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Use of a brief version of the self-compassion inventory with an international sample of people with HIV/AIDS

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Abstract

The objective of this study was to extend the psychometric evaluation of a brief version of the Self Compassion Scale (SCS). A secondary analysis of data from an international sample of 1,967 English-speaking persons living with HIV disease was used to examine the factor structure, and reliability of the 12-item Brief Version Self Compassion Inventory (BVSCI). A Maximum Likelihood factor analysis and Oblimin with Kaiser Normalization confirmed a two-factor solution, accounting for 42.58% of the variance. The BVSCI supported acceptable internal consistencies, with .714 for the total scale and .822 for Factor I and .774 for Factor II. Factor I (lower self compassion) demonstrated strongly positive correlations with measures of anxiety and depression while Factor II (high self compassion) was inversely correlated with the measures. No significant differences were found in the BVSCI scores for gender, age, or having children. Levels of self-compassion were significantly higher in persons with HIV disease and other physical and psychological health conditions. The scale shows promise for the assessment of self-compassion in persons with HIV without taxing participants, and may prove essential in investigating future research aimed at examining correlates of self-compassion, as well as providing data for tailoring self-compassion interventions for persons with HIV.

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Keywords

Brief self-compassion inventory; HIV; psychometrics; factor analysis

On the basis of a conceptualization of self-compassion, Neff (2003) developed a psychometrically sound and theoretically valid scale to measure this construct. Since the self-compassion scale (SCS) was first published, the majority of research on self-compassion has used the SCS. Although this measure is increasingly popular in use, several potential issues have been noted. The longer 26-item SCS may be too burdensome or semantically complex for use by some persons who are experiencing a chronic medical illness, including HIV/AIDS (Barnard & Curry, 2011).

A shortened yet structurally equivalent scale, the Brief Version Self Compassion Inventory (BVSCI), was developed to reduce participant burden and also offer researchers an opportunity to gather perspectives from persons who are ill or debilitated in varied clinical settings. The purpose the current study was to extend the psychometric evaluation of the BVSCI using data from an international study of persons with HIV disease.

Method

This secondary analysis explored associations between key self-care concepts (self-compassion, self-efficacy, and self-esteem) and antiretroviral treatment adherence, HIV transmission behaviors, and symptom management (Corless et al., 2012; Nokes et al., 2012; Webel et al., 2012). Study sites included Canada, China, Namibia, Thailand, and the U.S. The study was approved by Institutional Review Boards at each study site and all participants gave written consent. Participants at each site completed a packet of self-report study measures that included the BVSCI. Data on CD4 and length of HIV were also obtained by self-report. This analysis included sites where study measures were completed in English (n = 1,967). Participant characteristics are presented in Table 1.

Measures

Self-Compassion Inventory—The self-report 26-item SCS assesses three major components of self-compassion, including self-kindness, common humanity, and mindfulness. In addition to three major components of self-compassion, the scale assesses six factors that reflect the positive and negative poles of these three components of self-compassion (Neff, 2003).

The BVSCI possesses psychometric characteristics comparable to Neff's 26-item SCS. Based on loadings on the SCS's three subscales (four items per subscale), a subset of 12 items that loaded highest on the three factors from Neff's original 26-item SCS was identified, thereby reducing the length of the scale from 26 to 12 items. Scores on these 12 items correlated .92 with total SCS scores (M. Leary, personal communication, December, 2012). The BVSCI was validated with three non-clinical samples of adults including 117 adult community members, 281 participants from a psychology subject pool, and 161 graduate students. The samples completed the 12-item BVSCI and the 26-item SCS, along with various combinations of personality measures. The BVSCI demonstrated patterns of correlations with other psychometric measures that have known relationships with self-compassion. Internal reliability of the 12-item scale was acceptable (> .82) (M. Leary, personal communication, December, 2012).

Center for Epidemiology Studies Depression Scale (CES-D)—This non-diagnostic 20-item self-report scale measures the current level of depressive symptoms in community

populations (Radloff, 1977). Items are rated on a 4-point Likert-type scale, ranging from 0 (rarely or none of the time) to 3 (most of the time). The CES-D yields a total score of 60. The alpha reliability estimate was 0.90 in a sample of 727 AIDS patients (Holzemer, 1999).

