

Interventions to Reduce Self-Stigma Among People Living With HIV: A Systematic Review

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Over 4 decades into the global HIV pandemic, HIV-related self-stigma—a mindset of negative beliefs, thoughts, and behaviors a person holds about themselves—remains a major barrier to HIV treatment, management, and care. HIV-related self-stigma is a persistent public health threat and leads to depression and other mental health problems, lowers adherence to antiretroviral medication, and acts as a barrier to health services. Not enough is known about what interventions work and how they work to reduce self-stigma. We conducted a systematic review of existing interventions that address self-stigma among people living with HIV to address this gap. We searched PubMed, Embase, and Web of Science; used Covidence review software; dual-screened the results; extracted data from each included study; analyzed the data using Cochrane guidelines and the Template for Intervention Description and Replication Framework; and categorized the content based on emerging themes around the intervention/program. We included 35 studies in the review, with the majority (32/35, 91%) showing promise to reduce HIV self-stigma or components of self-stigma. Intervention approaches included working on thoughts, feelings, and beliefs through a range of cognitive-based, inquiry-based, and mindful-based techniques, often with a forward-looking goal-setting focus. However, comparison of studies was difficult with different definitions and understandings of self-stigma and different measurement scales. Many studies were small-scale and lacked sufficient in-depth descriptions. This study makes an important contribution to the field of HIV more broadly and HIV-related stigma, specifically, in proposing a common definition of self-stigma and providing in-depth descriptions of interventions in terms of content, type, level, and effectiveness.

Clinical Impact Statement

Not much is understood about the approaches or components of self-stigma interventions for people living with HIV and how they are measured. We examined these types of interventions and found that there is a wide range across 13 countries, most leading to positive impacts on people's lives. These interventions included cognitive-based, mindfulness, and inquiry-based techniques, reflective and creative bespoke training, and person-centered counseling approaches. Interventions mainly targeted the individual. This study provides an in-depth description of the curriculum content and the process of implementation for self-stigma interventions and suggests a common definition of self-stigma that would help us compare studies.

Keywords: self-stigma, internalized stigma, HIV, interventions, systematic review

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There are no competing interests for the authors of this systematic review.

With respect to gender, when the article was drafted, six authors self-identified as women and one author as a man. With respect to race, six authors self-identified as White European and one as Black African.

Our positionality statements follow: All authors recognize that positionality

influenced the study to some extent. All authors acknowledge their standpoint as educated adults living in high-income countries and have followed HIV-related stigma through educational and employment research opportunities. Previous work has been done in terms of stigma and interventions for people living with HIV by authors, and this is why this systematic review topic was chosen. The authors recognize the importance for this research and hope it encourages more in the same area.

Nadine Ferris France played an equal role in conceptualization, data curation, formal analysis, methodology, supervision, validation, visualization, writing—original draft, and writing—review and editing. Sophie Lyons played an equal role in data curation, formal analysis, project administration,

continued

HIV remains a major global public health issue, having claimed 40.4 million lives so far with ongoing transmission in all countries globally (World Health Organization, 2023). More than 4 decades into the global HIV pandemic, stigma remains a major barrier to HIV treatment, management, and care (Stackpool-Moore, Logie, et al., 2022; Stackpool-Moore, Nkosi, et al., 2022; van der Kooij et al., 2023). Stigma is a complex, multidimensional phenomenon and concept with many definitions, understandings, and approaches. Goffman (1963) defined stigma as “an attribute that is deeply discrediting,” which, in the view of others, serves to reduce the person who possesses it. Stigma emerges from a dynamic social process that is enacted and perpetuated through structures, organizations, communities, and individuals (Stangl et al., 2013). Much has been published about stigma as it relates to HIV and AIDS, mental illness, physical deformities, disability, and illness. However, much less is understood about reducing self-stigma, also called internalized, internal, or personal stigma (Pantelic, Sprague, & Stangl, 2019). Link et al. (1997) defined self-stigma as “the extent to which people endorse negative beliefs and feelings associated with their stigmatized attribute and apply them to self.”

A systematic review found that HIV-related stigma, including self-stigma, undermined HIV medication adherence by compromising general psychological processes (e.g., adaptive coping and social support; Katz et al., 2013). In the same review, 70% of the studies reported an association between HIV stigma and medication nonadherence (Katz et al., 2013). Self-stigma is experienced by people living with HIV (PLHIV) to a far greater extent than stigma received from the broader community (Ferris France et al., 2015; Kalichman et al., 2009).

While few in number, existing reviews provide a good foundation for synthesizing evidence regarding stigma/self-stigma interventions in PLHIV and affected key populations. Pantelic, Steinert, et al. (2019) synthesized such evidence focused exclusively on low- and middle-income countries. They excluded qualitative studies but included other study designs and any study that had a self-stigma outcome, even if this was not the intervention’s primary aim. In another systematic review, P. H. X. Ma et al. (2019) reviewed studies addressing stigma for PLHIV or family members that included psychosocially, cognitively, or behaviorally-oriented interventions that were experimental/quasi-experimental or pre-post design, with a self-stigma outcome. Studies without a quantitative component were excluded. Identified gaps from both these reviews include small sample sizes and a scarcity of qualitative intervention evaluations, as well as general gaps in reporting. Heterogeneity across studies has also been identified as a challenge in relation to comparing these interventions.

Other reviews in this area, such as Katz et al. (2013), assessed the relationship between HIV-related stigma and medication adherence; they mention self-stigma, although it was not the primary focus. Ferguson et al. (2022) focused on identifying frameworks, measures, and evaluations addressing internalized stigma and discrimination in

health care settings and stigma and discrimination at the legal or policy level, but not self-stigma interventions for PLHIV. Last, Stangl et al. (2023) reviewed intervention studies whose aim was specifically to address intersectional stigma and discrimination, and qualitative studies were excluded.

Both of the relevant systematic reviews mentioned above (P. H. X. Ma et al., 2019; Pantelic, Steinert, et al., 2019) were published about 5 years ago and, therefore, do not include the most recent literature. These need to be updated as the field of self-stigma in relation to HIV is growing exponentially, as are the interventions trying to address it. Additionally, there is growing recognition of self-stigma as one of the biggest barriers to adherence and to reaching the global HIV (95–95–95) targets (Joint United Nations Programme on HIV/AIDS, 2023). These stipulate that by 2025, 95% of all PLHIV know their HIV status, 95% of all people with diagnosed HIV infection are on sustained treatment, and 95% of all people on HIV treatment are virally suppressed (Joint United Nations Programme on HIV/AIDS, 2015). A PLHIV Global Stigma Index Report published in December 2023 reported that 86.4% of PLHIV worldwide experience internalized stigma, which affects their treatment outcomes (Global Network of People Living with HIV, 2023; Pantelic, Steinert, et al., 2019).

Our review includes studies on adolescents and young PLHIV, a group that was not adequately addressed in previous reviews. We also include all research designs—though P. H. X. Ma et al.’s (2019) review excluded qualitative research designs, they did recommend that future research focus more on qualitative studies to increase understanding of the voices of those most affected. Our study further adds to P. H. X. Ma et al.’s (2019) and Pantelic, Steinert, et al.’s (2019) reviews by including a detailed overview of the interventions—we provide an in-depth description of the interventions: the details of the curriculum as well as details on the practical approaches, level, theory, and dosage.

Therefore, while previous reviews have examined PLHIV, their friends, and family as well as high-risk population groups, they are not exclusive to self-stigma interventions, exclude certain study designs, and require updating and a more detailed reporting of the interventions. Our specific review question was: Looking at existing interventions that address self-stigma among PLHIV, what interventions work and how do they work?

Method

Search Terms

We identified and extracted studies from PubMed, Web of Science, and Embase databases up to April 15, 2024. These databases were chosen based on expert recommendations and also their relevance to the review question. Searches, using search strings, were conducted for titles and abstracts in databases (see Supplemental Material 1). The

validation, visualization, writing—original draft, and writing—review and editing. Ana Cioringa played an equal role in validation, visualization, writing—original draft, and writing—review and editing. Webster Mavhu played an equal role in validation, writing—original draft, and writing—review and editing. Iria Manas Miramontes played a supporting role in formal analysis, validation, and writing—review and editing. Elaine Byrne played an equal role in conceptualization, formal analysis, methodology, supervision, validation, visualization, writing—original draft, and writing—review and editing.

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search strings were developed using the Population, Intervention, Comparison/Control, Outcome, and Study method for keywords:

- Population: PLHIV, that is, any person who has been diagnosed with HIV and is living with it.
- Intervention: interventions or programs that aimed to address self/internalized stigma.
- Comparison/Control: some comparison before and after the intervention was included.
- Outcome: some measure of impact on self-stigma or its components was included.
- Study designs: All study designs.

All references were imported into Covidence reviewing software, and duplicates were removed.

Inclusion and Exclusion Criteria

The inclusion and exclusion criteria were set and agreed by all authors, and studies were only included if they met all inclusion criteria. The inclusion criteria were that the study included an intervention/program that:

1. focused on PLHIV
2. focused on the reduction of HIV/AIDS self-stigma
3. was described in sufficient detail to be replicable in some way, such as in terms of process, content, or method used
4. included a measure of self-stigma or ≥ 2 self-stigma components before and after the intervention
5. was published in English.

Studies were excluded if the article:

1. did not include an intervention/programme
2. was a protocol/proposal, review article, conference abstract, or poster.

The Template for Intervention Description and Replication Framework (Hoffmann et al., 2014) was used to ensure that all studies included met intervention description criteria, where possible (Supplemental Material 2).

Screening

Using Covidence, three authors (Sophie Lyons, Nadine Ferris France, Elaine Byrne) took part in the initial title and abstract screening and full-text screening, with at least two reviewers screening each article independently. The review was updated in May 2024. Two of the authors (Elaine Byrne, Iria Manas Miramontes) screened the title and abstracts, and three authors (Elaine Byrne, Iria Manas Miramontes, Nadine Ferris France) conducted the full-text screening. If there was a conflict, the third reviewer would review the article, and the full team discussed the outcome. Following title and abstract screening, full-text articles were uploaded for the remaining studies.

The full-text screening was completed by examining the articles for compliance with the inclusion/exclusion criteria. One of the authors (Sophie Lyons) cross-referenced articles in related systematic reviews with the articles we included. We also contacted authors, mainly via ResearchGate, when we could not find the full text for an article retrieved. Two reviewers independently reviewed each article in Covidence and conducted the quality review. Any and all conflict or clarification needed was discussed among three reviewers (Sophie Lyons, Nadine Ferris France, Elaine Byrne) before a final decision was made.

Data Extraction

The study data extraction form was developed to obtain a detailed description of the intervention/program and to obtain impact/evaluation details (Supplemental Material 3). We exported the extracted data into Excel for further data analysis and synthesis. Due to variability in the self-stigma definition, the different quantitative studies impact measurement scales, and interventions' heterogeneity, it was not possible to conduct a data meta-analysis. Instead, a metasynthesis of intervention content was conducted. The Cochrane Handbook Preferred Reporting Items for Systematic Reviews and Meta-Analyses checklist (Page et al., 2021) was used to ensure all systematic review aspects were included (Supplemental Material 4).

