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The aims of this study were to examine differences in self-schemas between persons living with HIV/AIDS with and without depressive symptoms, and the degree to which these self-schemas predict depressive symptoms in this population. Self-schemas are beliefs about oneself and include self-esteem, HIV symptom management self-efficacy, and self-compassion. Beck's cognitive theory of depression guided the analysis of data from a sample of 1766 PLHIV from the USA and Puerto Rico. Sixty-five percent of the sample reported depressive symptoms. These symptoms were significantly ($p \leq 0.05$), negatively correlated with age ($r = -0.154$), education ($r = -0.106$), work status ($r = -0.132$), income adequacy ($r = -0.204$, self-esteem ($r = -0.617$), HIV symptom self-efficacy ($r = -0.408$), and self-kindness ($r = -0.284$); they were significantly, positively correlated with gender (female/transgender) ($r = 0.061$), white or Hispanic race/ethnicity ($r = 0.047$) and self-judgment ($r = 0.600$). Fifty-one percent of the variance ($F = 177.530$ (df = 1524); $p < 0.001$) in depressive symptoms was predicted by the combination of age, education, work status, income adequacy, self-esteem, HIV symptom self-efficacy, and self-judgment. The strongest predictor of depressive symptoms was self-judgment. Results lend support to Beck's theory that those with negative self-schemas are more vulnerable to depression and suggest that clinicians should evaluate PLHIV for negative self-schemas. Tailored interventions for the treatment of depressive symptoms in PLHIV should be tested and future studies should evaluate whether alterations in negative self-schemas are the mechanism of action of these interventions and establish causality in the treatment of depressive symptoms in PLHIV.

Keywords: HIV; Beck's cognitive theory of depression; self-esteem; HIV symptom management self-efficacy; self-compassion

Background

Depression is the most common psychiatric diagnosis in people living with HIV/AIDS (PLHIV; Rabkin, 2008). The estimated prevalence is two to ten times higher than that in the general US population (Bing et al., 2001; Pence, 2009). Depressive symptoms in PLHIV are associated with poor linkage to care (Bhatia, Hartman, Kallen, Graham, & Giordano, 2011), poor medication adherence (Ammassari et al., 2004; Kacanek et al., 2010; Kim et al., 2007), risky behaviors (Bing et al., 2001; Brown et al., 2006; Ryan, Forehand, Solomon, & Miller, 2008), poorer virological response to treatment (Anastos et al., 2005; Hartzell, Spooner, Howard, Wegner, & Wortmann, 2007) and increased risk of mortality (Anastos et al., 2005; Leserman, 2008). In the context of depression, self-evaluation is often negative, critical and self-deprecating (Van Dam, Sheppard, Forsyth, & Earleywine, 2011). Therefore, self-schemas, beliefs about oneself that guide how one processes information, may be associated with depressive symptoms in PLHIV. Self-schemas include evaluation of self-worth (self-esteem), perceived self-efficacy in managing HIV symptoms (HIV symptom self-efficacy), and feeling kind/non-judgmental to oneself (self-compassion). The following

background is an overview of these three self-schemas, our constructs of interest, in the context of depressive symptoms in PLHIV.

Self-esteem and depressive symptoms

Self-esteem refers to one's general feelings of self-worth or self-value and is an affective evaluation of the self (Rosenberg, 1989). The relationship between self-esteem and depressive symptoms has been documented in numerous studies with clinical (patients) and non-clinical populations. Findings suggest that those with low self-esteem are more susceptible to depression. In a meta-analysis of 77 longitudinal studies, low self-esteem predicted depressive symptoms across gender and age groups (Sowislow & Orth, 2013). In studies with a total of 3011 adolescents and young adults, low self-esteem predicted depressive symptoms (Orth, Robins, & Meier, 2009). Sinclair et al. (2010) reported self-esteem was negatively associated with depression in a national sample of adults ($N = 503$).

Self-esteem was significantly associated with depressive symptoms in diverse samples of PLHIV. These included African-American and Hispanic women ($N = 363$), Hispanic men ($N = 46$) and a predominantly white male sample ($N = 200$) (DeSantis, Gonzalez-Guarda, & Vasquez, 2012; Simoni, Huang, Goodry, & Montoya, 2006; Varni, Miller, McCuin, & Solomon, 2012). Self-esteem was significantly associated with depressive symptoms and mediated the effect of self-stigma on depressive symptoms in a diverse community sample of PLHIV ($N = 197$) (Herek, Saha, & Burack, 2013). Van Dyk (2008) suggested that low self-esteem in PLHIV is due to rejection, loss of social identity, and the physical consequences of HIV disease.