Symptom Checklist-90 (SCL-90)—Anxiety symptoms were assessed with the self-report 10-item anxiety subscale from the SCL-90 (Derogatis, Lipman & Covi, 1973; Derogatis & Unger, 2010). This subscale is scored on five-points (0–4) assessing 'how much' the respondent was bothered by each anxiety symptom in the past week (1=not at all; 5=extremely). Items are summed to obtain a total score, ranging from 0 to 40. The SCL-90 has been tested across numerous populations 13 years and older and has well-established reliability and validity (Derogatis & Cleary, 1977; Derogatis & Unger, 2010). Internal consistency of the SCL-90 anxiety subscale in this sample was high (> .95).

Factor Structure of the BVSCI

It was hypothesized that the factor structure of the BVSCI would reflect the single higher order factor in the SCS (Neff, 2003). A Maximum Likelihood (ML) extraction method and Oblimin with Kaiser Normalization was conducted on the BVSCI data. The minimum factor loading was set at .40. The data had a skewness of −.316 (standard error .053) and a kurtosis at 1.219 (standard error .106), indicating normal distribution.

Contrary to expectation, it was found that a one factor model did not fit the data. Two independent factors with drawn eigenvalues greater than 1.0 were found, accounting for 42.58% of the total item variance. Examination of the scree-test showed a distinct break between the steep slope of the first two factors and the gradual trailing off of the remaining factors. The first 6 item factor (low self-compassion items) accounted for 23.79% of the variance while the second factor (high self-compassion items) accounted for 18.59% of the variance. Both subscales were highly correlated with the BVSCI total score (Factor 1, r = .80; Factor 2, r = .60), suggesting a possible higher order factor.

The 6 reverse scored items in factor one formed a separate factor from the 6 straightforward worded items in factor two, raising the question of whether such factors should be considered meaningful or discarded as an expected artifact of method effects or response bias (Brown, 2003; Weeks et al., 2005). The weak negative correlation found between the two subscales (r = −.011) offered support for a two-factor solution.

Means, standard deviations, factor loadings, and communalities for each item of the BVSCI are reported in Table 2.

Findings show that the total BVSCI was sufficiently reliable (= .714). Cronbach's alpha for Factor 1 subscale was .822, while the alpha for the Factor 2 subscale was .774.

It was hypothesized that the BVSCI would demonstrate similar patterns of correlations between the SCS and measures of anxiety and depression. The mean score for the CES-D was 21.5 (SD 11.7), while the mean score for the SCL-90-anxiety subscale was 17.8 (SD 9.1). The 6-item subscale based on Factor I (lower self compassion) demonstrated strongly positive correlations with the CES-D (r = .435; p = .000) and the SCL-90 anxiety subscale (r = .571; p = .000). The 6-item subscale based on Factor II (high self compassion) was inversely correlated with the CES-D (r = −.152; p = .000) and the SCL-90 anxiety subscale (r = −.289; p = .000).

The mean score for the BVSCI was 29.97 (SD 6.23), with a range of 10–50. Differences in mean BVSCI scores were found across race/ethnicity (p<.026), length of HIV disease (p<.017), and for having other chronic conditions (p<.000). Significant correlations were

observed between Factor I scores and education (p<.010) and whether or not participants worked for pay (p<.006). Significant correlations were also observed between Factor II and race/ethnicity (p<.000), education (p<.026), having health insurance (p<.001), working for pay (p<.000), and having other health conditions (p<.000).

Discussion

This study provided an investigation of the psychometric properties of the BVSCI with a large international sample of people living with HIV disease. In contrast to a single factor solution, a two-factor structure was found. Findings suggest that this shortened instrument has acceptable reliability and validity, and they support the utility of using the BVSCI in future research.

