

## Role of Self-Esteem People Living with HIV (PLHIV) in HIV Prevention Behavior: A Literature Review

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### KEYWORDS

HIV;  
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### ABSTRACT

**Introduction:** Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) remain significant public health challenges worldwide, impacting both clinical outcomes and psychosocial well-being. People living with HIV (PLHIV) often face stigma and discrimination, which can lower self-esteem. Reduced self-esteem is linked to increased engagement in risky behaviors that may facilitate HIV transmission. This study investigates how self-esteem influences HIV prevention behaviors among PLHIV.

**Methods:** A scoping review was conducted using the Population, Exposure, Outcome, Study Design (PEOS) framework. The literature search covered PubMed, ScienceDirect, EBSCO, and Google Scholar. Eligible articles were English-language primary studies published from 2020 to 2024. The search used the keywords: “HIV Infections” AND “PLHIV” AND “self-esteem” OR “self-concept.” The selection process followed PRISMA guidelines.

**Results:** Fifteen articles were analyzed. Findings indicate that self-esteem significantly influences HIV prevention behaviors, including status disclosure, antiretroviral therapy adherence, safe sex practices, and viral suppression. Self-esteem also acts as a mediator and protective factor against stigma and mental health disorders.

**Conclusion:** Self-esteem is a key psychosocial factor in preventing HIV transmission among PLHIV. Incorporating self-esteem interventions into HIV programs may improve prevention outcomes and quality of life.

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## **INTRODUCTION**

The global incidence of HIV/AIDS continues to pose a significant public health challenge. According to UNAIDS, by 2023, approximately 39 million individuals will be living with HIV worldwide, with 1.3 million new infections and around 630,000 AIDS-related deaths each year (1). Beyond the clinical burden, the HIV epidemic exerts a substantial psychosocial impact, largely due to persistent stigma and discrimination in many countries. HIV-related stigma has been recognized as a major obstacle to prevention, treatment, and the attainment of the 95–95–95 global targets, as it directly affects the mental health and health-related behaviors of people living with HIV/AIDS (PLWHA) (2-4).

In Indonesia, the trend of HIV/AIDS cases shows a consistent increase from year to year and is part of the dynamics of the global epidemic (1). The Ministry of Health of the Republic of Indonesia reports that Indonesia is one of the countries with relatively rapid growth in HIV cases in the Asia Pacific region, especially among productive age groups and key populations (2). In addition to medical problems, people living with HIV (PLWHA) in Indonesia face significant psychosocial pressures, one of which is impaired self-esteem. Various national studies indicate that the majority of PLWHA have low self-esteem, with a prevalence reaching around 65% of respondents, which is influenced by social rejection, loss of identity, physical changes due to illness or therapy, and repeated experiences of stigma and discrimination (3, 4).

Globally, low self-esteem in people living with HIV has been associated with a variety of behavioral and clinical consequences. Studies in various countries have shown that low self-esteem is associated with social withdrawal, poor adherence to antiretroviral therapy (ARV), increased risk of depression and anxiety, and higher engagement in risky behaviors such as unprotected sex and non-adherence to HIV prevention strategies (5-7). Conversely, people living with HIV with better self-esteem tend to demonstrate more consistent preventive behaviors, including condom use, disclosure of HIV status to partners, and active involvement in health services. In this context, social support has consistently been identified as a key protective factor capable of strengthening the self-esteem and psychological resilience of people living with HIV (8-10).

Despite the growing body of literature examining psychosocial determinants of HIV-related outcomes, most existing studies have primarily focused on general mental health outcomes, treatment adherence, or stigma-related experiences, rather than providing a structured synthesis specifically addressing HIV prevention behaviors. In particular, there is a lack of comprehensive reviews that integrate recent empirical evidence (post-2020) to examine how self-esteem functions not only as an independent psychosocial factor but also as a potential mediating or moderating mechanism linking stigma, mental health, and HIV prevention practices among people living with HIV. This gap limits the ability to understand the pathways through which psychosocial factors.