HIV symptom management self-efficacy and depressive symptoms

Self-efficacy, a core construct of Bandura's social cognitive theory (1977, 1986), refers to one's confidence in the capacity to engage in behaviors leading to desired outcomes. Self-efficacy may be general or behavior-specific, and is based on beliefs, not actual capabilities. HIV symptom management self-efficacy, which is behavior-specific, is the belief in one's ability to manage symptoms of HIV disease.

Researchers examined depression and several types of self-efficacy in PLHIV, however, no studies of HIV symptom management self-efficacy and depression were located. In a sample of newly diagnosed PLHIV ($N = 180$), general self-efficacy was lower in depressed compared to non-depressed participants (Bhatia et al., 2011). Marshall et al. (2013) reported patient activation, which is one's knowledge, skill and self-efficacy in

managing chronic disease, was lower in PLHIV with depression ($N = 433$). HIV medication-taking self-efficacy was significantly associated with depressive symptoms ($N = 215$) (Cha, Erlen, Kim, Sereika, & Caruthers, 2008). In two studies (Study 1, $N = 264$; Study 2, $N = 2848$) of the HIV Adherence Self-efficacy Scale (HIV-ASES), which measures self-efficacy for HIV treatment-related behaviors, depressive symptoms were significantly associated with both the integration and perseverance subscales (Johnson et al., 2007). The integration subscale measures self-efficacy for integrating treatment into daily routines and the perseverance subscale measures self-efficacy for persistence in treatment adherence.

Self-compassion and depression

Self-compassion, a construct with roots in Buddhist tradition, involves an attitude of caring kindness, understanding and non-judgment toward oneself. Neff (2003) suggested that a perspective of mindfulness, in which painful feelings are acknowledged without judgment and put in the context of the human experience, underlies self-compassion. Two components of self-compassion are self-kindness and its converse, self-judgment. Self-kindness refers to the tendency to be caring and understanding, while self-judgment refers to the tendency to be critical with and berating of oneself.

Greater self-compassion has consistently predicted lower levels of depression in non-clinical samples. Depressive symptoms were positively related to self-judgment and negatively related to self-kindness in undergraduate students ($N = 131$) (Mills, Gilbert, Bellew, McEwan, & Gale, 2007). Similarly, in a sample of 65 postgraduate students, depressive symptoms were positively related to self-judgment and negatively related to self-kindness. In an international community sample ($N = 504$), self-compassion explained 43.5% of the variance in depressive symptoms (Van Dam et al., 2011).

There is little research on self-compassion and depressive symptoms in clinical populations, and none in PLHIV. In a study with patients with chronic pain, depressive symptoms were significantly related to self-kindness and self-judgment (Costa & Pinto-Gouveia, 2011).

Conceptual framework

Beck's cognitive theory of depression guided the analysis in this study (Beck, 1967, 1987). This theory, a vulnerability-stress model, posits that pre-existing maladaptive cognitions and dysfunctional, negative beliefs about the self (negative self-schemas) are triggered by environmental stressors and events. Negative self-schemas are causal agents, antecedents to rather than the result of

depression (Beevers, 2005). Beck posited a cognitive triad, or pattern, of depressive thoughts. These consist of a negative view of the self as deficient, incapable, or unworthy; a negative view of the world focused on defeat or deprivation; and a negative view of the future in which the individual believes current difficulties are permanent. Individuals with generalized negative belief patterns are more vulnerable to depression. In this study, we examined three self-schemas in relation to depressive symptoms in PLHIV. Study aims were to examine differences in self-esteem, HIV symptom management self-efficacy, and self-compassion between PLHIV with and without depressive symptoms and examine the degree to which these self-schemas predict depressive symptoms.

Methods

Participants and settings

This study is a sub-analysis of data from a cross-sectional study of 2182 PLHIV from the United States, Puerto Rico, Canada, Namibia, China, and Thailand conducted by the International Nursing Network for HIV/AIDS Research. Included are participants from the USA and Puerto Rico ($N = 1766$).