The sample in this analysis consisted of adults with increased levels of depressive and anxiety symptoms, common co-morbidities in HIV disease (Kemppainen et al., 2006, 2012; Rabkin, 2008). In this analysis, the measures of anxiety and depression were independently associated with the two factors in the BVSCI. Items representing lower self compassion were positively associated with anxiety and depression, while items representing higher self compassion demonstrated inverse associations. Researchers have found that the longer, single factored SCS is negatively correlated with measures of both anxiety and depression (Barnard & Curry, 2011). It is noteworthy that the participants in previous studies studies were undergraduates with subclinical anxiety and depression. Although a recent meta-analysis by MacBeth & Gumley (2012) provides robust data on the association between self-compassion and lower psychopathology, there is a continued need for research focused on populations with increased levels of anxiety and depression.

In contrast with previous studies of undergraduates that found lower levels of self-compassion in women than men (Neff, 2003; Neff, Hseih, & Dejitthirat, 2005; Neff & McGeehee, 2010), results in this study were fairly consistent across gender. Study findings may reflect positive psychological changes that frequently result in both males and females following a negative life event such as being diagnosed with HIV (Milam, 2004). Despite struggles with a life threatening diagnosis, many people living with HIV disease experience positive changes, including a new outlook on life.

In a noteworthy finding, levels of self-compassion were significantly higher in persons with HIV disease who had other health conditions. A growing body of literature reports the associations between quality of life in HIV disease and mindfulness (Robinson, Matthews, & Witek-Janusek, 2003), self-forgiveness (Martin, Vosick, & Riggs, 2012), and self esteem (Anderson, 2000; Simoni, Huang, Goodry & Montaoya, 2006). An interesting future direction for research would be to examine correlates of self-compassion in persons who deal with other physical or psychological conditions.

Participants with a length of HIV at 10 years or less reported significantly higher scores on the BVSCI than participants with HIV greater than 10 years. This finding may relate to asymptomatic illness stage, fewer HIV-related symptoms, or levels of social support (Parkenham & Rinaldi, 2001). Disclosure rates have also been associated with the use of more adaptive coping strategies (Simoni, Demas, Mason, Drossman & Davis, 2000). Little work has been published, however, that examines the role of self-compassion as a psychological adaptation strategy across the stages of HIV disease.

Several important imitations must be considered. Although our sample was international, it primarily represented persons with HIV disease from North America. The smaller number of participants from China, Thailand, and Namibia limit generalizeability. The instruments used in the original study further limited our analysis. An additional limitation relates to the

sample in this study. While self-compassion studies tend to include more females than males, the sample is reversed in this analysis. The primarily male sample reflects the demographics of the HIV epidemic. Future research should examine levels of self-compassion related to age and race or ethnicity. While the BVSCI would add to an understanding of self-compassion in this population, further testing of the 12-item scale is recommended.

Conclusions

Research instruments that effectively measure levels of self-compassion in persons with HIV disease can facilitate the development of interventions aimed at increasing levels of self-compassion. The BVSCI shows promise for examining the construct of self-compassion without taxing study participants.

Acknowledgments

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Table 1

Demographic Data (n = 1,969)

Variable	Range	Mean	SD`	Frequency
Age	18–73 yrs.	45.11	9.48	1896
CD4 Self Report	0–10,000	482.94	431.02	1424
Length of HIV Self Report	1–31 yrs.	12.93 yrs.	7.53	1886
Self Rating of Physical Condition	0 – 10	6.76	2.18	1958
Self Rating of Psychological Support	0 – 10	6.79	2.38	1956
Self Rating of Social Support	0 – 10	6.94	2.64	1955
Sex				
Male				1416 (72.6%)
Female				530 (27.2%)
Decline to State/Other				4 (0.2%)
Education				
11th Grade or Less				526 (27.0%)
High School or GED				717 (36.8%)
2 Yrs. College/AA Degree/Technical School				425 (21.8%)
College (BS or BA)				211 (10.8%)
Masters Degree				63 (3.2%)
Doctorate/Medical Degree/Law Degree				9 (0.5%)
Ethnicity				
Asian/Pacific Islander				357 (18.4%)
African American/Black				750 (38.6%)
Hispanic				258 (13.3%)
Native American Indian				68 (3.5%)
White/Anglo (Non Hispanic)				457 (23.5 %)
Other				53 (2.7%)
Children				
No				1000 (51.8%)
Yes				931 (48.2%)
Work for Pay				
Do Not Work for Pay				1448 (74.4%)
Do Work for Pay				498 (25.6%)
Adequacy of Income				
Totally Inadequate				542 (28.0%)
Barely Enough				960 (49.6%)
Enough				432 (22.3%)
Told You Have AIDS				
No				1051 (53.0%)
Yes				862 (45.0%)
Don't Know				39 (2.0%)
Other Health conditions				