Results

Description of Included Studies

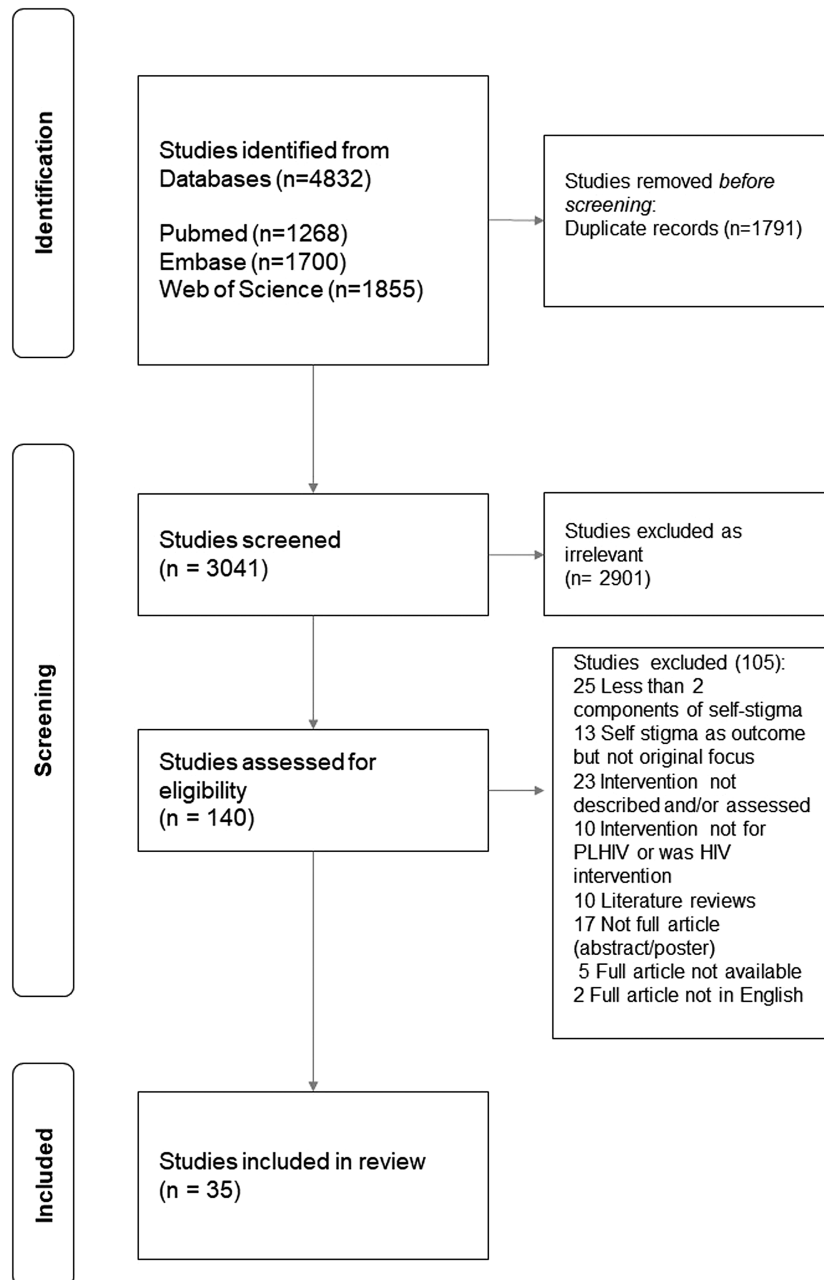
Our search yielded 4,832 results in total, 140 articles were included for full-text review, with 35 articles being fully extracted (Figure 1. See Supplemental Material 5 articles included in full text extraction).

Thirty-five interventions were described in the 35 articles (one article had two interventions, Nabunya et al., 2024; and two articles described the same intervention, Denison et al., 2020; Merrill et al., 2023). Fourteen (40%) interventions took place in America (13 in the United States, one in Guatemala), 14 (40%) in sub-Saharan Africa, four (11%) in Asia, two (6%) in Europe, and one (3%) in the Caribbean (see Table 1). Of the 35 studies, 11 (31.4%) were quasi-experimental, 12 (34.3%) were randomized control trials (RCTs), seven (20%) were mixed methods (MM), and five (14.3%) were qualitative. Six of the mixed methods studies and one RCT had a significant qualitative component included. Two articles describing the same intervention (Denison et al., 2020; Merrill et al., 2023) included an RCT and a qualitative study. There was a wide sample size range (5–699 participants; see Table 1).

Quality Assessment

Quality was assessed differently across study types (Supplemental Material 6) using the most commonly used checklists for particular research designs (L.-L. Ma et al., 2020). Research designs were classified as described by the authors. For qualitative ($n = 5$) and mixed methods studies ($n = 6$) and the RCT ($n = 1$) reporting a significant qualitative component, the Critical Appraisal Skills Programme (2024) was used. The main limitation highlighted by this checklist was the few articles that described or considered the relationship between researcher and participants explicitly. For RCTs

Figure 1
Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020
Flow Diagram



Note. PLHIV = people living with HIV.

($n = 11$), the risk of bias–2 revised tool was used (Higgins et al., 2011). A common limitation highlighted by this tool was the lack of discussion on who had access to the outcome results as well as whether the allocation to intervention or control group was effectively concealed. Often, the intervention arm included additional sessions/workshops for participants; they therefore identified themselves as part of the intervention group by attending. For one of the RCTs (Nabunya et al., 2024), the Consolidated Standards of Reporting

Trials checklist of information to include when reporting a pilot trial was used. In this case, there were a number of the checklist items not included. Quasi-experimental studies ($n = 11$) were assessed using the Joanna Briggs Institute Checklist for Quasi-Experimental Studies (nonrandomized experimental studies; Tufanaru et al., 2020)—six of these studies did not have a control group. The mixed methods studies ($n = 7$) were assessed using the mixed methods questions from the Critical Appraisal Skills Programme Mixed Methods Appraisal Tool

Table 1
Study Description

Article number	Study reference	Study design ^a	Country of intervention	How self-stigma or components of self-stigma were assessed	Intervention setting	Focus population	Sample size	Reported effect on self-stigma and components of self-stigma	Quality assessment—see Supplemental Material 5 for more detail
1	Barrington et al. (2021)	Mixed methods	Dominican Republic	Sociobehavioral surveys; Qualitative interviews	Clinic	Transgender female sex workers living with HIV	30 participants	Participants stressed that trust and being treated with respect allowed them to relax and improve their self-esteem.	Assessed with CASP Mixed Methods Appraisal Tool (MMAT) reveals two questions that are assessed with different methods but are not connected as an overall question that would require a mixed methods approach. Assessed with CASP Qualitative Research Checklist: Did not contain full details to address all required questions, namely: <ul style="list-style-type: none"> Were the data collected in a way that addressed the research issue? Has the relationship between researcher and participants been adequately considered? Have ethical issues been taken into consideration? Was the data analysis sufficiently rigorous?
2	Barroso et al. (2014)	Randomized control trial (RCT)	United States	Questionnaire including: Rosenberg Self-Esteem Scale (RSES); Coping Self-Efficacy Scale (CSES); Internalized HIV Stigma Scale (IHSS)	Clinic and home	Adult women living with HIV	99 participants	Treatment-by-time effect: <ul style="list-style-type: none"> improved self-esteem (intent-to-treat: $p = .0308$; completers: $p = .0284$) decreases in internalized stigma (intent-to-treat: $p = .0036$; completers: $p = .0060$), improved coping self-efficacy (intent-to-treat: $p = .0414$; completers: $p = .0321$). 	Assessed with risk of bias-2 (RoB-2) revised tool. All questions addressed adequately.
3	Bartels et al. (2022)	Longitudinal qualitative study	Guatemala	Longitudinal qualitative interviews	Clinic	Gay and bisexual men living with HIV	10 participants	A medium effect of the intervention in terms of improving self-esteem was observed when compared with the control condition in those who completed the study. Magnitude of the intervention effect, however, was large with regard to reducing overall stigma, improving social relationships, and decreasing stereotypes in both groups. Participants experienced changes in their view of self and diagnosis perceptions, improved physical and mental health, increased interest in sex and relationships, and a	Assessed with CASP Qualitative Research Checklist. All questions addressed adequately.

(table continues)

Table 1 (continued)

Article number	Study reference	Study design ^a	Country of intervention	How self-stigma or components of self-stigma were assessed	Intervention setting	Focus population	Sample size	Reported effect on self-stigma and components of self-stigma	Quality assessment—see Supplemental Material 5 for more detail
4	Batchelder et al. (2020)	Mixed methods	United States	Questionnaire including: HIV and Abuse-Related Shame Inventory (HARSI); Centre for Epidemiological Studies Depression Scale (CES-D); Qualitative interviews	Clinic	Adults living with HIV and with substance use disorders	10 participants (10 at baseline, eight completed intervention but five for post face-to-face sessions and five postintervention follow-up results)	<p>clarification of their life goals. The intervention helped participants reach diagnosis acceptance, improve self-esteem, and gain self-efficacy for managing life with HIV.</p> <p>Reporting largely on feasibility of intervention</p> <p>Some variables showed improvement (e.g., decreased impact on behavior over the entire period and decreased HIV-related shame higher post face-to-face but remaining lower than baseline postintervention) and others showing fluctuation (e.g., depression and self-compassion lower post face-to-face sessions but higher postintervention).</p> <p>Participants reported use of compassionate self-talk and changes in the way they thought about themselves (including experiencing less self-judgment).</p> <p>Some confusion of participants on self-compassion scale.</p>	<p>Assessed with CASP Mixed Methods Appraisal Tool (MMAT), and questions adequately addressed with case for MM made.</p> <p>Assessed with CASP Qualitative Research Checklist:</p> <p>Did not contain full details to address all required questions, namely:</p> <ul style="list-style-type: none"> • Was there a clear statement of the aims? • Has the relationship between researcher and participants been adequately considered? • Was the data analysis sufficiently rigorous?
5	Bryant et al. (2023)	Randomized control trial (RCT)	United States	Questionnaire including adapted: Internalized AIDS-Related Stigma Scale (IA-RSS); Berger HIV Stigma Scale (HSS)	Online	Women living with HIV	130	<p>Statistically significant differences were not observed for internalized stigma.</p>	Assessed with risk of bias-2 (RoB-2) revised tool. All questions addressed adequately.
6	Denison et al. (2022)	Randomized control trial (RCT)	Zambia	Questionnaire including: Internalized AIDS-Related Stigma Scale (IA-RSS)	Clinic	Adolescent men and women living with HIV and caregiver pairs	100 participants (50 pairs of adolescents and their caregivers)	<p>Adolescents in the intervention group showed a greater reduction in HIV-related feelings of worthlessness and shame than the comparison group—not statistically significant.</p>	Assessed with risk of bias-2 (RoB-2) revised tool. All questions addressed adequately except participants not blinded after allocation and blinding of outcome assessments not mentioned.
7	Denison et al. (2020)	Randomized control trial (RCT)	Zambia	Questionnaire including: Internalized AIDS-Related Stigma Scale (IA-RSS)	Clinic	Adolescent and young men and women living with HIV	273 participants (137 intervention, 136 comparison)	<p>Internalized stigma significantly reduced by a factor of 0.39 (interaction term $OR = 0.39$, 95% CI [0.21, 0.73]) in the intervention (50.4%–25.4%) relative to the comparison arm (45.2%–39.7%).</p>	Assessed with risk of bias-2 (RoB-2) revised tool. All questions addressed adequately except unclear on blinding of outcome assessments.
8	Edwards and Edwards (2009)	Quasi-experiment (quantitative)	South Africa	Questionnaire including: Ryff Psychological Well-Being Scale	Clinic	Adult men and women living with HIV	41 participants: 30 for the experimental group and 11 for control group	<p>Patients' psychological well-being scores indicated significant improvements in perceptions of autonomy, $F(1, 39) = 8.78$, $p = .01$, personal growth, $F(1, 39) = 65.69$, $p = .00$, environmental mastery, $F(1, 39) = 17.9$, $p = .00$, positive</p>	<p>Assessed with Joanna Briggs Institute (JBI) Checklist for Quasi-Experimental Studies. Questions adequately addressed except:</p> <ul style="list-style-type: none"> • The participants included in comparisons were not similar. • No mention of drop outs.

