Finding shows that the most adaptive personal coping strategies include self-acceptance, positive thinking, emotional expression, physical activity, and spiritual practices such as prayer and self-reflection. Spiritual coping, especially prayer and faith-based reflection, emerged as a key component of emotion-focused coping, helping adolescents find meaning, reduce rumination, and achieve inner peace despite HIV-related stressors. Overall, adaptive personal coping strategies play a crucial role in alleviating depression, stress, and anxiety among this population. These findings highlight the importance of integrating psychosocial support—including spiritual and emotion-focused approaches—into responsive, evidence-based healthcare services for adolescents with HIV/AIDS. Policymakers and healthcare providers should prioritize such integration to better support the mental health and overall wellbeing of this vulnerable group.

Keyword: Adolescents, Coping Strategies, HIV/AIDS, Mental Health

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Introduction

Adolescents living with HIV/AIDS are at high risk for mental health disorders, especially depression and stress, due to stigma, discrimination, and social pressure (1)(2). Several studies have shown a high prevalence of depression in this group, which is exacerbated by environmental factors such as poverty and violence (3). Unfortunately, there are still gaps in the handling of mental health in adolescents with HIV, especially in strengthening coping strategies. In fact, various interventions such as proactive coping, social support, spiritual coping, and mindfulness have been proven effective in reducing negative mental symptoms and improving quality of life (4)(5)(6). Social stigma, discrimination, and the trauma from past experiences can lead to depression, stress, and anxiety among adolescents suffering from HIV/AIDS, making them more vulnerable to various mental health disorders. This combination of psychosocial pressures, coupled with feelings of low self-worth, represents a significant disadvantage to their mental and physical well-being (7)(8)(9)(10)(11). Limited treatment, uncertainty regarding future health conditions, and minimal social support for

HIV/AIDS adolescents contribute to the increasing feelings of stress and anxiety (12)(13). To find solutions to mental health issues, adolescents should engage in various coping strategies, including problem-focused coping such as undergoing treatment and exercising, as well as emotion-focused coping like prayer, mindfulness, and social support (2)(5)(7). Community and family-based approaches have also been shown to enhance psychological resilience and improve treatment adherence (9)(14). Among the many coping strategies that have been explored in various other literatures, they have been proven effective in helping adolescents with HIV/AIDS address their mental health problems. However, the available literature is still scattered across different topics, focusing on discussions concerning depression, stress, and anxiety. To date, there is still limited literature that summarises various coping strategies used by adolescents with HIV/AIDS to deal with these three mental health issues in a single literature review. Moreover, although aspects of religiosity such as praying have been identified as a form of emotion-focused coping with greater potential to improve mental health, the role of religiosity in helping adolescents with HIV/AIDS overcome depression, stress, and anxiety has not been widely discussed in various literature reviews either (13). Despite the growing recognition of mental health challenges among adolescents living with HIV/AIDS, the integration of culturally relevant and contextually appropriate coping strategies remains underexplored. In many settings, particularly in sub-Saharan Africa where most of the HIV-positive youth reside, spiritual and religious practices serve as naturally available resources for managing psychological distress. *Mutumba et al.* found that religious coping strategies, including prayer, seeking comfort from faith, and trusting in a higher power, significantly buffered the negative effects of stressors on psychological distress among Ugandan adolescents living with HIV. These findings suggest that religiosity is not merely a passive escape but an active form of emotion-focused coping that can enhance mental resilience (13). Due to the diverse focus of the literature on coping strategies of adolescents with HIV/AIDS, a systematic review approach is implemented to systematically and transparently identify, select, and synthesize evidence based on pre-established criteria. This approach allows for the systematic collection and analysis of studies to provide a comprehensive overview of coping strategies in dealing with mental health problems like depression, stress, and anxiety across different research settings. This systematic review aims to identify and synthesize the various coping strategies used by adolescents living with HIV/AIDS to address these mental health challenges, and to assess the most commonly reported forms of coping in the existing literature (7)(8)(13).

Methods

The research method used is the systematic review method, as this method is suitable for collecting and delineating various literature sources descriptively, thus providing a comprehensive overview of the topic discussed. The preparation of this systematic review is conducted by searching for international research articles in English through a peer-reviewed process, published between 2007 and February 2025 (the end date of publication at the time of the search). The search for research articles utilizes the PubMed database as the primary tool to identify relevant literature sources. The initial search in PubMed was conducted using the following search terms.