Given the magnitude of the global and national burden of HIV/AIDS and the complexity of its accompanying psychosocial impacts, a thorough understanding of the role of self-esteem in HIV prevention behaviors among people living with HIV (PLWHA) is crucial. Therefore, this review aims to provide a focused synthesis of recent empirical studies and to explore the role of self-esteem across specific prevention-related behavioral domains, including antiretroviral therapy adherence, HIV status disclosure, safer sexual practices, and viral suppression. In addition, this review seeks to examine the potential role of self-esteem within broader psychosocial pathways, particularly its interaction with stigma and social support, in shaping HIV prevention behaviors. This is particularly relevant in the Indonesian context, which has social and cultural diversity and still has relatively high levels of HIV stigma. Therefore, this paper aims to systematically explore the mechanisms by which self-esteem influences HIV/AIDS prevention behaviors among people living with HIV (PLWHA), including adherence to treatment, safe sexual behavior, and engagement in health services, as a basis for developing more effective and contextualized psychosocial-based promotive and preventive interventions.

## **METHOD**

This literature review utilized journals sourced from international databases, including Google Scholar, ScienceDirect, EBSCO, and PubMed.

## Identifying research questions

Developing research questions is a critical step that shapes the review protocol, including the search strategy, inclusion and exclusion criteria, and data extraction. This study used a *scoping review* design, following the PRISMA-ScR guidelines. The scoping review was chosen to systematically map existing evidence and identify key concepts, patterns, and gaps regarding the role of self-esteem in HIV prevention behaviors among people living with HIV (PLHIV), rather than to estimate effect sizes or establish causality. The PEOS framework is presented in the table below.

**Table 1.** PEOS and Framework

<b>P (Population)</b>	<b>E (Exposure)</b>	<b>O (Outcome)</b>	<b>S (Study Design)</b>
People living with HIV (PLHIV).	Level of self-esteem.	HIV prevention behaviors (HIV status disclosure, ART adherence, safe sexual practices, viral suppression).	Observational and intervention studies (cross-sectional, longitudinal, quasi-experimental, RCT).

## Identifying relevant articles

There are three steps in identifying relevant articles. The first step is to determine the database. The databases used are PubMed, ScienceDirect, EBSCO and Google Scholar. A comprehensive literature search was conducted between January and March 2025. The search strategy was developed using a combination of Medical Subject Headings (MeSH), keywords, and Boolean operators tailored to each database. The full Boolean search string applied in PubMed was: (“HIV Infections” [MeSH Terms] OR “people living with HIV” OR “PLHIV”) AND (“self-esteem” OR “self-concept”) AND (“HIV prevention behavior” OR “antiretroviral therapy adherence” OR “HIV disclosure” OR “safe sexual behavior”). In ScienceDirect and EBSCO, similar keyword combinations were used with database-specific syntax adjustments, while Google Scholar searches were conducted using simplified keyword combinations due to search engine limitations. Truncation and phrase searching were applied where appropriate to enhance sensitivity and specificity of the search results.

The second step is to determine the inclusion and exclusion criteria. Articles are filtered according to the inclusion criteria published in 2020-2024, articles published in English, primary research articles (original research), and no specific country criteria, cross-sectional and descriptive research methods, retrospective, and case analysis, that describe data on self-esteem of PLHIV related to, or contributing to, behaviors that prevent HIV transmission. The exclusion criteria are opinion articles, peer reviews, theses manuscripts and theses. The third step is to determine the keywords that are focused on based on the framework, expanded by determining the Thesaurus and Boolean synonyms (can be seen in table 2).

**Table 2.** Article search keywords

<b>Database</b>	<b>Keyword Search</b>
PubMed	(HIV Infections) OR (“people living with HIV”) AND (“self - esteem”)
Science Direct	(people living with HIV) OR (“HIV - positive”) AND (“self - concept”)
EBSCO	(HIV Infections) OR (“people living with HIV”) AND (“self - esteem”)
Google Scholar	(people living with HIV) OR (“HIV disclosure”) AND (“safer sexual behavior”)

## Selection/choice of articles

The screening process is used to assess the relevance of research identified in the search according to the desired literature characteristics. From the search using 4 databases as many as 120 articles. Then the articles are filtered based on duplication, abstract and title and full text reading. After the screening and eligibility assessment process, a total of 15 articles met the inclusion criteria and were included in the final review. This number has been consistently applied across all sections of the manuscript, including the abstract, results, and PRISMA flow diagram. So that 20 articles were found to be reviewed. Furthermore, a critical appraisal was carried out using the Quality Assessment tool from Hawker and the classification of the total quality of the article and the article screening process

are stated in PRISMA. The appraisal process involved two independent reviewers who assessed each included study across nine domains: abstract and title, introduction and aims, method and data, sampling, data analysis, ethics and bias, results, transferability, and implications. Each domain was scored on a scale ranging from 1 (very poor) to 4 (good), resulting in a total score ranging from 9 to 36 for each study. Any discrepancies between reviewers were resolved through discussion until consensus was achieved. The results of the quality appraisal are summarized in Table X, which presents the individual scores for each study across all domains. The appraisal results were used to support the interpretation of findings, with greater emphasis placed on studies with higher methodological quality, although no studies were excluded based on quality scores, consistent with scoping review methodology. The flowchart in Figure 1.