(table continues)

Table 1 (continued)

Article number	Study reference	Study design ^a	Country of intervention	How self-stigma or components of self-stigma were assessed	Intervention setting	Focus population	Sample size	Reported effect on self-stigma and components of self-stigma	Quality assessment—see Supplemental Material 5 for more detail
9	Erlén et al. (2001)	Randomized control trial (RCT)	United States	Questionnaire including: Centre for Epidemiological Studies Depression Scale (CES-D); Purpose in life test; Rosenberg Self-Esteem Scale (RSES); Ferrans and Powers Quality of Life Index (QLI)	Clinic	Adult men and women living with HIV	20 participants	relations with others, $F(1, 39) = 4.93, p = .03$, and self-acceptance, $F(1, 39) = 5.36, p = .03$, when compared with a conveniently selected, student control group. Within-groups analysis confirmed significant differences between the groups for purpose in life at posttest time only, $t(39) = 2.4, p = .02$. Treatment group: improved overall quality of life and self-esteem compared with the control group over 12 months; less depressive symptoms over 12 months; and a greater purpose in life after 3 months. The effects were medium to small effects.	Assessed with risk of bias-2 (RoB-2) revised tool. All questions addressed adequately except no blinding of participants and outcomes assessments after allocation.
10	Ferris France et al. (2023)	Qualitative	Zimbabwe	Qualitative interviews Focus group discussions Review of intervention documentation and creative elements	Hybrid—online and face to face in NGO	Adolescent and young men and women living with HIV	62 participants	Main themes that emerged were positive changes around: self-confidence, self-agency, sense of purpose/meaning, body positivity, improved communication and personal/family relationships, and forgiveness.	Assessed with CASP Qualitative Research Checklist. All questions addressed adequately.
11	Ferris France et al. (2019)	Mixed methods (sequential explanatory design)	Zimbabwe	Questionnaire including: Internalized AIDS-Related Stigma Scale (IA-RSS); the Center for Epidemiologic Studies Depression Scale (CES-D); HIV/AIDS Targeted Quality of Life Scale; Focus group discussions; Interviews	NGO	Adult men and women living with HIV	23 participants	Statistically significant improvements in self-stigma and depression postintervention, both at 1-month and 3-month timepoints. Participants reported greater positive mentality in the qualitative interviews and focus group discussions.	Assessed with CASP Mixed Methods Appraisal Tool (MMAT), and questions adequately addressed with case for MM made. Assessed with CASP Qualitative Research Checklist. All questions addressed adequately.
12	Flickinger et al. (2018)	Mixed methods	United States	Questionnaire including: Berger HIV Stigma Scale (HSS); Message analysis (qualitative)	Online	Adult men and women living with HIV	12 participants	12-month data showed a trend toward more improved stigma scores for posters on the community message boards versus nonposters (-4.5 vs. -0.63) and for posters of stigma-related content versus other content (-5.1 vs. -3.3).	Assessed with CASP Mixed Methods Appraisal Tool (MMAT), and questions adequately addressed with case for MM made. Assessed with CASP Qualitative Research Checklist. Did not contain full details to address all required questions, namely: (table continues)

Table 1 (continued)

Article number	Study reference	Study design ^a	Country of intervention	How self-stigma or components of self-stigma were assessed	Intervention setting	Focus population	Sample size	Reported effect on self-stigma and components of self-stigma	Quality assessment—see Supplemental Material 5 for more detail
13	Fuster-Ruiz de Apodaca et al. (2016)	Quasi-experiment (quantitative with a nonequivalent control group and pretest and posttest measures)	Spain	Questionnaire including: Revised Berger's HIV Stigma Scale using a 4-point Likert-like scale; Battery of Psychological Predictors of Well-Being and Quality of Life of People With HIV in Spain; Coping with Stigma Scale, Quality of Life Questionnaire	Not stated	Adult men and women living with HIV	221 participants in intervention and 57 in the control group	Reduction of perceived stigma and avoidance strategies and an increase in perceived self-efficacy to cope with stigma, self-esteem, and quality of life.	<ul style="list-style-type: none"> Has the relationship between researcher and participants been adequately considered? Have ethical issues been taken into consideration? Assessed with Joanna Briggs Institute (JBI) Checklist for Quasi-Experimental Studies. All questions adequately addressed.
14	Harding et al. (2019)	Randomized control trial (RCT)	Tanzania	Questionnaire including: Brief Symptom Inventory (BSI); Rosenberg Self-Esteem Scale (RSES); Strengths and Difficulties Questionnaire (SDQ); Self-Efficacy Questionnaire for Children (SEQC); Focus group discussion	Clinic	Children living with HIV	48 participants	2 weeks post baseline intervention effects were found on: Rosenberg Self-Esteem Scale (SES) $d = 0.65$, $p = .001$; self-efficacy questionnaire for children both "social" and "emotional" subscales, $d = 0.54$, $p = .008$ and $d = 0.63$, $p = .002$, respectively. At 9 weeks post baseline, significant effects remained for all measures, and SES effect increased from medium to large ($T1 = 0.65$, $T2 = 1.33$).	Assessed with risk of bias-2 (RoB-2) revised tool. All questions addressed adequately. Also assessed with CASP qualitative study for qualitative component. Did not contain full details to address all required questions, namely: <ul style="list-style-type: none"> Has the relationship between researcher and participants been adequately considered? Was the data analysis sufficiently rigorous?
15	Harper et al. (2014)	Quasi-experiment (pre-posttest on accessibility and feasibility pre RCT)	United States	Questionnaire including: Berger's HIV Stigma Scale (HSS); HIV/AIDS Targeted Quality of Life Scale	Clinic	Adolescents and young adults living with HIV	50 participants	Overall reductions in stigma (three dimensions: personalized stigma, disclosure concerns, and negative self-image). Only the combined-sample effects for negative self-image were maintained at 3-month follow-up.	Assessed with Joanna Briggs Institute (JBI) Checklist for Quasi-Experimental Studies. All questions adequately addressed, but no control group.
16	Lennon-Deuring and Hirschi (2019)	Quasi-experiment (pre-posttest with one qualitative evaluation question at posttest)	United States	Questionnaire including: Rosenberg Self-Esteem Scale (RSES); Coping Self-Efficacy Scale (CSES); Patient Health Questionnaire-9 (PHQ-9); One additional open-ended question	Not stated	Adult women living with HIV	23 participants	Self-esteem increased from pretest ($M = 23.18$, $SD = 4.61$) to posttest ($M = 24.71$, $SD = 3.64$). Self-efficacy increased from pretest ($M = 182.06$, $SD = 42.29$) to posttest ($M = 209.24$, $SD = 37.37$).	Assessed with Joanna Briggs Institute (JBI) Checklist for Quasi-Experimental Studies. All questions adequately addressed, but no control group and unclear on follow-up.

(table continues)

Table 1 (continued)

Article number	Study reference	Study design ^a	Country of intervention	How self-stigma or components of self-stigma were assessed	Intervention setting	Focus population	Sample size	Reported effect on self-stigma and components of self-stigma	Quality assessment—see Supplemental Material 5 for more detail
17	Mathew and Manjula (2022)	Quasi-experiment (quantitative)	India	question during postassessment Questionnaire including: Rosenberg Self-Esteem Scale; General Self-Efficacy Scale (GSE)	Clinic	Adolescent boys and girls (12–17 years old) living with HIV	97 participants	There is a significant improvement in the level of self-esteem ($t = 21.154$; $p < .001$) and self-efficacy ($t = 6.036$; $p < .001$) postintervention in the experimental group, and no such improvement was observed on both the variables in control group.	Assessed with Joanna Briggs Institute (JBI) Checklist for Quasi-Experimental Studies. All questions adequately addressed.
18	Merrill et al. (2023)	Qualitative (substudy of Denison et al., 2020, RCT)	Zambia	Qualitative interviews	Clinic	Adolescent and young men and women living with HIV	276 in intervention—40 interviewed in this substudy	Many of the participants cited changes in behavior in the context of greater feelings of self-worth and acceptance of their HIV status, resulting in less shame and fear associated with living with HIV. Youth also attributed Project Youth Engaging for Success! with reducing their sense of isolation. The predominant themes emerging across the in-depth interview concerned youths': (a) increased motivation for HIV care, (b) reduced feelings of shame and fear and enhanced self-worth, and (c) greater sense of community.	Assessed with CASP Qualitative Research Checklist: Contained sufficient detail to address all questions except: • Has the relationship between researcher and participants been adequately considered?
19	Mundell et al. (2011)	Quasi-experiment	South Africa	Questionnaire including: Rosenberg Self-Esteem Scale (RSES); Center for Epidemiologic Studies Depression scale (CES-D); Modified version of the brief Coping Orientation to Problems Experienced Inventory; Multidimensional Social Support Inventory	Clinic	Pregnant women living with HIV	361 participants (144 in intervention and 217 control)	Those who attended at least half of the intervention sessions exhibited improved self-esteem ($t = 2.11$, $p < .05$).	Assessed with Joanna Briggs Institute (JBI) Checklist for Quasi-Experimental Studies. All questions adequately addressed, but no control group.
20	Nabunya et al. (2024)	Pilot cluster randomized trial (three arm)	Uganda	Primary: Berger HIV Stigma Scale (HSS); nine items measuring internalized and anticipated stigma) and anticipated stigma) Secondary: Child Depression Inventory (14 item); Beck Hopelessness Scale; Tennessee Self-Concept Scale	Clinic	Children (10–14) and caregivers	89 children-caregiver dyads ($n = 178$)	Significant intervention main effects for internalized stigma ($c2 = 14.85$, $p < .01$) and anticipated stigma ($c2 = 8.80$, $p = .012$) Multiple family group-based family strengthening intervention reported significantly lower levels of internalized stigma at 3 months (mean difference = 0.008, 95% CI [0.015, 0.001], $p = .025$) compared with usual care. Group-based cognitive behavioral therapy intervention reported lower levels of anticipated stigma (mean	Assessed with Consolidated Standards of Reporting Trials checklist of information to include when reporting a pilot trial. Significant gaps in information.