"(((strategies [Title/Abstract]) AND (mental health [Title/Abstract])) AND (HIV[Title/Abstract])".

After obtaining the initial search results from PubMed, the article selection process continued using Rayyan AI, a web-based artificial intelligence platform designed to automatically detect duplicate files, making the article selection more efficient and accurate. Once the duplicate files were removed, further filtering of articles was conducted through PubMed to obtain more specific articles.

The keywords used in this advanced search are:

((HIV/AIDS[Title/Abstract]) OR (AIDS[Title/Abstract]) OR (HIV[Title/Abstract]))
AND
((YOUNG PEOPLE[Title/Abstract]) OR (YOUNG PERSON[Title/Abstract]) OR (YOUTH[Title/Abstract]) OR (adolescent [Title/Abstract]))
AND
((COPING[Title/Abstract]) OR (MANAGING[Title/Abstract]) OR (SURVIVING[Title/Abstract]) OR (DOING STRATEGIES[Title/Abstract]))
AND
((STRESS[Title/Abstract]) OR (DEPRESSION[Title/Abstract]) OR (ANXIETY[Title/Abstract]))

The strategy for searching articles is focused on articles that discuss coping strategies for mental disorders in adolescents with HIV/AIDS globally, including mental disorders such as stress, depression, and anxiety. In addition, this strategy also involves selecting articles available in full-text format for access. After obtaining the search results, the final step is to manually review the relevant articles to select those that align with the focus of the review according to the inclusion criteria, which are topics about coping with stress, depression, or anxiety in adolescents with HIV/AIDS in English, while the exclusion criteria consist of topics that are not about HIV/AIDS, adolescents, and coping, and methods using literature reviews. At the end of this process, a qualitative analysis will be conducted to identify key themes and knowledge gaps in the selected literature regarding coping strategies for mental disorders in adolescents with HIV/AIDS at the global level. The journal selection process was carried out independently by three researchers using PubMed Advance and Rayyan AI. Discrepancies in the selection results were discussed collectively until a consensus was reached. Data from articles that met the criteria were extracted, including authors, year of publication, research location, study design, research sample, and main findings. Subsequently, a systematic synthesis was conducted by grouping the results according to the coping strategies identified for each mental health issue. Figure 1 presents the flow of database search results through four main stages, namely identification, screening, eligibility, and inclusion, as depicted in the following PRISMA flow diagram.

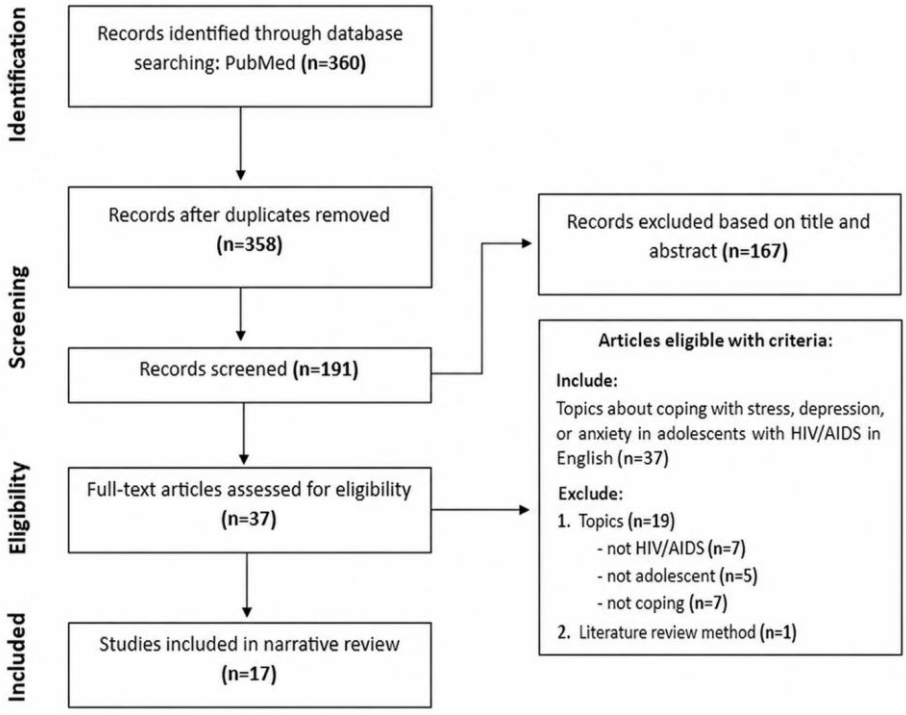

Figure 1. PRISMA flowchart of literature screening

Results

A total of 17 studies were included and were conducted worldwide, across three continents: Africa (n = 9), America (n = 7), and Asia (n = 1). The participants in this study were adolescents with HIV/AIDS who experienced mental health disorders such as depression, stress, and anxiety. Among the included studies, nine focused on coping strategies related to depression, five examined coping with stress, and three explored coping with anxiety.