### Data Charting

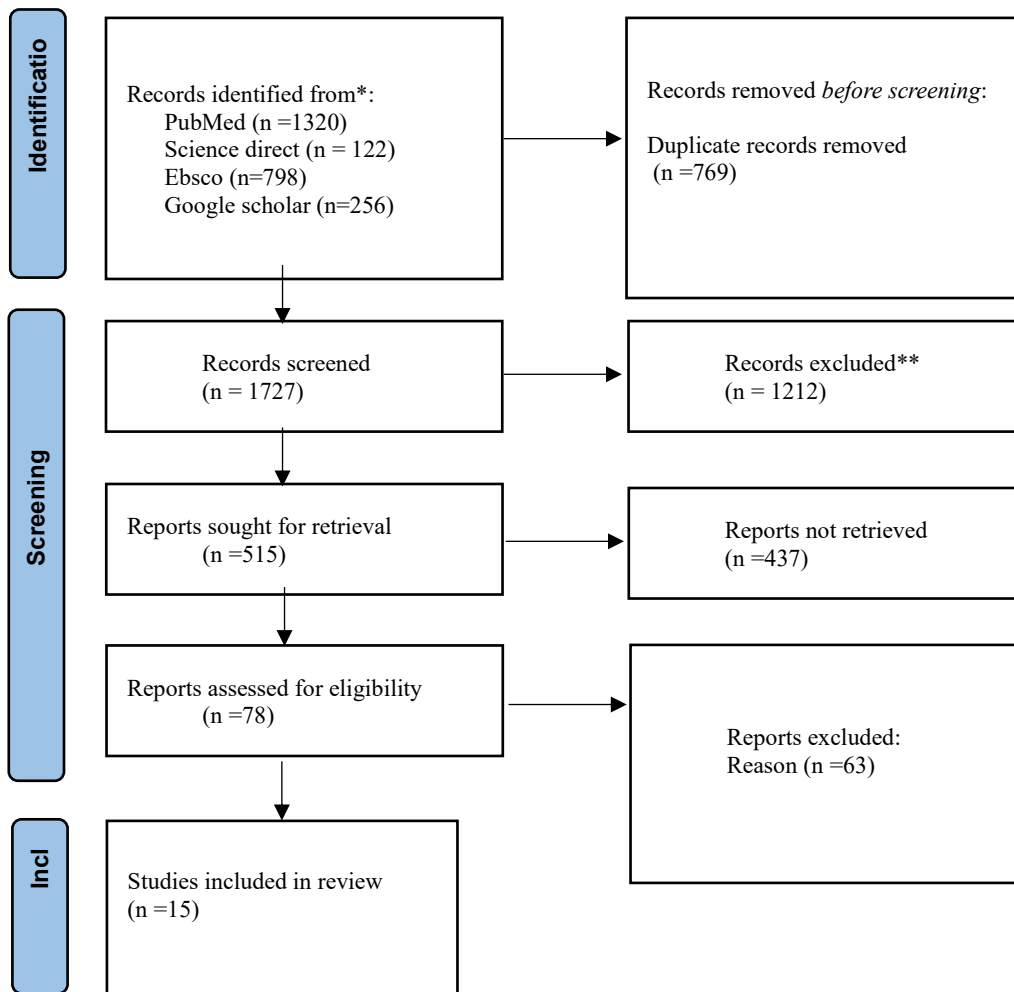


Figure 1. PRISMA Flow

### RESULTS

After searching through the Google Scholar, EBSCO, Science Direct and PubMed databases, the researchers obtained fifteen articles that were relevant to the research topic. These results can be seen in table 3.