Procedures

Participants were recruited during routine visits to HIV clinics or AIDS service organizations from 1 site in Puerto Rico and 10 US sites in 6 states. Inclusion criteria were: (1) age 18 years or older (USA) or 21 years or older (Puerto Rico); (2) self-reported HIV-positive serostatus; and (3) ability to provide informed consent. All sites received approval from human subjects review committees. Following recruitment and screening, informed consent was obtained, and participants completed a written survey. A member of the research team read the questions to participants needing assistance. Upon completion participants received a monetary incentive, which varied by location (approximately $5–$30 US).

Measures

Sociodemographic data

Data regarding patient characteristics included age, gender, race, education, work status, adequacy of income, AIDS diagnosis and antiretroviral medication use.

Depressive symptoms

The Center for Epidemiological Studies Depression Scale (CES-D) was used to measure depressive symptoms (Radloff, 1977). Responses on the 20-item scale range from 0 (never or rarely) to 3 (mostly or all of the time). Summed scores range from 0 to 60, and, as suggested by Radloff, scores ≥16 indicated depressive symptoms. Cronbach's alpha reliability estimate for the scale in this study was 0.90.

Self-esteem

The Rosenberg Self-Esteem Scale (RSES) includes 10 statements related to feelings of self-worth or self-acceptance, and measures global self-esteem (Rosenberg, 1989). The response set for this scale can be either 0 (strongly agree) to 3 (strongly disagree) or 1 (strongly agree) to 4 (strongly disagree). In this study, the 1–4 response set was used. Employing this scaling rubric, total scale scores range from 10 (low self-esteem) to 40 (high self-esteem). When we compared our approach with scores in other studies using the 0–3 scale, scores in those studies were adjusted to reflect the 1–4 scoring scale. Cronbach's alpha reliability coefficient for the scale in this study was 0.85.

There are no norms or cutoff scores for the RSES, however, mean scores were reported for non-clinical samples. Schmidt and Allik (2005) reported RSES scores ($M = 32.21$; $SD = 5.01$) in a US college student sample ($N = 2782$). Similar scores were reported for men ($M = 32.43$; $SD = 6.21$) and women ($M = 32.79$; $SD = 5.41$) in a study with a diverse national adult sample (Sinclair et al., 2010). The one study in PLHIV that reported their item-scoring rubric described RSES scores ($M = 30.46$; $SD = 4.75$) in a small sample ($N = 46$) of Hispanic men (DeSantis et al., 2012).

HIV symptom management self-efficacy

The 10-item HIV Symptom Management Self-Efficacy Scale is based on the abbreviated 6-item Chronic Disease Self Efficacy Scale, which includes four domains: symptom control, role function, emotional function and communicating with physicians (Lorig, Sobel, Ritter, Laurent, & Hobbs, 2001). Four HIV-specific items added for this study address respondents' confidence in controlling medication side effects, judging when to see a physician, developing a plan for symptom management, and keeping symptoms from interfering with relationships. The scale measures respondents' confidence in their ability to manage HIV symptoms. Responses range from 1 (not at all confident) to 10 (totally confident). A total score is calculated as the mean of the items; higher scores indicate greater confidence. Descriptive statistics for the 6-item scale were reported ($M = 5.17$; $SD = 2.22$) in a study of participants ($N = 605$) with chronic disease. Reliability and validity of a nine-item, HIV-specific version of the scale were supported in a sample of women living with HIV/AIDS ($N = 89$). Factor analysis yielded a one-factor solution accounting for 93% of the

variance (Webel & Okonsky, 2011). That study did not include the item that captures the impact of symptom management self-efficacy on social relationships. There are no norms or cutoff scores reported for the 10-item scale. Cronbach's alpha reliability coefficient for the 10-item scale in this study was 0.94.

Self-compassion

Self-compassion was assessed using the 12-item Self Compassion Scale-Short Form adapted from Neff's original 26-item scale (Neff, 2003; Raes, Pommier, Neff, & Van Gucht, 2011). The scale includes two subscales: self-kindness and self-judgment. Participants rate how they deal with difficult situations on a 5-point scale ranging from 1 (almost never) to 5 (almost always). Scores on positively worded items are summed for the self-kindness subscale; scores on negatively worded items are summed for the self-judgment subscale. Examples of self-kindness items are "When I'm going through a very hard time, I give myself the caring and tenderness I need," and "When something painful happens, I try to take a balanced view of the situation." Self-judgment items include "When I see aspects of myself that I don't like, I get down on myself," and "When something painful happens I tend to blow the incident out of proportion." Total scores on each subscale range from 6 to 30, higher scores indicate greater self-kindness or self-judgment. There are no norms or cutoff scores for the subscales. Cronbach's alpha reliability coefficients for self-judgment and self-kindness subscales in this study were 0.83 and 0.78, respectively.