Table 1. Literature Synthesis Table

Author	Country	Desain	Sampel	Main Findings
Debra A Murphy, William D Marelich, Hortensia Amaro (2009)	USA	Longitudinal study (sequential longitudinal design)	In PACT I, 135 mothers with HIV/AIDS and their healthy children aged 6–11 years were recruited. For the longitudinal analysis in this study, 81 mother-child pairs who participated in both phases of the study (PACT I and PACT II) were used.	The Parents and Children Coping Together (PACT) model is valid in predicting child/adolescent developmental outcomes in terms of self-concept and depression. The study's implications are discussed, including the influence of maternal factors on the child's self-concept and depression, as well as a reconsideration of the impact of family cohesion on child/adolescent developmental outcomes.
Valerie A Earnshaw, Rachel C Kidman , Avy Violari (2018)	South Africa	Cross-sectional study	The sample consisted of 250 adolescents with perinatal HIV (infected with HIV through mother-to-child/perinatal transmission) in South Africa	Internal stigma associated with HIV status increases the risk of depression, whereas stigma related to the mother's HIV status increases the risk of depression and substance use problems in adolescents with perinatal HIV. Current interventions focus on internal stigma; therefore, it is also essential to address associative stigma to enhance outcomes among adolescents perinatally infected with HIV.
Bridgette M Brawner, Loretta Sweet Jemmott, Gina Wingood, Janaiya Reason, Bridget	USA	Cross-sectional study	The sample consisted of 53 Black adolescents aged 14–17 years, who were sexually active with the opposite sex and had mental disorders, recruited from outpatient mental health service programs in Philadelphia.	Difficulties in emotion regulation and poor coping mechanisms are associated with various HIV/STI-related risky sexual behaviors in Black adolescents with mental disorders, thus HIV/STI prevention interventions need to include improvements in

Daly, Kiahana Brooks, Yzette Lanier (2022)				emotion regulation and coping skills.
Arvin Bhana, Claude A. Mellins, Latoya Small, Danielle F. Nestadt, Cheng-Shiun Leu, Inge Petersen, Sphindile Machanyangwa, dan Mary McKay (2016)	South Africa	**Cross-sectional study**	The sample consisted of 177 adolescents with perinatal HIV (PHIV+) and their caregivers, derived from a combination of data from a pilot study (n = 66) and a larger randomized controlled trial (RCT) (n = 111)	Lower levels of adolescent depression are associated with higher self-esteem ($\beta = -0.067$; $p < 0.001$), greater social support ($\beta = -0.453$; $p = 0.002$), and lower internalized stigma ($\beta = 0.608$; $p = 0.040$).
Laura S. Mkumba, Fortunata Nasuwa, Blandina T. Mmbaga, Aisa M. Shayo, Coleen K. Cunningham, Karen E. O'Donnell, dan Dorothy E. Dow (2025)	Tanzania	Qualitative study with in-depth interviews (IDI) supported by quantitative data from depression and stigma scores (mixed-methods exploratory study).	The sample consisted of 10 adolescents and young adults living with HIV (YLWH) aged 18–25 years, who had participated in the Sauti ya Vijana (SYV) intervention; 70% were male.	SYV interventions increase self-acceptance, positive coping, and peer support among adolescents living with HIV, but HIV-related stigma and mental health issues are still widely experienced.
Carmen H. Logie, Miranda G. Loutet, Moses Okumu, Madelaine Coelho, Simon Odong Lukone, Nelson Kisubi, Maya Latif, Alyssa McAlpine & Peter Kyambadde (2024)	Uganda	A multi-methods study (mixed methods) combining focus group discussions (FGDs), in-depth interviews (IDIs), and a cross-sectional survey.	The sample consisted of 60 adolescent refugees aged 16–24 years for FGD and IDI, 8 community leaders (elders), 8 healthcare workers, and 115 adolescent refugees aged 16–24 years for a cross-sectional survey.	Poverty, Sexual and Gender-Based Violence (SGBV), and substance use interact synergistically (syndemically) and increase HIV vulnerability among refugee adolescents in Uganda.
Jaime Martinez, Gary Harper,	USA	Longitudinal study (prospective	A sample of 178 adolescent and young adult females living with HIV, aged 15–24	Although HIV stigma does not directly predict ART adherence at 12 months, satisfaction with