Variable	Range	Mean	SD`	Frequency
Yes				1182 (64.5%)
No				651 (35.5%)

Table 2

Means, Standard Deviations, Factor Loadings, and Communalities for the BVSCI (n = 1,967)

Scale Items		Factor Loadings		Communalities
	Mean (SD)	1	2	
*When I see aspects of myself that I don't like, I get down on myself.	3.21 (1.2)	**.662**	−.244	.517
*When I'm feeling down, I tend to feel like most other people are probably happier than I am.	3.21 (1.2)	**.652**	−.168	.452
*I can be a bit cold-hearted towards myself when I'm unhappy.	3.43 (1.2)	**.650**	−.118	.441
*When I'm feeling down I tend to obsess and fixate on everything that's wrong.	3.34 (1.2)	**.625**	−.246	.451
*When I'm really struggling, I tend to feel like other people must be having an easier time of it.	3.25 (1.2)	**.614**	−.281	.465
*When something painful happens, I tend to blow the incident out of proportion.	3.47 (1.2)	**.565**	−.142	.388
When something painful happens, I try to take a balanced view of the situation.	3.30 (1.2)	.302	**.642**	.558
When I fail at something important to me I try to keep things in perspective.	3.45 (1.2)	.320	**.617**	.505
When I'm going through a very hard time, I give myself the caring and tenderness I need.	3.22 (1.3)	−.055	**.578**	.474
I'm kind to myself when I'm unhappy or experiencing suffering.	3.09 (1.2)	.432	**.549**	.384
When I feel inadequate in some way, I try to remind myself that most people feel inadequate from time to time.	2.81 (1.1)	−.103	**.533**	.455
When I'm down, I remind myself that there are lots of other people in the world feeling like I am.	2.89 (1.2)	.333	**.506**	.875
Eigenvalue		2.879	2.231	
Percent Variance		23.99%	18.59%	

Note: Extraction Method: Maximum Likelihood; Rotation method: Oblimin and Promax with Kaiser Normalization Loadings in bold are values greater than .40 and are retained for that factor.

*
Reverse coded items

Table 3

Means and Standard Deviations for the Total BVSCI, Factor I, and Factor 2

Variable	Total BVSCI*		Factor I		Factor 2	
	M	*SD*	*M*	*SD*	*M*	*SD*
Total Sample:	29.97	6.17	18.81	4.94	10.98	3.75
Gender:						
Male	29.91	6.14	18.83	4.90	11.09	3.72
Female	29.57	6.16	18.81	4.99	10.78	3.82
Age:						
Age 50 and older	30.37	5.85	19.68	5.01	10.72	3.68
Under age 50	29.75	6.28	18.57	4.90	11.18	3.78
Children:						
Having children	29.84	6.34	18.92	4.95	10.93	3.84
Without children	29.79	5.97	18.75	4.93	11.05	3.66
Ethnicity:						
White	30.38*	4.80	18.60	4.91	11.79	3.73
Non-White	29.64*	6.49	18.89	4.94	10.77	3.73
Other Health Conditions:						
Yes	30.23***	5.82	18.58	4.90	11.47	3.77
No	28.98****	6.68	18.89	5.08	10.13	3.61
AIDS						
Received an AIDS diagnosis	29.58	6.27	18.66	4.88	10.94	3.71
Not received an AIDS diagnosis	30.03	6.01	18.93	5.00	11.09	3.79
Not sure	28.28	7.60	18.81	5.47	9.37	3.66
Length of HIV Disease						
10 years or less	30.17*	5.96	19.24	4.96	10.93	3.60
Greater than 10 years	29.48*	6.26	18.43	4.87	11.07	3.91

[a] BVSCI total scores were calculated by reverse coding of 6 items and then summing both subscale means.