Data analysis

Data were analyzed using IBM® SPSS® Statistics (Version 20). Descriptive statistics were used to examine sample characteristics and bivariate correlations between variables of interest. Independent *t*-tests and Chi-square analyses with two groups (CES-D $\geq$ 16 and CES-D < 16) were conducted. Tests were 2-tailed with α = 0.05 criterion for significance. Linear regression analysis was employed to examine the degree to which self-schemas predicted depressive symptoms after controlling for demographic characteristics.

Results

The majority of participants was male, African American, had a high school education, did not work for pay, and reported their income as "barely adequate." Sixty-five percent (*N* = 1151) of the sample reported depressive symptoms (CES-D $\geq$ 16). Those with depressive symptoms were significantly younger, had less education, and lower income. They were more likely to be female or transgender, and white or Hispanic, and less likely to be taking antiretroviral medications. Participants with depressive symptoms had lower self-esteem, HIV symptom management self-efficacy, and self-kindness, and higher self-judgment than those without depressive symptoms (see Table 1).

Depressive symptoms were significantly, negatively correlated with age, education, work status, income adequacy, self-esteem, HIV symptom management self-efficacy and self-kindness; they were significantly, positively correlated with female/transgender gender, white or Hispanic race/ethnicity and self-kindness (see Table 2).

Fifty-one percent of the variance (*F* = 177.530 [df = 1524]; *p* < 0.001) in depressive symptoms was predicted by the combination of age, education, work status, income adequacy, self-esteem, HIV symptom self-efficacy, and self-judgment. After controlling for demographic characteristics, which explained 8.1% of the variance, an additional 43.2% of the variance in depressive symptoms was explained by the combination of self-esteem, HIV symptom management self-efficacy and self-judgment. The strongest predictor of depressive symptoms was self-judgment (see Table 3).

Discussion

This exploratory study adds to the knowledge about the relationship between self-schemas and depressive symptoms in PLHIV. Our aims were to describe self-esteem, HIV symptom management self-efficacy, and self-compassion in depressed and non-depressed PLHIV, and assess the degree to which they predict depressive symptoms. The rate of depressive symptoms observed in our sample was 65%, similar to that reported in some previous studies (Bhatia et al., 2011; DeSantis et al., 2012; Simoni et al., 2006).

Cross-sectional studies cannot test causality, and the associations between self-schemas and depressive symptoms may be bidirectional. However, our findings were consistent with Beck's (1967, 1987) cognitive theory of depression, a vulnerability model, in which negative self-schemas are antecedents to depressive symptoms. Negative self-schemas were significantly higher in depressed study participants. Self-esteem, HIV symptom management self-efficacy, and self-judgment were significant predictors of depressive symptoms, while self-kindness was not. Although self-kindness did not significantly predict depressive symptoms in our sample, this relatively new construct has not been previously studied in PLHIV, therefore, additional studies that include this indicator of self-compassion are warranted.

We observed lower self-esteem scores in depressed compared to non-depressed participants. When compared with self-esteem scores reported in studies with

Table 1. Sociodemographic variables, depressive symptoms and self-constructs in depressed (*n* = 1151) and non-depressed (*n* = 615) participants.