Russell A. Carleton, Sybil Hosek, Kelly Bojan, Gretchen Glum, dan Jonathan Ellen (2011)		cohort study)	years, was recruited between 2003 and 2005 from 5 cities in the United States. Of these, 60 participants provided ART adherence data that were analyzed.	healthcare services (B = −0.020; p < 0.05) and various coping strategies—including proactive coping (B = 0.012; p < 0.05), seeking family support (B = 0.012; p < 0.05), spiritual coping (B = 0.021; p < 0.05), professional help (B = 0.021; p < 0.05), and physical distraction (B = 0.016; p < 0.05)—significantly moderate the effect of stigma on treatment adherence.
Patricia A. Garvie, Patricia M. Flynn, Marvin Belzer, Stephen A. Spector, Aditya H. Gaur, dan tim Pediatric AIDS Clinical Trials Group (PACTG) P1036B (2011)	USA	Multisite pilot feasibility study with a longitudinal design (pre-post follow-up)	The sample consisted of 20 adolescents and young adults with behaviorally acquired HIV, who had issues with ART adherence, 65% female, with a median age of 21 years.	The Directly Observed Therapy (DOT) intervention improves depressive symptoms and temporarily reduces substance use and negative coping; additionally, baseline depression (p = 0.05), beliefs about medication (p = 0.006), and perception of HIV as a threat (p = 0.03) predict better adherence to therapy.
Florence Mwangwa, Jason Johnson-Peretz, James Peng, Laura B. Balzer, Janice Litunya, Janet Nakigudde, Douglas Black, Lawrence Owino, Cecilia Akatukwasa, Anjeline Onyango, Fredrick Atwine, Titus O. Arunga, James Ayieko, Moses R. Kamya, Diane	Kenya and Uganda	The mixed-methods study, which is part of a cluster-randomized trial (SEARCH-Youth Trial), utilizes a cross-sectional survey (PHQ-9) and longitudinal in-depth interviews.	The sample consisted of 1,234 adolescents and young adults with HIV aged 15–24 years (median age 21 years; 80% female) for the quantitative survey, as well as 113 participants (adolescents, family members, and service providers) for the qualitative component.	Life stage-based interventions (SEARCH-Youth) reduced the prevalence of depressive symptoms in adolescents and young adults with HIV by 28% compared to standard care (RR = 0.72; 95% CI: 0.59–0.89), while supportive counseling helped to improve self-confidence and coping skills.

Havlir, Carol S. Camlin, dan Theodore Ruel (2025)				
Joseph Mumba Zulu, Henna Budhwani, Bo Wang, Anitha Menon, Deogwoon Kim, Mirriam Zulu, Patrick Nyamaruze, Kaymarlin Govender, dan Russell Armstrong (2024)	Zambia	Mixed-methods study (convergent) that combines in-depth interviews and a cross-sectional quantitative survey.	The sample consisted of 56 HIV-positive adolescents and young adults from key groups, namely men who have sex with men (MSM) and transgender women (TGW), recruited from three districts in Zambia (Lusaka, Chipata, and Solwezi); the average age was 23 years.	Intersectional stigma due to HIV status, sexual orientation, and gender identity is associated with high mental health problems, with 36% of participants experiencing moderate to severe depressive symptoms and 36% having had suicidal thoughts; more TGW experience depression (40% vs. 33%) and have suicidal ideation (55% vs. 36%) compared to MSM.
Latoya A. Small, Alexis K. Huynh, dan Tyrone M. Parchment (2022)	South Africa	Cross-sectional study	The sample consisted of 37 caregiver-child dyads involving adolescents living with perinatal HIV (pYLHIV) and their caregivers in Durban, South Africa.	Higher symptoms of depression and anxiety are associated with lower self-esteem (B = 0.68 and 0.57) as well as higher internalized stigma (B = 0.38 and 0.34), whereas HIV knowledge is not related to self-esteem or stigma.
Keneilwe Molebatsi, Vuyokazi Ntlantsana, Merrian J Brooks, Esther Seloilwe (2024)	Botswana	Cross-sectional quantitative study	The sample consisted of 119 adolescents and young adults living with HIV, aged 15–24 years, in Botswana	As many as 47% of participants experienced at least one type of childhood trauma, and such trauma was significantly associated with ART non-adherence; specifically, emotional abuse (OR = 5.83), emotional neglect (OR = 3.10), sexual abuse (OR = 5.97), and physical neglect (OR = 2.52). Sexual abuse and emotional neglect had the highest likelihood of predicting ART non-adherence.
Krystal S. Frieson Bonaparte, Chanda C. Graves, Eugene W. Farber, Scott E. Gillespie, Sophia A. Hussen, LaTeshia	USA	Single-center, prospective, nonrandomized, interventional control group study	The sample consisted of 98 adolescents and young adults with HIV, aged 18–24 years (mean age 21.5 ± 1.8 years), divided into a MACARTI group (n = 49) and a standard of care group (n = 49).	The MACARTI intervention, which integrates motivational interviewing and intensive case management, significantly reduced psychological distress (p = 0.016) and HIV/AIDS-related stress (p = 0.023), as well as increased the use of reflective coping (p = 0.016) and planning strategies (p = 0.001) during the first 6 months, although these