(table continues)

Table 1 (continued)

Article number	Study reference	Study design ^a	Country of intervention	How self-stigma or components of self-stigma were assessed	Intervention setting	Focus population	Sample size	Reported effect on self-stigma and components of self-stigma	Quality assessment—see Supplemental Material 5 for more detail
21	Nestadt et al. (2019)	Randomized control trial (RCT)	Thailand	Questionnaire including: Strengths and Difficulties Questionnaire; Children's Depression Inventory; Perceived Stigma of HIV/AIDS Scale	Clinic	Adolescent men and women living with HIV	88 families	difference = 0.039, 95% CI [0.072, 0.006], $p = .013$) compared with usual care at 6-month follow-up. Significant group main effects for depressive symptoms ($\zeta^2 = 49.88, p < .001$) and self-concept ($\zeta^2 = 15.40, p < .001$). The study was not statistically powered to detect differences in treatment effects; the Collaborative HIV Prevention and Adolescent Mental Health Program+ group significantly improved at 6 months in youth mental health.	Assessed with risk of bias-2 (RoB-2) revised tool. All questions addressed adequately except no blinding of participants and outcomes assessments after allocation.
22	Nyamathi et al. (2013)	Cluster randomized control trial (RCT)	India	Questionnaire including: Internalized HIV Stigma Scale (IHSS); Center for Epidemiologic Depression Scale (CES-D)	Clinic	Women living with HIV	68 participants	Reductions in internalized stigma from baseline to 6-month follow-up were associated with participation in the intervention. (Internalized stigma $M = 3.25, SD = 0.8$, range = 1.5–4 at baseline; $M = 1.11, SD = 0.1$, range = 1–1 at 6-month interval).	Assessed with risk of bias-2 (RoB-2) revised tool. All questions addressed adequately, but unclear on concealment before allocation.
23	Peltzer et al. (2018)	Cluster randomized control trial (RCT)	South Africa	Questionnaire including: Berger's HIV Stigma Scale (HSS)	Clinic	Pregnant women living with HIV	699 participants	Baseline scores of overall HIV related stigma and the four scale factors (personalized stigma, disclosure concerns, negative self-image, and concern public attitudes) decreased at follow-up in the intervention group. (Personalized stigma: baseline: intervention $M = 32.5, SD = 10.9$, control mean = 33.5, $SD = 8.8, p < .001$; postintervention: intervention $M = 31.4, SD = 10.3$, control mean = 35.3, $SD = 11.7$).	Assessed with risk of bias (RoB-2) revised tool. All questions addressed adequately, but unclear on concealment before allocation.
24	Peterkin et al. (2013)	Quasi-experiment (pre-posttest — quantitative)	United States	Questionnaire including: Rosenberg Self-Esteem Scale (RSES); Stanford Emotional Self-Efficacy Scale; Silencing the Self Scale; Open-ended questionnaire	Clinic	Adult men living with HIV	31 participants	There was a trend toward an increase in participants' self-reported emotional self-efficacy ($p = .03$) and a significant increase in self-esteem ($p = .01$).	Assessed with Joanna Briggs Institute (JBI) Checklist for Quasi-Experimental Studies. All questions adequately addressed, but no control group.
25	Pichon et al. (2022)	Qualitative	United States	Qualitative interviews; Focus group discussions	Community	Adult men and women living with HIV	47 participants in Session 1 and 34 in Sessions 2 and 3	Photovoice-facilitated discussion topics ranging from healing and recovery to overcoming factors of social determinants of HIV. A safe space for discussion was created.	Assessed with CASP Qualitative Research Checklist. All questions addressed adequately.
26	Rao et al. (2012)	Quasi-experiment (pre-posttest without a	United States	Questionnaire including: Stigma Scale for Chronic Illness (SSCI)	Clinic	Adult women living with HIV	24 participants	Led to decreased stigma from the start of the workshop to the end ($p = .05$) and 1 week after ($p = .07$) the last session of workshop.	Assessed with Joanna Briggs Institute (JBI) Checklist for Quasi-Experimental Studies. All questions adequately addressed, but no control group.

(table continues)

Table 1 (continued)

Article number	Study reference	Study design ^a	Country of intervention	How self-stigma or components of self-stigma were assessed	Intervention setting	Focus population	Sample size	Reported effect on self-stigma and components of self-stigma	Quality assessment—see Supplemental Material 5 for more detail
27	Skinta et al. (2015)	control—quantitative) Mixed methods	United States	Questionnaire including: Internalized HIV Stigma Scale; Qualitative interview	Clinic	Gay or bisexual men living with HIV	Five participants	The three participants who had attended every follow-up session indicated some benefit from the group. Participants reported some change in their experience of HIV related to the group.	Assessed with CASP Mixed Methods Appraisal Tool (MMAT) reveals two questions that are assessed with different methods but are not connected as an overall question that would require a mixed methods approach. Assessed with CASP Qualitative Research Checklist. Did not contain full details to address all required questions, namely: <ul style="list-style-type: none"> • Was the recruitment strategy appropriate to the aims of the research? • Were the data collected in a way that addressed the research issue? • Has the relationship between researcher and participants been adequately considered? • Have ethical issues been taken into consideration? • Was the data analysis sufficiently rigorous? • Is there a clear statement of findings? • How valuable is the research?
28	Smith Fawzi et al. (2019)	Stepped-wedge randomized controlled trial (RCT)	Tanzania	Questionnaire including: Rosenberg Self-Esteem Scale (RSES); General Self-Efficacy Scale (GSE)	Urban primary school	Adult men and women living with HIV	458 recruited (390 received intervention across the three steps)	For change agents: higher self-esteem, self-efficacy, and self-efficacy for safer sex. For network members: an increase in self-esteem was observed ($p = .04$); however, no change was observed for self-efficacy or self-efficacy for safer sex.	Assessed with risk of bias-2 (RoB-2) revised tool. All questions addressed adequately, though not double blind study, small sample sizes and possible contamination across steps, but these are acknowledged as limitations of the study.
29	Soro et al. (2021)	Quasi-experiment	Spain	Questionnaire including: Battery of Psychological Predictors of Well-Being and Quality of Life of People With HIV in Spain (10 items); Beck's Depression Inventory-II; State-Trait Anxiety Inventory	Government administration building in Spain	Adult and adolescent men and women living with HIV	50 participants: 26 in the therapy group and 24 in the control group	Declared stigma decreased significantly in the therapy group at the end of treatment ($p = .050$). Internalized stigma decreased significantly at the end of treatment ($p = .005$)—effect sizes were large.	Assessed with Joanna Briggs Institute (JBI) Checklist for Quasi-Experimental Studies. All questions adequately addressed.
30	Suyanti et al. (2018)	Quasi-experiment (pre-posttest)	Indonesia	Questionnaire including: Internalized Stigma of AIDS Tools (ISAT)	Not stated	Women living with HIV	60 participants	Significant decrease in self-stigma and depression ($p < .05$) in participants undergoing the proposed intervention.	Assessed with Joanna Briggs Institute (JBI) Checklist for Quasi-Experimental Studies. All questions adequately addressed, but no control group.

(table continues)

Table 1 (continued)

Article number	Study reference	Study design ^a	Country of intervention	How self-stigma or components of self-stigma were assessed	Intervention setting	Focus population	Sample size	Reported effect on self-stigma and components of self-stigma	Quality assessment—see Supplemental Material 5 for more detail
31	Tsai et al. (2017)	Longitudinal qualitative study (substudy of main RCT)	Kenya	In-depth interviews	Home	Adult men and women living with HIV	54 participants	At follow-up, participants in the treatment arm described less stigma and voiced positive changes in confidence and self-esteem.	Assessed with CASP Qualitative Research Checklist. All questions addressed adequately.
32	Tshabalala and Visser (2011)	Mixed methods	South Africa	Questionnaire including: The Brief Cope Scale; The Serithi Internalized Stigma Scale; Enacted stigma 3-point scale; Rosenberg Self-Esteem Scale; The Beck Depression Inventory-II; Interviews; Focus group discussions; Therapy transcripts	Clinic	Adult women living with HIV	20 participants randomly assigned to experimental and control group	The women in the experimental group reported less negative ways of coping ($p < .05$), lower depression ($p < .001$), and lower internalized stigma ($p < .05$), as well as more positive ways of coping ($p < .05$) and higher levels of self-esteem ($p < .01$) than the control group. There was no change in the enacted stigma scores in both groups. The women in the experimental group reported less negative ways of coping ($p < .05$), lower depression ($p < .001$), and lower internalized stigma ($p < .05$), as well as more positive ways of coping ($p < .05$) and higher levels of self-esteem ($p < .01$) than the control group. There was no change in the enacted stigma scores in both groups. Qualitatively, change in thought patterns and behavior was observed in all of the women. They grasped that HIV will not cause their immediate death and that they can still live a healthy life. Their self-perception changed and the way they interpreted others' perception of them.	Assessed with CASP Mixed Methods Appraisal Tool (MMAT), and questions adequately addressed with case for MM made. Assessed with CASP Qualitative Research Checklist. Contained responses to nearly all questions except: <ul style="list-style-type: none"> Has the relationship between researcher and participants been adequately considered?
33	Uys et al. (2009)	Mixed methods	Lesotho, Malawi, South Africa, Swaziland (Eswatini), and Tanzania	Questionnaire including: HIV/AIDS Stigma Instrument—people living with HIV/AIDS (HASI-P); General Self-Efficacy Scale (GSE); Rosenberg Self-Esteem Scale (RSES); Written report (qualitative); Semistructured interviews	Clinic	Adult men and women living with HIV	41 participants	People living with HIV who participated in the project showed a significant reduction in overall perceived stigma ($t = 3.16, df = 40, p = .003$). Their self-esteem changed significantly ($t = 2.57, df = 40, p = .014$), but not their self-efficacy. Nurses who participated on the intervention teams demonstrated no change in stigma and no significant difference in self-esteem or self-efficacy.	Assessed with CASP Mixed Methods Appraisal Tool (MMAT) reveals two questions that are assessed with different methods but are not connected as an overall question that would require a mixed methods approach.

(table continues)

Table 1 (continued)

Article number	Study reference	Study design ^a	Country of intervention	How self-stigma or components of self-stigma were assessed	Intervention setting	Focus population	Sample size	Reported effect on self-stigma and components of self-stigma	Quality assessment—see Supplemental Material 5 for more detail
34	Vaughan and Kinnier (1996)	Quasi-experiment (pre-posttest with control)	United States	Questionnaire including: Rosenberg Self-Esteem Scale (RSES)	Clinic	Adult men and women living with HIV	27 participants	Although analyses revealed no significant differences between the interventions, statistical trends and participants' written evaluations favored the life review intervention. Attrition was a significant problem.	Assessed with Joanna Briggs Institute (JBI) Checklist for Quasi-Experimental Studies. All questions adequately addressed.
35	Yigit et al. (2020)	Randomized control trial (RCT)	United States	Questionnaire including: Revised Berger's HIV Stigma Scale; the Patient Health Questionnaire-8 (PHQ-8) depression scale	Clinic	Adult men and women living with HIV	371 participants randomly assigned to control or intervention group (1:1)	The decrease in internalized stigma from baseline to 48 weeks was significantly larger in the intervention arm compared with the control arm. (Internalized HIV stigma: intervention at baseline, $M = 2.32$, $SD = 0.75$, $p = .000$, and follow-up, $M = 2.11$, $SD = 0.68$; control arm baseline, $M = 2.27$, $SD = 0.75$, and follow-up, $M = 2.23$, $SD = 0.77$, $p = .514$, respectively).	Assessed with risk of bias-2 (RoB-2) revised tool. All questions addressed adequately, but blinding of participants until baseline conducted and unclear on blinding of outcome assessment.