Variable	Depressed Mean (SD) Range	Non-depressed Mean (SD) Range	*t* (df)	*p*
CES-D	28.2 (8.4) 16–57	9.0 (4.3) 0–15	−52.71 (1764)	<0.001
Self-constructs				
Self-esteem	27.9 (5.3) 10–40	34.1(4.8) 10–40	23.69 (1686)	<0.001
HIV symptom self-efficacy	6.82 (2.05) 1–10	8.23 (1.89) 1–10	13.79 (1678)	<0.001
Self-kindness	18.2 (4.6) 6–30	20.7 (5.3) 6–30	10.32 (1742)	<0.001
Self-judgment	18.1 (4.7) 6–30	12.6 (4.5) 6–30	−23.92 (1741)	<0.001
Age	45.4 (8.9) 20–71	47.4 (9.8) 18–74	4.20 (1708)	<0.001
	N (%)	*N* (%)	χ^2	
Gender			8.551	0.014
Male	772 (67.7%)	447 (73.2%)		
Female	332 (29.1%)	156 (25.5%)		
Transgender	30 (2.7%)	6 (1.0%)		
Race/ethnicity			6.640	0.249
African American/Black	478 (42.1%)	273 (45.1%)		
Hispanic/Latino	286 (25.2%)	136 (22.5%)		
White/non-Hispanic	280 (24.7%)	154 (25.5%)		
Asian/Pacific Islander	32 (2.8%)	18 (3.0%)		
Native American	28 (2.5%)	6 (1.0%)		
Other	31 (2.7%)	18 (3.0%)		
Education			32.425	<0.001
Less than high school	325 (28.5%)	116 (19%)		
High school or GED	469 (41.1%)	243 (39.8%)		
AA/technical school	235 (20.6%)	151 (24.8%)		
College (BA/BS)	84 (7.4%)	77 (12.6%)		
Master's degree	22 (1.9%)	20 (3.3%)		
Doctorate/MD/law degree	5 (0.4%)	3 (0.5%)		
Income adequacy			38.996	<0.001
Totally inadequate	320 (28.4%)	118 (19.5%)		
Barely adequate	616 (54.7%)	313 (51.7%)		
Adequate	191 (16.9%)	174 (28.8%)		
Work status			27.613	<0.001
Work for pay	183 (16.0%)	162 (26.5%)		
Do not work for pay	960 (84.0%)	450 (73.5%)		
AIDS diagnosis			1.430	0.489
Yes	485 (42.8%)	260 (43.0%)		
No	632 (55.7%)	340 (56.2%)		
Don't know	17 (1.5%)	5 (0.8%)		
Currently taking antiretroviral medications			4.884	0.027
Yes	899 (80.3%)	510 (84.5%)		
No	221 (19.7%)	93 (15.4%)		

diverse community samples and HIV-positive Hispanic men, scores of depressed participants in our study were significantly lower (*p* < 0.001) while those of non-depressed participants were significantly higher (*p* < 0.001; DeSantis et al., 2012; Schmidt & Allik, 2005; Sinclair et al., 2010). None of these studies examined self-esteem in depressed and non-depressed participants separately. Given the prevalence of depression in the general population, and in PLHIV, it is quite likely that a percentage of participants in these studies were

experiencing depressive symptoms. This would result in mean scores somewhere between those of the depressed and non-depressed participants. Additional studies that examine self-esteem scores in samples both with and without depressive symptoms are needed to provide norms in clinical and non-clinical populations.

HIV symptom management self-efficacy scores were significantly lower in depressed compared to non-depressed participants. We found no other studies of HIV symptom management self-efficacy or that

Table 2. Correlations among study variables ($N = 1176$).

	1	2	3	4	5	6	7	8	9	10	11
1. Depressive symptoms	–										
2. Age	-0.154*	–									
3. Gender	0.061*	-0.075**	–								
4. Race/ethnicity	0.047*	-0.001	-0.090**	–							
5. Education	-0.106**	0.136***	-0.174***	0.167**	–						
6. Work	-0.132**	-0.089***	0.083***	0.039	0.158**	–					
7. Income adequacy	-0.204**	0.102***	-0.006	-0.027	0.036	-0.108***	–				
8. Self-esteem	-0.617***	0.104***	-0.003	-0.088***	0.101**	0.117**	0.170**	–			
9. HIV symptom self-efficacy	-0.408**	0.075***	0.009	-0.030	0.002	0.059**	0.147***	0.410**	–		
10. Self-judgment	0.600**	-0.125***	0.017	0.084***	-0.052*	-0.086***	-0.161***	-0.571***	-0.293**	–	
11. Self-kindness	-0.284**	0.122***	-0.020	-0.024	0.041	0.063**	0.044	0.451**	0.347**	-0.122**	–

$*p \leq 0.05$; $**p \leq 0.01$.

Table 3. Predictors of depressive symptoms ($N = 1176$).