Thomas-Seaton, Rana Chakraborty, dan Andres F. Camacho-Gonzalez (2020)				effects did not persist up to 1 year.
Massy Mutumba, Jose A. Bauermeister, Gary W. Harper, Victor Musiime, James Lepkowski, Ken Resnicow, dan Rachel C. Snow (2017)	Uganda	Cross-sectional study	The sample consisted of 464 adolescents living with HIV (ALHIV) aged 12–19 years, with 53% being female, who were recruited from a large HIV care center in Kampala, Uganda.	Psychological distress in adolescents with HIV is associated with various stressors, namely daily hassles, negative life events, poor HIV-related quality of life, and stigma, whereas religious coping, social support, and optimism act as protective factors that reduce psychological distress.
J. T. Goldbach and J. J. Gibbs (2015)	USA	A qualitative study using semi-structured in-depth interviews with a thematic analysis approach based on the Compas Model of Adolescent Coping	The sample consisted of 48 sexual minority adolescents (SMA) who were racially and ethnically diverse, aged 14–19 years	A total of 43 unique coping statements were identified that align with the Compas Model of Adolescent Coping. Sexual minority adolescents use coping strategies similar to heterosexual adolescents in dealing with general stress, but they also employ distinctive coping resources to address minority stress.
Siyuan Ke, Yanjie Yang, Xiuxian Yang, Xiaohui Qiu, Zhengxue Qiao, Xuejia Song, Erying Zhao, Wenbo Wang, Jiawei Zhou, dan Yuewu Cheng (2022)	China	Case-control	The sample consists of 290 adolescents in Henan Province, comprising 140 adolescents with HIV (case group) and 150 healthy adolescents (control group).	Adolescents with HIV have lower self-concept scores compared to healthy adolescents ($p < 0.05$), and self-concept is significantly influenced by age ($\beta = -0.19$; $p = 0.03$), perceived stress ($\beta = -0.19$; $p = 0.03$), perceived social support ($\beta = 0.26$; $p < 0.001$), positive coping style ($\beta = 0.50$; $p < 0.001$), and negative coping style ($\beta = -0.45$; $p < 0.001$).
Lindsey Webb, Carisa Perry-Parrish, Jonathan	USA	Randomized Controlled Trial (RCT)	The sample consisted of 72 adolescents with HIV aged 14–22 years (mean age 18.71 years), recruited from	At the 3-month follow-up, the MBSR group showed higher mindfulness (P = 0.03), problem-solving coping (P = 0.03), and

Ellen, dan Erica Sibinga (2018)	two urban clinics and randomized into the Mindfulness-Based Stress Reduction (MBSR) group or an active control group.	life satisfaction (P = 0.047), as well as lower aggression (P = 0.002) compared to the control group. In addition, MBSR participants were more likely to experience or maintain a decrease in HIV viral load (P = 0.04).

After the quality assessment process, each study is treated individually to explore how the findings relate to the objectives of the systematic review. Once the research team has a deep understanding of each study, iterative and interpretative methods are employed to explore perspectives, interactions, connections, and differences across the studies (15). Findings from all studies are integrated using systematic techniques, such as searching for similar and contrasting words, quotes, and sentences, which are then woven into a story about mental health and well-being experiences, leading to the discovery of insights, meanings, and an evolving understanding (15).