Note. CASP = Critical Appraisal Skills Programme; OR = odds ratio; CI = confidence interval; NGO = nongovernmental organization; MM = mixed methods; T1 = 2 weeks following intervention; T2 = 9 weeks from T0; T = time period; T0 = baseline.
^a Study designs were classified according to the authors' classification.

(Hong et al., 2019), but in half (50%) of the studies, the qualitative component focused on intervention evaluation while the quantitative assessed intervention impact. In every case, at least two authors assessed different research designs using the checklist.

Description of Interventions

There was considerable divergence across the reported studies. The Template for Intervention Description and Replication Checklist (Hoffmann et al., 2014) guided our analysis of interventions to systematically understand their content. While it was possible to extract some information from each described intervention and complete the checklist, there were often significant gaps in the level of detail provided in the published studies to describe the studies to the same level of detail. However, we were able to describe the content of the interventions in a number of areas, which are expanded on below: theoretical basis; level of implementation; intervention participants; intervention approaches, content, and delivery; intervention setting and implementation; and reported effectiveness of intervention (see Table 2).

Theoretical Basis

Interventions were not consistently embedded within a theoretical framework. Of those that used a theoretical framework, these included the five Cs of Positive Youth Development (i.e., competence, confidence, connection, character, caring; Denison et al., 2020; Merrill et al., 2023), the theory of logotherapy (Vaughan & Kinnier, 1996) and the Comprehensive Health Seeking and Coping Paradigm (Nyamathi et al., 2013), social action (Nestadt et al., 2019), various narrative therapies (Harding et al., 2019; Peterkin et al., 2013), social cognitive theory (Harper et al., 2014), inquiry-based stress reduction (Ferris France et al., 2019, 2023), appreciative inquiry framework (Smith Fawzi et al., 2019), acceptance and commitment therapy (Mathew & Manjula, 2022), Beck's cognitive model (Tshabalala & Visser, 2011), and empowerment social learning theory (Rao et al., 2012). One intervention used the 4Rs and 2S (rules, responsibility, relationship, respectful communication, stress, and social support; Nabunya et al., 2024), and one intervention used a systems theory perspective (Mundell et al., 2011).

Level of Implementation

Similar to Pantelic, Sprague, and Stangl (2019), we used the four levels of the socioecological model: individual, family/relationship, community, and society to assess the level of focus the intervention targeted. Allocation to levels was based on the intervention description—where level was not explicitly discussed, the reviewers allocated the level based on the description given in the article. Interventions whose objectives or content focused on the personal level were classified as “individual.” Those interventions that included topics about relationships and/or family were classified as “family.” Interventions that addressed topics outside of the household but within the immediate environment of the individual were classified as “community.” Interventions that addressed societal factors such as human rights, legal empowerment, or working with the health care system, for example, were classified as “societal.” Interventions that were classified as addressing more than one level can be recognized as multilevel interventions. We found 19 individual-level only

interventions, six individual- and family-level, five individual-, family-, and societal-level, three individual- and societal-level, and two societal-level only. No intervention targeted the community level.

Figure 2 shows the socioecological levels at which the interventions included in this review operated. As 19/35 (55%) interventions targeted the individual, impact was measured largely at this level. Sixteen (45%) operated at the individual and at least one other level, but impact was not measured beyond the individual level. For example, the impact on the individual who participated was assessed, but not that on their family members or society.

Intervention Participants

PLHIV were the target group, with interventions targeting the following subgroups within this population (see Table 2):

- Both adult men and women living with HIV ($n = 12$).
- Adults living with HIV and with substance use disorders ($n = 1$).
- Only adult men living with HIV ($n = 1$).
- Gay and bisexual men living with HIV ($n = 2$).
- Only adult women living with HIV ($n = 6$) and pregnant ($n = 2$).
- Transgender female sex workers living with HIV ($n = 1$).
- Adult and adolescent men and women living with HIV ($n = 1$).
- Adolescent and young men and women living with HIV ($n = 6$).
- Children living with HIV ($n = 3$).

Intervention Approaches, Content, and Delivery

Interventions showed substantial divergence in terms of overall approaches and content (see Table 2). An initial inductive analysis was carried out by in-depth reading and review of the interventions themselves, including approaches, elements used, dosage, and frameworks referred to. Using previous systematic reviews (P. H. X. Ma et al., 2019; Pantelic, Steinert, et al., 2019) as a guidance, we developed six broad categories of approaches and then through deductive analysis, classified each intervention to the most appropriate category:

1. Traditional cognitive behavioral therapy (CBT) includes interventions that specifically use the methodology of CBT (Bartels et al., 2022; Nabunya et al., 2024; Peltzer et al., 2018; Soro et al., 2021; Soroka et al., 2018; Tshabalala & Visser, 2011).
2. Multipronged cognitive and mindfulness-based approaches: This includes programs that bring in third wave psychological approaches—mindfulness, self-inquiry, awareness, such as acceptance and commitment therapy (Skinta et al., 2015), inquiry-based stress reduction (Ferris France et al., 2019, 2023), combined CBT, awareness, motivational interviewing with creative elements such as music, art, and drama

(Mathew & Manjula, 2022), combined coaching and motivational interviewing (Yigit et al., 2020), educational information (Fuster-RuizdeApodaca et al., 2016). One intervention combined logotherapy commitment, acceptance therapy, and family psychoeducation (Suyanti et al., 2018). One intervention used appreciative inquiry—a structured approach to positively framed questions (Smith Fawzi et al., 2019), and one of the interventions in this category was mobile phone-delivered (Batchelder et al., 2020).

3. Reflective and creative: These included drawing on creative expression such as narrative therapy and narrative competence therapy (Harding et al., 2019; Peterkin et al., 2013), photovoice (Lennon-Dearing & Hirschi, 2019; Pichon et al., 2022), and life review (Erlen et al., 2001; Vaughan & Kinnier, 1996).
4. Bespoke training: These included informational elements such as discussions, role-play, and reflective activities (Denison et al., 2022; Harper et al., 2014), cartoons and structured discussion (Nestadt et al., 2019), discussion and journaling with sharing of experiences (Denison et al., 2020), structured discussions with sharing and support (Nabunya et al., 2024), and an educational video series (Barroso et al., 2014). One study included a short film (Bryant et al., 2023). Two interventions utilized structured peer support group meetings, drawing upon games, role-plays, storytelling, case studies, and sharing of experiences (Mundell et al., 2011; Rao et al., 2012). One intervention combined accompaniment to health facilities and provision of food with the training (Nyamathi et al., 2013).
5. Traditional person-centered counseling includes interventions that specifically use a person-centered counseling methodology (Barrington et al., 2021; Edwards & Edwards, 2009).
6. Other: These included a livelihood intervention (Tsai et al., 2017), an information-giving intervention (Uys et al., 2009), and a mobile health empowerment intervention (Flickinger et al., 2018).

Overall, curricula focused on social support/relationship building, medication adherence/HIV knowledge, goal setting, coping skills, disclosure fears, and communication skills, and were delivered in group settings. However, the approaches used to cover these topics varied and included cognitive-based approaches, group discussions, role-plays, and more bespoke methodologies. Many of the studies did not include detailed descriptions of the interventions, which not only made it difficult to understand the content but also how it was delivered. Intervention details, including curricula summaries for interventions, are included in Table 2.

Intervention Setting and Implementation

Twenty-three interventions were delivered within health care/professional settings (clinics $n = 22$ and clinic and home $n = 1$). Four were in settings such as a nongovernmental organization, government administration building, and convenient locations in the community. One was home-based, two were online, and one was hybrid online

Table 2
Intervention Details

Article number	Author	Curricula at a glance	Trained facilitator	Ecological model level	Intervention category	Dosage of intervention	Homework
1	Barrington et al. (2021)	Individual sessions: including HIV care and treatment, adherence, sexual health, relaxation and stress management, violence, substance use, and life plans. Self-esteem was a cross-cutting theme in all sessions. Peer navigation: emotional, informational, and instrumental support for HIV care and treatment adherence. Community mobilization: social interaction develop trust, skill development, and economic opportunities.	A trained cisgender Dominican woman with a background in psychology.	Individual and society	Traditional person-centered counseling	Eight individual counseling sessions, with continued peer and community navigation	No
2	Barroso et al. (2014)	45-min video presenting vignettes of five seropositive women and the ways in which stigma has affected their lives.	Untrained	Individual	Bespoke training	Watch a 45-min video weekly for 4 weeks + as much or as little as desired for Weeks 5–12	No
3	Bartels et al. (2022)	Session 1: social support and discrimination Session 2: adherence, addictions, and HIV knowledge Session 3: sexual health, diagnosis disclosure, and partner relationships Session 4: developing a life plan Session 1: review emotion glossary, differentiating self-conscious emotions. Introduce self-compassion and compassionate self-statements Session 2: introduce metacognitive awareness and cognitions and mindfulness Session 3: metacognitive awareness, cognitive reframing, and self-compassion Session 4: reflect on how emotions and thoughts impact behavior. Practice awareness about oneself in relation to self-care. Revisit cognitive reframing Session 5: review content covered over all sessions and practice exercises	Therapists and cotherapist used for therapeutic group	Individual and family	Traditional cognitive behavioral therapy (CBT)	Four individual health education and counseling sessions	No
4	Batchelder et al. (2020)		Not specified	Individual	Multipronged cognitive and mindfulness-based approach	Five individual sessions (1 hr each)	No

(table continues)

Table 2 (continued)

Article number	Author	Curricula at a glance	Trained facilitator	Ecological model level	Intervention category	Dosage of intervention	Homework
		Followed by a personalized bidirectional text component through which participants received their personalized compassionate self-statements, informed by the intervention content, in response to their answers to emotion queries for 8 weeks after the five sessions.					
5	Bryant et al. (2023)	Short film—content of the film not included	Untrained	Individual	Bespoke training	Not specified	No
6	Denison et al. (2022)	Session 1: understanding HIV Session 2: disclosure Session 3: treatment and adherence Session 4: nutrition and self-care Session 5: growing and changing Session 6: communication Session 7: sex and relationships Session 8: sexual health and positive prevention Session 9: handling stigma and discrimination Session 10: support network (adolescents)	Health care providers at each clinic underwent a weeklong training and facilitated the 10 sessions held every other Saturday at their HIV clinic over a 6-month period.	Individual, family, and society	Bespoke training	Experimental group = 10 group sessions, control group = usual care	No
7	Denison et al. (2020); Merrill et al. (2023)	Session 1: orientation meeting with a health care provider, their assigned youth peer mentor, and an adult caregiver One-on-one meetings: X six Group meetings: knowledge and skills to support their youth living with HIV.	Youth peer mentors were trained and hired	Individual	Bespoke training	Orientation meeting, monthly group meetings (12 sessions, One Individual × 6 months; One Group × 6 months)	Journals used to track adherence and reflect on journeys
8	Edwards and Edwards (2009)	Optional caregiver support groups Sessions 1–6: definition and discussion of the everyday lived experience and improvement of each particular psychological well-being dimension	Trained—psychologist and nursing personal	Individual	Traditional person-centered counseling	Six hourly sessions—one per day.	No
9	Erlén et al. (2001)	Session 1: childhood years Session 2: focused on topics related to adolescence Session 3: focused on the adult years Session 4: summary, evaluation of the person's life as described during life review, and the termination component of life review	Researchers took part in the study but no mention of formal training	Individual	Reflective and creative	Data collection session, four life review sessions lasting 1–2 hr.	No
10	Ferris France et al. (2023)	Session 1: self-stigma, emotions, and me Session 2: the power of thinking Session 3: introducing inquiry Session 4: judgments of HIV	Trained local coaches, previously trained in IBSR, themselves adults living with HIV, codelivered the	Individual and family	Multipronged cognitive and mindfulness-based approach	16 × 3-hr group sessions (hybrid) and 10 × 7-hr group sessions	Yes—activity journal that consisted of worksheets and exercises. WhatsApp support (table continues)