**Table 3.** Results of Literature Review articles

Author/ Year	Objective	Sample	Method	Results
Morkphrom E, et al.,2021 (11)	Identifying factors associated with non-disclosure of HIV status.	Adult PLHIV	Cross-sectional	Self-esteem acts as a protective factor against non-disclosure to sexual partners.
Stutterheim SE, et al.,2021(12)	Analyzing the psychological correlates of HIV disclosure.	PLHIV	Cross-sectional	Self-esteem is significantly related to HIV status disclosure.
Agyemang (13)	Identifying predictors of self-esteem in adolescents with HIV.	139 ALHIV youth (Ghana)	Cross-sectional; questionnaire (including Rosenberg)	Shows the proportion of low self-esteem and its predictor factors in ALHIV.
Judd A (14)	Examining factors associated with ART nonadherence in perinatal YPLHIV.	Perinatal YPLHIV (England)	Observational; analysis of nonadherence predictors	Nonadherence related to psychosocial/quality of life factors; psychological variables including self-aspects (in the study).
Mathew RN(15)	Assessing the effect of interventions on self-esteem & self-efficacy of HIV+ adolescents.	HIV with Adolescents	Pre-Post Design Study	Self esteem and efficacy increased significantly after the intervention.
Nyamaruze (16)	Testing the self-esteem: ART adherence pathway (internal stigma mediation & body appreciation).	YPLHIV	Serial mediation analysis	The self-esteem-adherence relationship is indirect through internalized stigma (and a chain pathway with body appreciation).
Wei (17)	Test of the stigma: depression: suicidal ideation pathway, and the role of self-esteem as a moderator.	PLWHA (China)	Cross-sectional; moderated mediation	Depression mediates stigma-suicidal ideation; self-esteem buffers the pathway.
Small (18)	To relationship between mental health, stigma and self-esteem, in young PLHIV.	Young PLHIV (South Africa)	Observational	Stigma is related to self-esteem & mental health outcomes (generally negative direction).
Alford (19)	Linking HRQoL to cognitive symptoms; measuring self-esteem as a psychosocial variable.	PLWH (multisite)	Observational	Groups with cognitive impairment/symptoms tended to have lower HRQoL; self-esteem was measured as a psychosocial component.
Huang (20)	Assessing the role of social support, self esteem, self-efficacy on management behavior.	282 PLWHA (China)	Cross-sectional; SEM	Social support influences self-management; the effect is mediated by self-efficacy & self-esteem (including chain mediation).

Ndongo (21)	Testing mental disorder factors (including low self-esteem) with adherence/clinical outcomes.	PLHIV (clinical setting)	Observational	Low self-esteem and mental disorders are associated with worse clinical outcomes (e.g., detectable viral load/poor adherence).
Septanto (22)	Testing the relationship between self-esteem, stigma, social support and quality of life.	PLWH (Surabaya, Indonesia)	Cross-sectional correlational	Self-esteem & social support are related to QoL; self-esteem is an important factor that “determines” QoL in the analysis.
Warner (23)	Exploring the impact of the HIV status disclosure feature in the application on user experience (including self-esteem aspects).	App users (study context)	Qualitative study/social analysis (as per article)	Disclosure field influences social/psychological dynamics, including experiences of stigma & self-esteem.
Antelman (24)	Evaluation of social support on clinical outcomes.	HIV+ teenagers	Cohort	Participation increases self-esteem and viral suppression.
Okafor (25)	Identifying psychosocial determinants of HIV	Adult PLHIV	Mixed methods	Self-esteem and perceived control are strong predictors of disclosure; low self-esteem is associated with non-disclosure.

## DISCUSSION

### Mapping the Relationship between Self-Esteem and HIV Prevention Behavior

Self-esteem is a key psychosocial factor influencing HIV prevention behaviors in people living with HIV (PLHIV), such as status disclosure, antiretroviral therapy (ART) adherence, and safe sex practices. Studies indicate that PLHIV with higher self-esteem are more likely to disclose their HIV status to sexual partners, which helps reduce the risk of HIV transmission over time (11). Conversely, low self-esteem is often associated with non-disclosure, which increases the risk of transmission due to poor risk communication with partners (5, 6). The relationship between self-esteem and HIV prevention is also evident in ART adherence and viral suppression. Cohort studies and mediation analyses indicate that self-esteem plays a direct and indirect role in ART adherence through psychological mechanisms such as reduced internalized stigma, increased body appreciation, and more adaptive emotion regulation (24). PLHIV with low self-esteem are more susceptible to nonadherence, which results in viral suppression failure and poor clinical outcomes (12, 14). Furthermore, self-esteem is significantly correlated with safer sexual behaviors, particularly consistent condom use and the ability to negotiate risk with partners.