This research reports various coping strategies utilized by adolescents living with HIV/AIDS in confronting mental health disorders such as depression, stress, and anxiety. Despite the variations in how adolescents respond to psychological pressures, the findings reveal common patterns that form three main areas of coping strategies, namely: (1) coping strategies to address depression; (2) coping strategies to manage stress; and (3) coping strategies to alleviate anxiety. The research team compiled narratives under each of these areas to illustrate the psychosocial contexts that influence how adolescents adapt to emotional pressures (15).

This systematic explores various coping strategies adolescents cope with feelings of despair and a loss of motivation while facing depression (for example, by seeking emotional support or fostering hope for the future), how they handle daily pressures related to treatment, stigma, or life demands through active coping or positive distraction, and how they manage anxiety through relaxation techniques, avoiding anxiety triggers, or seeking reassurance from healthcare professionals and close others. The complexity of these experiences reflects that coping strategies are dynamic, influenced by internal factors such as personal resilience, as well as external factors like social support and access to mental health services (15).

Coping among adolescents suffering from HIV/AIDS is generally discussed in the context of mental disorders such as depression, stress, and anxiety, where all three are interconnected and can exacerbate psychosocial conditions if not addressed promptly and adequately (16)(10)(1). Among these three mental disorders, depression is the most prevalent and poses a significant issue that needs to be addressed due to its serious impact on treatment adherence, adolescent behavior, and overall quality of life (11)(4)(3).

Discussion

This systematic review found that depression is the most prevalent psychological disorder among adolescents living with HIV/AIDS, followed by stress and anxiety. Across the 18 studies reviewed, adaptive coping strategies including positive reappraisal, emotional expression, social support seeking, physical activity, and spiritual practices such as prayer and self-reflection were consistently associated with reduced psychological distress. Conversely, maladaptive strategies such as social withdrawal, hiding HIV status, and emotional suppression were linked to worse mental health outcomes. These findings align with previous studies that emphasize the critical role of coping in moderating the psychological impact of HIV-related stigma and discrimination (11)(17).

To understand why certain coping strategies are more effective than others, this review adopts the transactional model of stress and coping proposed by Lazarus and Folkman (1984). This framework distinguishes between problem-focused coping aimed at modifying or eliminating the source of stress and emotion-focused coping directed at regulating emotional responses to stressors. In the context of this review, strategies such as treatment adherence, physical activity, and information-seeking represent problem-focused coping, while positive reappraisal, emotional expression, spiritual practices, and social support seeking are categorized as emotion-focused coping. The findings suggest that adolescents who employ both types of coping adaptively, for example, adhering to medication while also seeking emotional support through prayer or trusted relationships tend to demonstrate better psychological resilience. This is consistent with the theoretical proposition that flexible coping, rather than reliance on a single strategy, is most effective in managing chronic stressors (18).

Before diving into specific findings, it is helpful to first map out how coping strategies are discussed in relation to the three main mental health conditions found among adolescents with HIV/AIDS: depression, stress, and anxiety. While these conditions often overlap and influence one another, each requires different coping responses. The following sections will break down the strategies used by adolescents to deal with each of these psychological challenges.

Coping strategies for depression in adolescents with HIV/AIDS

Personal coping strategies play a crucial role in overcoming depression in adolescents living with HIV/AIDS. In facing the emotional pressures caused by their HIV status, many adolescents demonstrate adaptive capabilities through personal coping mechanisms such as positive thinking, sharing feelings with trusted individuals, and seeking meaning from their life experiences (16)(2), who are able to accept their condition and are open in their communication tend to experience lower levels of depression and are more capable of managing stress independently.

Coping strategies such as expressing emotions to peers, family, or trusted adults are commonly used to reduce feelings of shame, fear, and isolation (11)(10). Conversely, coping strategies that focus on negative emotions such as hiding HIV status, avoiding social interaction, or suppressing emotions actually increase the risk of depression and exacerbate psychological burden (11)(4). In some cases, adolescents may express feelings of frustration through impulsive actions, such as risky sexual behavior or aggression, as a form of escape from feelings of helplessness caused by an inability to self-regulate and manage emotions (10)(14).

Passive coping strategies such as surrendering or avoiding reality may provide temporary relief, but if practiced continuously, they can actually reinforce feelings of helplessness and worsen psychological conditions (14)(11). On the other hand, more adaptive internal coping styles such as optimism, hope, and positive fantasy, if supported by self-awareness and emotional support from the surrounding environment, can enhance self-esteem and strengthen mental resilience (14)(12).