Criterion	Predictor	B	β	ΔR^2
Depression	*Step one*			0.081
	Age	-0.170	-0.132***	
	Gender	0.597	0.028	
	Race/ethnicity	0.585	0.066**	
	Education	-0.692	-0.061*	
	Work status	-3.347	-0.114***	
	Income adequacy	-3.104	-0.178***	
	Step two			0.432
	Age	-0.068	-0.052**	
	Gender	0.649	0.028	
	Race/ethnicity	-0.024	-0.003	
	Education	-0.374	-0.033	
	Work status	-1.162	-0.040*	
	Income adequacy	-1.031	-0.059**	
	Self-esteem	-0.627	-0.314***	
	HIV symptom self-efficacy	-0.082	-0.145***	
	Self-judgment	0.787	0.355***	
	Self-kindness	-0.093	-0.039	

$*p < 0.05$; $**p < 0.01$; $***p < 0.001$.

examined the relationship between HIV symptom management self-efficacy and depressive symptoms. However, general self-efficacy, chronic illness self-efficacy, HIV medication self-efficacy, and HIV adherence self-efficacy were all found to be lower in PLHIV with depressive symptoms (Bhatia et al., 2011; Cha et al., 2008; Johnson et al., 2007; Marshall et al., 2013).

When compared with adults with chronic pain, the only clinical sample for which data were reported, both depressed and non-depressed participants in our study had significantly higher scores on self-judgment (Costa & Pinto-Gouveia, 2011). This negative self-schema may be the result of HIV/AIDS stigma, which was associated with negative self-schemas in PLHIV (Varni et al., 2012). Internalized stigma, a type of self-judgment, occurs when stigmatized individuals internalize society's negative views of them (Earnshaw, Smith, Chaudoir, Amico, & Copenhaver, 2013). In a study of PLHIV ($N = 266$), 62.7% of participants expressed some level of internalized HIV-related stigma (Lee, Kochman, & Sikkema, 2002). Internalized stigma affects individuals' perceptions of self, resulting in self-blame and guilt (Brouard & Wills, 2006). Thus, self-judgment may be a proxy for internalized stigma in this population. In order to achieve clarity and determine whether there is, in fact, a distinction between the constructs of self-judgment and internalized stigma, studies are needed that measure both. Cognitive-behavioral interventions (CBIs) have been effective in the treatment of depressive symptoms in PLHIV. CBIs are based on the premise, put forward in Beck's theory that negative thinking contributes to the

occurrence and recurrence of depressive episodes (Kuyken et al., 2010). As a component of CBIs patients learn to recognize the link between thoughts and feelings, and to identify and change their negative thought patterns. In Mindfulness-Based Cognitive Therapy (MBCT), a type of CBI, individuals are also taught to cultivate self-compassion (Segal, Williams, & Teasdale, 2002). In a meta-analysis of 15 randomized controlled trials of CBIs in PLHIV, Crepaz et al. (2008) observed significant intervention effects on symptoms of depression ($d = 0.33$). In a systematic review, investigators concluded that interventions with a cognitive-behavioral component were the most effective in treating depression in PLHIV (Sherr, Clucas, Harding, Sibley, & Catalan, 2011).

Although CBIs are effective, their mechanism of action is unknown (Kuyken et al., 2010). However, it may be that CBIs reduce depressive symptoms by targeting negative self-schemas. CBI and MBCT have been effective in increasing self-esteem in women with HIV (Tshabalala & Visser, 2011), self-compassion and self-esteem in community-dwelling adults (Neff & Germer, 2013; Ree & Craigie, 2007) and caregiver self-efficacy in dementia caregivers (Oken et al., 2010).

Limitations

This study's cross-sectional design precludes our ability to make inferences about causality. This design, along with convenience sampling, and the self-report nature of the data may also bias study results.

Conclusions

The negative sequelae of depressive symptoms in PLHIV are well documented. This exploratory study is the first to examine relationships between depressive symptoms and three self-schemas in this population. Findings demonstrate that negative self-schemas are significantly higher in PLHIV with depressive symptoms, and that self-esteem, HIV symptom management self-efficacy, and self-judgment are independent predictors of these symptoms. Results support Beck's theory that those with negative self-schemas are more vulnerable to depression and suggest that clinicians should evaluate PLHIV for negative self-schemas. Theoretical support and empirical evidence suggest that tailored interventions incorporating elements of cognitive-behavioral therapy and mindfulness-based cognitive therapy for the treatment of depressive symptoms in PLHIV should be tested. Studies should also evaluate whether alterations in negative self-schemas are a potential mechanism of action of these interventions in the treatment of depressive symptoms in PLHIV.

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