Table 2 (continued)

Article number	Author	Curricula at a glance	Trained facilitator	Ecological model level	Intervention category	Dosage of intervention	Homework
11	Ferris France et al. (2019)	<p>Session 5: what others think of me</p> <p>Session 6: how HIV limits me</p> <p>Session 7: deepening Inquiry</p> <p>Session 8: Antiretrovirals and my story</p> <p>Session 9: my body</p> <p>Session 10: my body and sex</p> <p>Session 11: forgiveness</p> <p>Session 12: deepening Inquiry</p> <p>Session 13: shame and guilt</p> <p>Session 14: relationships and fear of disclosure</p> <p>Session 15: death and dying</p> <p>Session 16: my future</p>	<p>intervention together with an internationally IBSR-trained facilitator and an international creativity coach</p> <p>Twenty-two Zimbabwean PLHIV were supported to attend a 9-day IBSR: The Work of Byron Katie training workshop in Germany, who then worked together with International Certified Facilitators in designing the curriculum.</p>	Individual, family, and society	Multipronged cognitive and mindfulness-based approach	12 × 4-hr group sessions and one weekly individual session	Yes—activity journal that consisted of worksheets and exercises WhatsApp support
12	Flickinger et al. (2018)	<p>Session 12: who I truly am</p> <p>PositiveLinks app: daily queries of mood, stress, and medication adherence; tailored educational resources; access to the study team for individualized counseling and assistance.</p> <p>Community message board: interact with other users on a secure anonymous community message board.</p>	<p>Study team—no training of staff or research staff mentioned.</p>	Individual	Other	Access to PositiveLinks app and community message board	No
13	Fuster-RuizdeApodaca et al. (2016)	<p>Session 1: presentation and stigma and discrimination, characteristics, and consequences</p> <p>Session 2: self-esteem and coping with stigma</p> <p>Session 3: communication skills</p> <p>Session 4: techniques of emotional self-control and planning goals and ending the workshop</p> <p>3 editions of the same intervention</p>	<p>Professionals working for the coordinadora estatal de VIH y sida—state coordinator for HIV and AIDS in Spain</p>	Individual	Multipronged cognitive and mindfulness-based approach	16 hr, distributed in 4 × 4-hr sessions.	No

(table continues)

Table 2 (*continued*)

Article number	Author	Curricula at a glance	Trained facilitator	Ecological model level	Intervention category	Dosage of intervention	Homework
14	Harding et al. (2019)	Session 1: memory book Session 2: memory box Session 3: Tree of Life 1, Tree of Life 2 Session 4: hero book Session 5: issuing of certificates of participation	Trained—qualified social workers, a clinical officer, and a medical doctor	Individual and family	Reflective and creative	5-day residential camp including one-on-one support throughout group activities	No
15	Harper et al. (2014)	Session 1: decreasing negative feelings toward self and others living with HIV Session 2: increasing planned and strategic HIV disclosure to others Session 3: building supportive networks to combat fears and feelings of rejection Session 4: building skills to combat HIV-related discrimination and other forms of stigma Session 5: introduction to photo sharing with photo examples and narratives	All intervention delivery staff members participated in a centralized 3-day training	Individual, family, and society	Bespoke training	12 sessions: two individual sessions, 9 × 2-hr gender-specific group sessions and another individual session	No
16	Lennon-Dearing and Hirschi (2019)	Session 1: introduction to photo sharing with photo examples and narratives Session 2: photo-taking instructions Sessions 3–5: (a) challenges that you have overcome in your life, (b) your proudest accomplishment, and (c) your hopes and dreams for the future Sessions 6–7: reviewing developed photos for poster collage to represent participants' stories	Trained—first author, a social worker and a peer facilitator who worked as an early intervention specialist	Individual	Reflective and creative	Two cycles of seven weekly group sessions	A minimum of three photos between each session to share with the group
17	Mathew and Manjula (2022)	Sessions: awareness of health time management and goal setting, journaling, nonjudgmental awareness Dental hygiene, mindfulness practice Nutrition coping skills training, challenging ineffective thoughts, distancing negative thoughts Puberty self-care, conflict resolution, thought diffusion, self-soothing exercises Self-grooming, decision making, developing functional and effective thoughts, cultivating self-compassion	Study carried out by researcher but no mention of formal training given	Individual	Multipronged cognitive and mindfulness-based approach	44 hr over 6 months	No
18	Mundell et al. (2011)	Sessions 1–10: HIV-related knowledge and the emotional impact of HIV infection, coping	Trained—research assistants	Society	Bespoke training	10 weekly psychosocial group	No

(table continues)

Table 2 (continued)

Article number	Author	Curricula at a glance	Trained facilitator	Ecological model level	Intervention category	Dosage of intervention sessions	Homework
19	Nestadt et al. (2019)	with stigma, discrimination, and education on basic human rights, life planning, and goal setting Sessions 1–11: icebreaker activity and chapter of Tam's story Sessions 1–11: icebreaker activity and chapter of Tam's story Topics include concerns about growing up with HIV, communication within families, HIV stigma, HIV treatment and adherence, coping with loss/bereavement, risk behavior, and responding to peer pressure, puberty and sexual relationships, future goals, and social support. Group-based cognitive behavioral therapy (intervention 1) Session 1: introduction Session 2: stigma and depression Session 3: thoughts and emotions Session 4: identifying thought patterns Session 5: challenging negative thoughts Session 6: identifying and increasing helpful thoughts Session 7: setting goals and shaping your reality Session 8: visualization and guided imagery for mood management Session 9: change talk to improve mood Session 10: group review and celebration Multiple family group-based family strengthening (intervention 2) Session 1: introduction Session 2: HIV knowledge and antiretroviral therapy adherence Session 3: stigma, discrimination, and risk Session 4: family supports Session 5: rules for home and problem solving Session 6: respectful communication Session 7: responsibility at home Session 8: dealing with stress at home Session 9: family relationships Session 10: group review and celebration	Existing lay staff in clinic and medical settings. No mention of formal training for this staff.	Individual, family, and society	Bespoke training	One weekend per month over 6 months. 11 sessions in total.	No
20	Nabunya et al. (2024)		Trained paracounselors	Individual	Traditional cognitive behavioral therapy (CBT)	10 biweekly sessions lasting 1 hr each	No
	Nabunya et al. (2024)		Trained parent peers	Individual and family	Bespoke training	10 biweekly sessions lasting 1 hr each	No

(table continues)

Table 2 (continued)

Article number	Author	Curricula at a glance	Trained facilitator	Ecological model level	Intervention category	Dosage of intervention	Homework
21	Nyamathi et al. (2013)	Sessions covered: (a) HIV/AIDS and dealing with the illness; (b) learning about antiretroviral therapy and ways to overcome barriers; (c) parenting and maintaining a healthy home environment; (d) how to improve coping, reduce stigma, and care for family members; (e) basics of good nutrition and easy cooking tips; and (f) benefits of engagement in a life skills class.	Trained—lay village women were trained over 3-days. The sessions were conducted by expert physicians, nurses, and spiritual leaders.	Individual and family	Bespoke training	Six program-specific sessions in sequence lasting 45 min	No
22	Peltzer et al. (2018)	Sessions 1–6: HIV knowledge, prevention of vertical transmission, adherence to Prevention of Mother to Child Transmission and medication use, HIV testing, prevention of HIV transmission and stigma, HIV disclosure, communication with partners, intimate partner violence (IPV), infant feeding, safer conception, family planning, and dual method sexual barrier use.	Trained lay health workers. Counseling by nursing staff	Individual and family	Traditional cognitive behavioral therapy (CBT)	Four antenatal and two postnatal group sessions Four antenatal and two postnatal group sessions Control group consisted of standard care counseling by nursing staff during perinatal care plus time-equivalent attention-control videos	Homework addressed strategies practiced in the sessions
23	Peterkin et al. (2013)	Session 1: feedback coaching Subsequent sessions: reading of participant work with reactions and discussion	Co-led by a psychiatrist and an occupational therapist trained in group psychotherapy.	Individual	Reflective and creative	14–16 once weekly Sessions with pre and post questionnaires	Writing of a story to share in each session—writing prompts were provided each week.
24	Pichon et al. (2022)	Session 1: People living with HIV completed the informed consent process, received an overview of the project integrating photovoice ethics, met other participants, received a camera and camera training, completed a standardized internalized stigma scale, discussed experiences of internalized stigma, and were instructed to take 3–10 pictures that capture images of stigma Session 2: People living with HIV shared their pictures and discussed their meaning. We conducted seven focus group discussions of images ranging from 3 to 5 participants each with a final total	Trained—three authors of the article with extensive experience in HIV, intervention delivery, and photovoice methodology. A licensed clinician	Individual	Reflective and creative	Three sessions and seven focus group sessions	Yes—photo taking and reflection.

(table continues)

Table 2 (continued)

Article number	Author	Curricula at a glance	Trained facilitator	Ecological model level	Intervention category	Dosage of intervention	Homework
25	Rao et al. (2012)	<p>sample size of $n = 31$ people living with HIV—which was sufficient to reach saturation or repeated ideas and themes, which occurred after focus group six</p> <p>Session 3: People living with HIV clarified or expanded on what they shared in previous sessions in a one-on-one interview and made final selections for the planned display.</p> <p>All sessions: (a) practising relaxation and self-care; (b) sharing coping strategies from other group members; (c) viewing trigger videos; and (d) discussing how to handle potentially stigmatizing situations with family, in the workplace, and in other settings; and (e) role-playing ways to navigate these difficult situations. Two workshops—same intervention</p>	Trained—An African American woman living with HIV who worked as a peer advocate served as the primary workshop facilitator. A masters' level social worker assisted with facilitation and with leading break-out group sessions. The principal investigator of the study, a licensed clinical psychologist	Individual, family, and society	Bespoke training	4–5-hr workshop Session 2 consecutive weekday afternoons	No
26	Skinta et al. (2015)	<p>Session 1: core ACT perspectives</p> <p>Session 2: costs and unworkability of responding to HIV-related stigma</p> <p>Session 3: values-driven behaviors to replace control efforts</p> <p>Session 4: acceptance and mindfulness and how to apply these to concerns regarding HIV</p> <p>Session 5: self-as-context versus self-as-content</p> <p>Session 6: willingness</p> <p>Session 7: visualization of a compassionate friend</p> <p>Session 8: generalizing acceptance, mindfulness, and diffusion exercises learned during the course of the group</p> <p>Acceptance and commitment therapy enhanced with compassion focused therapy as one intervention</p>	Clinic workers (only a small number of providers were trained in cognitive behavioral therapy)	Individual	Multipronged cognitive and mindfulness-based approach	Eight therapy sessions across 8 weeks	No
27	Smith Fawzi et al. (2019)	<p>Session 1: introduction</p> <p>Session 2: love, relationships, and feelings</p> <p>Session 3: valuing different perspectives, ourselves, and our bodies</p>	Trained community-based health workers	Individual and societal	Multipronged cognitive and mindfulness-based approach	Group-based 10 weeks, 3–3.5 hr/week	No