Additionally, many adolescents demonstrate proactive coping mechanisms that stem from within, such as engaging in physical activities to reduce stress, connecting with spiritual values, or consciously seeking psychological support when feeling overwhelmed (2)(1). These strategies indicate that with good self-awareness and the motivation to persevere, adolescents can develop healthy coping mechanisms to face life pressures as individuals living with HIV/AIDS. Therefore, focusing on strengthening personal coping strategies becomes crucial in maintaining mental health and promoting emotional resilience among adolescents in their daily lives (16)(3)(1).

Coping strategies for stress in adolescents with HIV/AIDS

Adolescents with HIV/AIDS face stress due to social stigma, environmental pressures, and uncertainty about the future. To cope, they often employ personal coping strategies such as positive thinking, re-evaluating situations rationally, and engaging in physical activities like walking or light

exercise as a form of stress relief (19)(20). Additionally, a spiritual approach through prayer or self-reflection is commonly used to provide inner peace (11). Some adolescents also choose to express themselves through journaling or art, and spending time alone as a form of emotional regulation. These strategies are adaptive if they are employed consciously and do not become a form of constant avoidance. However, if these strategies turn into passive forms or emotional suppression, they may actually worsen their psychological condition (21). Therefore, it is important to strengthen self-awareness and management skill emotions as a component of healthy internal coping.

Coping strategies for anxiety disorders in adolescents with HIV/AIDS

Anxiety is a mental disorder that deserves serious attention as it frequently occurs among adolescents living with HIV/AIDS due to social stigma and traumatic experiences in childhood (8). The stigma experienced is often layered, such as HIV and gender or sexual identity, which has great potential to trigger anxiety (7). In this regard, coping strategies are necessary, that is, adolescents with HIV/AIDS must maintain their psychological and mental health (9).

Research addressing the field of adolescent health psychology in Zambia indicates that a significant number of gay male adolescents and transgender youth experience extremely high levels of anxiety due to the pressure to conceal their HIV status, with their sexual identity also contributing to the discrimination they face, resulting in exacerbated anxiety. Approaches to regulate this excessive anxiety reveal that most adolescents living with HIV consider exercise to be the most efficient means of alleviating stress, as physical activity can serve as a distraction (7).

Meanwhile, a study conducted in South Africa found that anxiety in adolescents with HIV is related to stigma and low self-esteem. Adolescents with HIV who have mental health disorders such as excessive anxiety tend to have a negative view of themselves and feel socially isolated. The coping strategies identified in this research states the significance of adequate healthcare services both physically and mentally, to encourage the development of healthy and effective coping mechanisms (9).

On the other hand, research in Botswana found that social stigma, as well as physical and emotional violence, can lead to anxiety symptoms among adolescents with HIV. These traumas create psychological pressure that disrupts the coping abilities of adolescents with HIV. Therefore, there is a need for trauma-focused coping strategies. One recommended coping strategy to reduce anxiety levels, as suggested by this research, is to design psychosocial services aimed at helping adolescents process traumatic experiences in a healthy manner (8). Therefore, to reduce anxiety among adolescents living with HIV/AIDS, it is crucial to implement integrated, trauma-informed, and socially supportive mental health interventions (9)(8)(7).

In addition to the personal and social coping strategies discussed above, one approach stands out across many studies, especially those conducted in African settings: religious and spiritual coping. For many adolescents, practices like prayer, spiritual reflection, and faith-based support are not just passive escapes but active ways to find meaning, calm their minds, and regain emotional balance. The next part will explore how religious coping plays a significant role in helping adolescents manage the psychological burden of living with HIV/AIDS.

Notably, religious coping emerged as a significant emotion-focused strategy across multiple studies, particularly among adolescents in African settings. Practices such as prayer, faith-based comfort, and spiritual reflection were reported not as passive escape mechanisms but as active meaning-making processes that help adolescents find purpose, reduce rumination, and foster inner peace amidst HIV-related stressors. This finding aligns with Mutumba et al. (2017), who found that religious coping significantly buffered the negative effects of stressors on psychological distress among Ugandan adolescents living with HIV. Similarly, Kidman et al. (2018) reported that spiritual practices provided inner peace and emotional stability for HIV-positive youth facing stigma and uncertainty. The

salience of religious coping in these contexts underscores the need to recognize spirituality as a legitimate psychosocial resource, particularly in regions where religiosity is deeply embedded in daily life and professional mental health services are limited (11).