### Self-Esteem Indicators in PLHIV

Self-esteem indicators in people living with HIV are multidimensional and encompass cognitive, affective, and behavioral aspects. Cognitively, self-esteem is reflected in an individual's assessment of their value and meaning as a person living with HIV, including acceptance of their HIV status and perceptions of their ability to live a productive life. People living with HIV with positive self-esteem generally demonstrate greater self-acceptance and lower identity conflict due to their HIV status. Affectively, self-esteem is closely related to emotional conditions such as depression, anxiety, and suicidal ideation. Moderated mediation studies show that self-esteem functions as a buffering factor that weakens the impact of stigma on depression and suicidal ideation in PLHIV (16, 18). Low self-esteem is often part of comorbid mental disorders, impacting quality of life and maladaptive health behaviors. In the

behavioral dimension, indicators of self-esteem are evident through the ability of PLHIV to manage their treatment, participate in social support, and engage in self-empowerment activities. Participation in support groups, HIV youth clubs, and peer support programs has been shown to increase self-esteem while improving clinical outcomes and HIV prevention behaviors (26, 27).

### **Self-Esteem Assessment in PLHIV Research**

Self-esteem assessment in research on people living with HIV is generally conducted using standardized psychometric instruments, with the Rosenberg Self-Esteem Scale (RSES) being the most widely used. This instrument is widely applied to various groups of people living with HIV, including adolescents, young adults, and clinical populations, due to its good cross-cultural reliability and validity (13, 28). The RSES provides a global measure of self-esteem that is relevant for analyzing associations with HIV prevention behaviors.

In addition to quantitative approaches, several studies have combined self-esteem assessments with advanced analytical models such as structural equation modeling (SEM) and mediation analysis to elucidate the causal pathways between stigma, self-esteem, and HIV prevention behaviors (21, 23, 28). This approach reinforces the understanding that self-esteem often acts as a mediator or moderator, rather than simply a single independent variable (18, 26).

Qualitative and mixed-methods approaches have also been used to capture subjective experiences of self-esteem within broader social contexts, such as the use of dating apps and the dynamics of disclosure in digital spaces. These studies suggest that self-esteem assessments need to consider the socio-cultural and technological contexts that influence current interactions between people living with HIV (29). Therefore, self-esteem assessments should ideally be multimodal and contextual.

### **CONCLUSION**

Based on a synthesis of various studies, self-esteem has been shown to be a psychosocial determinant that plays a crucial role in shaping HIV prevention behaviors in people living with HIV (PLHIV). Higher self-esteem is consistently associated with disclosure of HIV status to partners, adherence to antiretroviral therapy (ART), safe sexual practices, and achieving viral suppression. Conversely, low self-esteem is closely associated with non-disclosure, treatment non-adherence, increased risk behaviors, and suboptimal clinical outcomes. These findings confirm that self-esteem not only influences the psychological well-being of people living with HIV but also has direct and indirect impacts on HIV prevention efforts.

The implication is that HIV prevention interventions need to integrate self-esteem-enhancing approaches as part of comprehensive and sustainable HIV services. Empowerment-based programs, peer support, stigma reduction, and psychosocial interventions have proven potential in strengthening self-esteem while promoting adaptive preventive behaviors. However, the limitations of predominantly cross-sectional designs and variations in socio-cultural contexts highlight the need for longitudinal research and controlled intervention trials in the future. A multidimensional approach linking self-esteem to stigma, social support, and mental health is key to improving the effectiveness of HIV prevention and the quality of life of people living with HIV.

### **AUTHOR CONTRIBUTION STATEMENT**

Kristiani was responsible for the research design, data collection, analysis, and drafting of the manuscript. Syamsul Arifin, Adi Nugroho, Ermina Istiqomah, Husaini Lenie Marlinae and Rusdi supervised the research process, contributed to the theoretical framework and literature review, and revised the manuscript critically for intellectual content.

### **CONFLICT OF INTEREST**

The authors declare that there are no conflicts of interest.

## **DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS**

Artificial intelligence tools were used to assist with language editing and grammar checking. No content generation, data analysis, or critical interpretation was performed by AI. All intellectual contributions are the sole responsibility of the authors. All research design, data collection, analysis, and interpretation were performed by the authors without AI assistance.

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