(table continues)

Table 2 (continued)

Article number	Author	Curricula at a glance	Trained facilitator	Ecological model level	Intervention category	Dosage of intervention	Homework
		Session 4: happy, healthy, safer sexual relations Session 5: developing assertiveness skills Session 6: deepening and expanding assertiveness skills Session 7: disclosure Part 1 Session 8: disclosure Part 2 Session 9: income generating skills Session 10: the future Same intervention conducted in three steps	People from the association for the support of people with HIV and AIDS in Aragon, Spain	Individual	Traditional cognitive behavioral therapy (CBT)	Therapy group—4 × 12-hr workshops	Between each session, homework was requested in line with the contents discussed
28	Soro et al. (2021)	Session 1: self-esteem Session 2: communication skills Session 3: emotional self-control skills Session 4: continued previous content plus added antidiscrimination and conflict resolution.	Health professionals (implied)	Individual	Multipronged cognitive and mindfulness-based approach	Not specified	Not specified
29	Suyanti et al. (2018)	Used ACT, logotherapy, and family psychoeducation but did not describe intervention topics or approach in any detail	Trained—research assistants each received 2 weeks of intensive training on qualitative interviewing techniques	Society	Other	Eight-session training program	Purchase a locally available handheld water pump and associated agricultural implements and commodities
30	Tsai et al. (2017)	Small loan and eight-session training program: agriculture and financial management	Trained therapist	Individual	Traditional cognitive behavioral therapy	Eight individual therapy sessions—the intervention focus group and interviews—development of intervention	Yes. Symptom relief, identify negative automatic thoughts, reflect on feelings of guilt could help with coping, listing of good qualities about themselves, practising of assertiveness, set future goals
31	Tshabalala and Visser (2011)	Session 1: role of HIV in participant's lives Session 2: powerlessness and loss of self-worth Session 3: guilt, anger, and negative self-evaluation Session 4: self-pity, self-neglect, isolation, denial, and suicide Session 5: human rights and antidiscriminatory laws Session 6: future goals Session 7: challenges in lifestyle Session 8: coping skills	Trained—the project initiation workshop was facilitated by a nurse and people living with HIV based on a standard manual, and both were trained over	Individual and society	Bespoke training	Five countries: Workshop of 21 hr (all), between 5 and 13-hr meeting × 1, between 8 and 20 intervention hours. Total range	Design a stigma reduction project within 1 month of receiving the intervention
32	Uys et al. (2009)	Intervention: (a) sharing information, (b) increasing contact with the affected group, and (c) improving coping through empowerment					

(table continues)

Table 2 (continued)

Article number	Author	Curricula at a glance	Trained facilitator	Ecological model level	Intervention category	Dosage of intervention	Homework
33	Vaughan and Kinnier (1996)	All sessions: the lifeline exercise, construction of personal genograms, and presentation of personal histories with the aid of photographs.	a period of 2 days prior to them running the workshops Trained—group leaders for this study were three female advanced doctoral students in counseling psychology who were trained and supervised by the first author	Individual	Reflective and creative	Six life review sessions for 2 hr weekly plus orientation and follow-up sessions	Reflection on in-session activities
34	Yigit et al. (2020)	Session 1: introduction to iENGAGE intervention Sessions 2–4: maintaining a positive approach and participating in skill-building modules with the counselors	Trained counselors—2-day in-person workshop—Training by behavioral scientists	Individual	Multipronged cognitive and mindfulness-based approach	Four face-to-face sessions with personal contact calls, visit reminder calls, and missed visit calls	No

Note. PLHIV = people living with HIV; IBSR = inquiry-based stress reduction; ACT = acceptance and commitment therapy.

and face-to-face in an nongovernmental organization. Four locations were not specifically stated.

Not all interventions included sufficient detail about delivery. However, from those that did, 29 interventions offered a structured course or a series of structured sessions ranging between 4 and 16 sessions for between 1 and 4.5 hr each. Delivery ranged between weekly sessions over four weekends, over 6 months, and back-to-back workshop format. Eleven interventions included homework, and others included partner work and personalized follow-up by trained personnel. Thirty interventions were delivered face-to-face in groups or one-on-one, with just two being delivered online and two unspecified (for more detail, see Table 2).

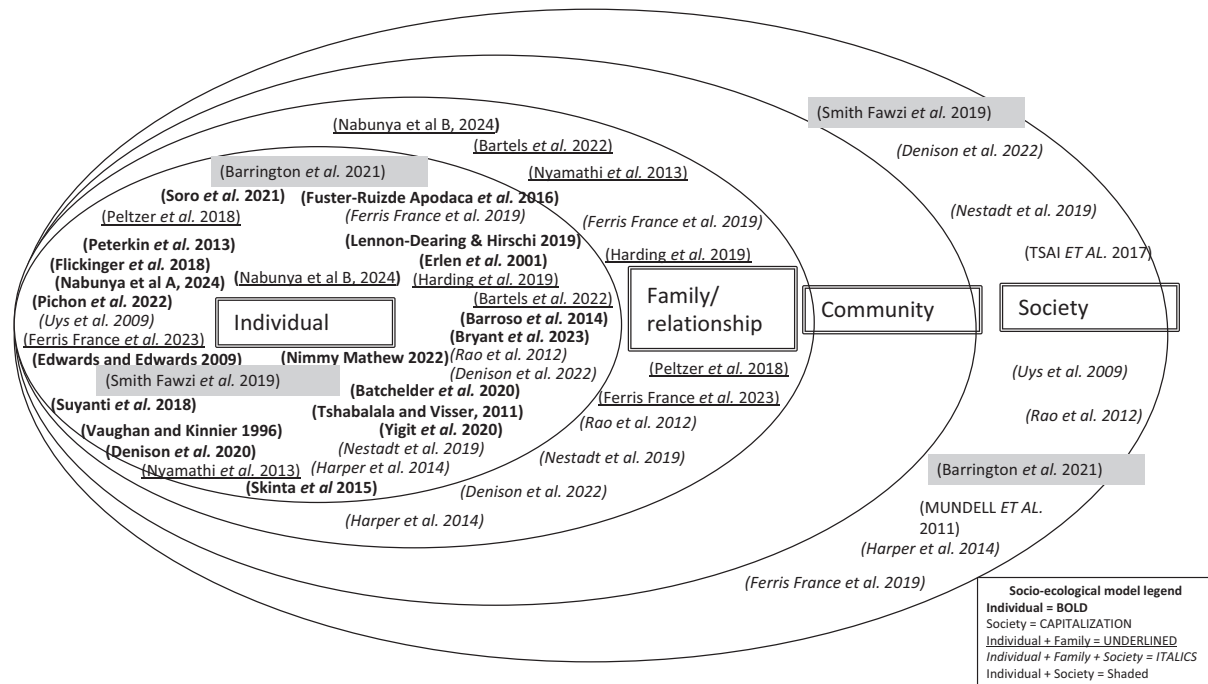
Measures Used and Reported Effectiveness of Intervention

As the definition of self-stigma varied by study type, measures of effectiveness also varied and ranged from descriptive outcomes/outputs to the use of a variety of scales. Scales were mainly used to measure self-stigma, self-esteem, self-efficacy, and quality of life (see Supplemental Material 7). For this review, we specifically looked at scales and measures that potentially could be used to assess self-stigma components (positive and inverse positive). Though studies often included other measures, such as the Center for Epidemiologic Studies Depression Scale, we did not include these.

The most common self-stigma measure was the Berger's HIV Stigma Scale (Berger et al., 2001). Other studies used the HIV/AIDS Stigma Instrument for people living with AIDS (Holzemer et al., 2007), the Stigma Scale for Chronic Illness (Molina & Ramirez-Valles, 2013), the Internalized AIDS-Related Stigma Scale (Kalichman et al., 2009), Internalized HIV Stigma Scales (Sayles et al., 2008), Internalized Stigma of AIDS Tool (Phillips et al., 2011), and The Serithi Internalized Stigma Scale (Visser et al., 2008). The most commonly measured inverse-positive self-stigma-related components included self-esteem, self-efficacy, and quality of life. The Rosenberg Self-Esteem Scale (Rosenberg, 1965) was most commonly used to assess self-esteem. The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995), the Coping Self-Efficacy Scale (Chesney et al., 2006), the Stanford Emotional Self-Efficacy Scale (Giese-Davis et al., 2004), and the Self-Efficacy Questionnaire for Children (Muris, 2001) were used to assess self-efficacy. The Beck Hopelessness Scale (Beck, 1988) and the Tennessee Self-Concept scales (Pauldine et al., 2020) were used in two interventions (Nabunya et al., 2024). The battery of Psychological Predictors of Well-Being and Quality of Life of PLHIV in Spain, the HIV/AIDS Targeted Quality of Life Scale (Holmes & Shea, 1998), the Ryff Psychological Well-Being Scale (Ryff, 1989), and the Quality of Life Index (Ferrans & Powers, 1985) were used to assess quality of life (see Supplemental Material 7 scale used for more detail). Given the diversity of studies and the lack of a commonly agreed definition of self-stigma, there were also other scales or measurement types used.

Qualitatively, studies mainly used in-depth interviews (Barrington et al., 2021; Bartels et al., 2022; Batchelder et al., 2020; Ferris France et al., 2019, 2023; Merrill et al., 2023; Pichon et al., 2022; Skinta et al., 2015; Tsai et al., 2017; Uys et al., 2009), and four studies (Ferris France et al., 2019, 2023; Harding et al., 2019; Pichon et al., 2022) also used focus group discussions to explore intervention participants' perceptions of self. The main themes that emerged from

Figure 2
Socioecological Model Mapping of Interventions



these studies were: increasing health knowledge (e.g., Barrington et al., 2021; Bartels et al., 2022); focusing on the self and the present moment (e.g., Merrill et al., 2023); and changing core beliefs and negative self-thoughts into positive ones (e.g., Ferris France et al., 2019). All qualitative studies reported, to some extent, reducing self-stigma or increasing self-agency, self-esteem, meaning in life, acceptance, coping skills, improved relationships, and/or psychological flexibility.

All purely qualitative studies addressed all the Critical Appraisal Skills Programme checklist items. However, all the mixed methods studies, including a qualitative component (Barrington et al., 2021; Batchelder et al., 2020; Flickinger et al., 2018; Skinta et al., 2015; Tshabalala & Visser, 2011), with the exception of one (Ferris France et al., 2019), and the nested qualitative study in the RCT (Harding et al., 2019), did not adequately address items on the relationship between researcher and participants nor describe the analysis process in any detail. Three studies did not include any ethics statement (Barrington et al., 2021; Flickinger et al., 2018; Skinta et al., 2015).