The predominance of religious and personal coping strategies observed in this review can be understood through the lens of Lazarus and Folkman's (1984) framework, which posits that emotion-focused coping is particularly effective when individuals perceive that little can be done to change the stressor itself a common experience among adolescents living with a chronic, stigmatized condition like HIV/AIDS. In such situations, strategies that regulate emotional arousal, such as prayer, positive reappraisal, and emotional expression, become essential for maintaining psychological equilibrium. This theoretical explanation addresses the question of why certain coping strategies are more effective: they target the emotional consequences of stress when the source of stress cannot be eliminated, thereby reducing the overall psychological burden (18).

These findings carry practical implications for public health programs and HIV care services. First, mental health screening should be integrated into routine HIV care for adolescents, allowing early identification of those at risk for depression, stress, and anxiety. Second, interventions should be culturally responsive and leverage existing community resources, including faith-based organizations and peer support networks, as platforms for psychosocial support. In resource-limited settings where professional mental health services are scarce, training community health workers and religious leaders to deliver basic psychosocial support can be a sustainable and cost-effective approach. Third, healthcare providers should be equipped to assess adolescents' existing coping mechanisms and reinforce adaptive strategies, while addressing maladaptive patterns such as social withdrawal or emotional suppression. Interventions such as cognitive-behavioral therapy, mindfulness-based stress reduction, and spiritually integrated counseling have shown promise in adolescent HIV populations and should be adapted to local cultural contexts (5).

Cultural and geographical variations in coping strategies were also observed. Studies from Africa emphasized spirituality and community support as primary coping resources, while studies from America and Asia placed greater emphasis on professional mental health services and individual coping skills. These differences highlight the importance of contextually tailored interventions. What works in sub-Saharan Africa where collectivist values and strong religious traditions provide naturally available support systems may not be directly transferable to settings with different social structures and healthcare systems. Therefore, intervention developers should conduct formative research to understand local coping resources and barriers before designing programs.

Several limitations of this review must be acknowledged. The reliance on a single database (PubMed) and English-language publications may have introduced selection and language bias. The predominance of cross-sectional studies limits the ability to establish causal relationships or track changes in coping strategies over time. Most studies had small sample sizes and focused on specific subgroups (e.g., adolescent girls, MSM/TGW communities), reducing generalizability to the broader adolescent HIV population. Additionally, the systematic review design, while appropriate for synthesizing diverse qualitative and quantitative evidence, does not allow for quantitative meta-analytic conclusions regarding the effectiveness of specific coping strategies. Future research should employ longitudinal designs, standardized coping measures, and diverse geographical samples to empirically evaluate the effectiveness of coping interventions across cultural contexts. Comparative studies between religious and non-religious coping approaches would also be valuable in identifying which strategies are most effective for specific populations and settings.

In addition, only one database (PubMed) was searched in this review, leading to the missing of some relevant studies indexed in other databases. The use of one database can also potentially introduce publication bias since studies that are unpublished or not indexed in PubMed are not included in the search process. Furthermore, restricting the literature to English may introduce language bias and

exclude findings from studies published in other languages.

Conclusion

This systematic review of 18 studies found that depression is the most prevalent psychological disorder among adolescents living with HIV/AIDS, followed by stress and anxiety. The most consistently reported adaptive coping strategies across studies include self-acceptance, positive thinking, emotional expression, physical activity, and spiritual approaches such as prayer and self-reflection. These spiritual coping mechanisms, particularly prayer and faith-based reflection, are integral to emotion-focused coping strategies that help adolescents with HIV/AIDS find meaning, reduce rumination, and foster inner peace amidst HIV-related stressors, while adaptive personal coping strategies overall play a crucial role in reducing symptoms of depression, stress, and anxiety. However, as this is a systematic review without meta-analytic synthesis, claims about the effectiveness of specific coping strategies must be interpreted cautiously. The findings are predominantly derived from cross-sectional studies with small sample sizes and limited geographical diversity, mainly concentrated in sub-Saharan Africa. Therefore, generalizability to other populations and settings remains constrained. Despite these limitations, the consistency of adaptive coping strategies across multiple studies highlights the need for policymakers and healthcare providers to integrate psychosocial support including culturally and spiritually sensitive approaches into evidence-based HIV care services. Future research should employ longitudinal designs, standardized coping measures, and diverse geographical samples to empirically evaluate the effectiveness of coping interventions across different cultural and geographical contexts.

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Conflict of Interest

This research is free from conflicts of interest.

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