Statistically significant improvements in self-esteem (Barroso et al., 2014; Harding et al., 2019; Smith Fawzi et al., 2019), decreases in internalized stigma (Barroso et al., 2014; Denison et al., 2020; Nabunya et al., 2024; Nyamathi et al., 2013; Peltzer et al., 2018; Yigit et al., 2020), and improvements in self-efficacy (Barroso et al., 2014; Harding et al., 2019; Smith Fawzi et al., 2019) were reported from the RCTs. In terms of effects over time, for Harding et al. (2019), at 2 weeks postbaseline, the intervention had a medium and statistically significant positive effect on self-esteem ($d = 0.65, p = .001$) and on self-efficacy in both social ($d = 0.54, p = .008$) and emotional ($d = 0.63, p = .002$) domains. By 9 weeks postbaseline, the effect on self-

esteem increased from medium to large ($d = 1.33$). Statistically significant differences were not observed for internalized stigma in Bryant et al.'s (2023) study, and though adolescents in the intervention group showed a greater reduction in HIV-related feelings of worthlessness and shame than the comparison group, these were not significant (Denison et al., 2020). The 12 RCTs addressed the requirements of the risk of bias–2 revised tool, though only three concealed the allocation of participants (Barroso et al., 2014; Bryant et al., 2023; Harding et al., 2019).

For the quasi-experimental and mixed methods studies, participants showed a significant reduction in overall perceived stigma (Uys et al., 2009), improvements in self-esteem (Lennon-Dearing & Hirschi, 2019; Mathew & Manjula, 2022; Mundell et al., 2011; Peterkin et al., 2013; Tshabalala & Visser, 2011; Uys et al., 2009), lower internalized stigma (Ferris France et al., 2019; Harper et al., 2014; Soro et al., 2021; Suyanti et al., 2018; Tshabalala & Visser, 2011), a decrease in declared stigma (Soro et al., 2021), improved self-efficacy (Lennon-Dearing & Hirschi, 2019; Mathew & Manjula, 2022; Peterkin et al., 2013), self-image (Harper et al., 2014), and psychological well-being (Edwards & Edwards, 2009). However, Uys et al. (2009) reported that their intervention did not improve self-efficacy. Vaughan and Kinnier (1996) reported no significant effects, and Skinta et al. (2015) noted nonsignificant self-reported benefits. In the former, there were problems with retention, and in the latter, the study was of suboptimal quality.

Similar to findings in the reviews by Pantelic, Steinert, et al. (2019) and P. H. X. Ma et al. (2019), many of the studies were small-scale (11/35, 31%) and had up to 30 participants, with only three participants out of five completing the intervention in one study (Skinta et al., 2015; see Table 2). Additionally, there was sometimes

a lack of accuracy in using the precise scale titles, and so the authors of this review had to make a judgment call based on reported details as to what scale was used. However, some of the described “scales” were not scales per se and were not validated.

Discussion

We conducted a systematic review to explore existing interventions to reduce self-stigma among PLHIV. By updating the previous reviews in this area that included interventions before 2019 (P. H. X. Ma et al., 2019; Pantelic, Steinert, et al., 2019), we have included 21 studies for the period 2018–2024. The included curricula details give a better understanding of the content of interventions, and by classifying the interventions into six categories guided by the main approach(s) used, it is possible to better understand the variety of interventions available to address self-stigma. We find that, unlike the findings of Pantelic, Steinert, et al. (2019), CBT was not the only effective self-stigma intervention at individual or individual and relational level. Traditional CBT and other cognitive-based and mindfulness/awareness approaches are also effective. Practically, this is an important finding to understand the types of interventions and implementing options. We discuss our findings that offer some guidance for policy, programming, and research in terms of defining self-stigma, highlighting issues with measurement, and what appears to work and possibly not work in practice.

Defining Self-Stigma

A striking challenge in conducting this review has been the absence of a comprehensive definition of self-stigma. This review found that while comprehensive frameworks exist to contextualize the concept, there is no universally accepted definition or framework that can be applied to explore this phenomenon (Hempel et al., 2021). Studies can only be viewed and analyzed based on the components researchers perceive as constituting self-stigma, and these vary greatly. Scales to assess self-stigma can include components of self-stigma such as self-agency, self-esteem, self-worth, and quality of life, making it challenging to identify and to compare and contrast. From this review, we are proposing a definition of self-stigma that can be used by researchers and program implementers going forward: “Self-stigma, is a mindset of negative beliefs, thoughts and *behaviours* about HIV, which manifests as shame, guilt, feelings of contamination, self-loathing, low self-esteem, and self-rejection.”

Measurement and Reported Effectiveness of Interventions

The different scales used to measure self-/internalized stigma (Supplemental Material 7) reflect this phenomenon’s ambiguity. Ferguson et al. (2022) found that there was considerable variation in how authors described or defined stigma (social), and thus comparisons between studies were difficult in terms of whether they were using the same framework or measures. Similarly, we found that the scales used in studies focused on just one or two unidimensional components of self-stigma (or inverse components, such as self-esteem) and not adequately representing this complex phenomenon.

Our review noted that many of the components or inverse positive components measured in the quantitative studies indicated some positive changes as a result of the intervention, but the qualitative

findings highlighted other issues that were not measured by these scales. As noted above, the qualitative studies also reported some degree of self-stigma reduction or increase in self-agency or self-esteem but additionally included aspects of flourishing such as finding meaning in life, acceptance, coping skills/resilience, and improved relationships that were not measured in the scales outlined in Supplemental Material 7. This suggests that a more comprehensive way to measure the impact of an intervention would be to adopt a mixed methods approach. Self-stigma as a holistic concept can be lost when we break it down to a scale. The results of positive self-stigma interventions show impacts in self-agency, autonomy, personal growth, personal goals in life, and other components. These nuanced elements of self-stigma and effects of interventions are more likely to be captured by using mixed methods and more in-depth qualitative research, of course alongside the RCTs and experimental designs.

What Worked and What Did Not?

Elements within interventions that reported a positive effect on self-stigma included working on thoughts, feelings, and beliefs through a range of cognitive-based, inquiry-based, and mindful-based techniques, often with a forward-looking goal-setting focus, with support of trained individuals—most often as groups with individual sessions and homework tasks. Only seven interventions were employed on modality (person-centered counseling/traditional CBT). All of the rest included more than one modality to address beliefs, behaviors, and life goals, highlighting the utility of multipronged approaches. Different to findings reported in Pantelic, Steinert, et al. (2019) that only CBT was effective at reducing self-stigma, our review found that broader multipronged cognitive and mindfulness-based approaches were also effective at the individual and relational levels. Unlike traditional CBT, the multipronged cognitive-based approaches introduced additional techniques and questions as well as meditation and mindfulness to support realizations, including, for example, specific methodologies to support participants to identify and question self-stigmatizing beliefs (Ferris France et al., 2019) or to identify costs and values and to start acceptance (Skinta et al., 2015).

Mechanisms of impact were harder to delineate given the level of intervention description in the studies, but it does appear that no one off-the-shelf approach to self-stigma is applicable across all social contexts and circumstances. Interventions that were effective at reducing self-stigma were mainly group or group- and individual-based. Furthermore, responding to a gap highlighted by Pantelic, Steinert, et al. (2019) related to the lack of self-stigma interventions addressing adolescents and young PLHIV, this review identified seven interventions ($n = 8$ articles), of which five interventions ($n = 6$ articles) reported positive effects in reducing self-stigma or its components (Denison et al., 2020; Ferris France et al., 2023; Harper et al., 2014; Mathew & Manjula, 2022; Merrill et al., 2023; Soro et al., 2021). This is particularly significant given the high levels of internalized stigma in this population group (Pantelic et al., 2017).

Due to interventions’ variability and little in-depth descriptions, it is hard to conclude whether there was a connection between dosage and results. However, studies that reported a positive effect on self-stigma involved trained individuals delivering the intervention, with training ranging from 1 day to over 2 years. Trainees included health care workers, social workers, psychologists, PLHIV, and community workers.

The socioecological model (Bronfenbrenner, 1979) provides a useful framework for understanding how health and well-being are influenced by multiple factors at various levels (individual, family/relationship, community, societal; see Figure 2). In keeping with the socioecological model, it is possible that a successful intervention at the individual level will also have a positive impact at the family/relationship level. In addition, similar to the review by Pantelic, Steinert, et al. (2019), this review found that interventions addressing intersectional stigma and at multiple levels are needed. Further, while it is widely understood that community-based HIV interventions are more successful when implementation is tailored to the country or community context (Dave et al., 2019; Mavhu et al., 2020), most of the interventions in this review were delivered in clinics or health settings. Pantelic, Steinert, et al. (2019) also found that either self-stigma intervention design and research do not include community engagement or report on it. Limiting delivery to health care or clinic settings may miss the opportunity to work with and train community groups to provide self-stigma interventions. As HIV-related stigma occurs at multiple socioecological levels, effective stigma-reduction interventions must also target multilevel sources of stigma (Nelson et al., 2021). The evidence about stigma-reduction interventions is clear that they are most effective when they include components directed at a range of actors and socioecological levels (Heijnders & Van Der Meij, 2006; Stangl et al., 2019). More research is needed on the impact of multilevel interventions.

It is important to highlight what did not appear to be effective or where the same intervention was both significant and nonsignificant in different contexts. At times, the same approach showed different results—for example, a Life Review study in the United States was reported as not significant (Vaughan & Kinnier, 1996), while interestingly, the same approach a number of years later, also in the United States, reported significant findings (Erlen et al., 2001). This would suggest that different contexts, resources, training, delivery, and fidelity determine an intervention's effectiveness. Of note, some studies show significant results for what seem relatively “light” interventions (e.g., Barroso et al., 2014, where the intervention is watching a video; Suyanti et al., 2018), suggesting that intervention intensity may not be the most critical aspect.

However, we are aware that there may be positivity bias in reporting results of interventions (Gluud, 2006), with interventions that did not work being unpublished, and therefore, our findings would not include those. In the study by Batchelder et al. (2020), the impact of the intervention, a combination of in-person and mobile-phone-delivered content for PLHIV with substance use disorders, was reported as not significant. The intervention had eight participants, so a very small sample size from which to draw conclusions. Additionally, the quality of reporting of studies varied—as we noted above, this was particularly so for mixed methods studies where the qualitative component was not described in sufficient detail.

Limitations

Our study has some limitations. We focused on studies that set out to address self-stigma. We are aware that other studies designed for other purposes may also have an impact on self-stigma, but these were excluded, as this would have made the review too broad. We also only included studies with ≥ 2 components of self-stigma, as otherwise it would not be a self-stigma study. A study focusing on self-esteem, self-efficacy alone would have been excluded. We also

categorized the intervention approaches into six different categories. All of these categories were not specifically mentioned in every study, and the authors of these studies could disagree with our categorization. Finally, due to resource limitations, we only analyzed peer-reviewed articles published in English; this may have introduced language bias. Nevertheless, applying the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines throughout increased the robustness of the review findings despite the inevitable methodological pitfalls.

Conclusions

In conclusion, this review adds to the previous reviews on interventions addressing stigma for PLHIV. This study also makes an important contribution to the field of HIV more broadly and HIV-related stigma, specifically, in relation to proposing a common definition of self-stigma and approaches to analyzing interventions in terms of content, type, level, and impact. While HIV-related self-stigma interventions show promise, much still remains to be learned. Future studies should clearly state the definition of self-stigma they are using and provide a more in-depth description of interventions, the implementation, and the context so that it would enable greater learning of what works for whom and where. Such studies are more likely to generate more transferable findings and inform interventions that can address this complex phenomenon.

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