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To cite this article: Jeffrey A. Hayes, Allison J. Lockard, Rebecca A. Janis & Benjamin D. Locke (2016): Construct validity of the Self-Compassion Scale-Short Form among psychotherapy clients, Counselling Psychology Quarterly, DOI: 10.1080/09515070.2016.1138397

To link to this article: http://dx.doi.org/10.1080/09515070.2016.1138397

Published online: 06 Apr 2016.

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Construct validity of the Self-Compassion Scale-Short Form among psychotherapy clients

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(Received 19 December 2014; accepted 3 January 2016)

Interest has been growing in the mental health benefits of self-compassion. Whereas, most research on this topic has been conducted with the 26-item Self-Compassion Scale (SCS), a briefer 12-item version of the instrument, the Self-Compassion Scale-Short Form (SCS-SF), also exists. The SCS-SF has demonstrated good validity and reliability in non-clinical samples, but it has not been used often in research with psychotherapy clients. This study was designed to examine the factor structure and construct validity of the SCS-SF in a clinical population. Data for this study were collected from 1609 college students receiving services at 10 campus counseling centers. The previously proposed factor structure of the SCS-SF was not supported. Instead, analyses revealed two factors, Self Care and Self Disparagement. Evidence for the construct validity of these factors was found via expected relationships with indices of depression, anxiety, social anxiety, hostility, academic distress, eating concerns, family distress, maladaptive perfectionism, suicidality, self-injurious behavior, and social support. SCS-SF scores were unrelated to various measures of substance use. Implications for clinical work and future research are discussed.

Keywords: self-compassion; validity; psychotherapy; college students

Self-compassion is a form of relating to oneself that involves responding to personal suffering with kindness, understanding, and support, as one might respond to a close friend (Neff, 2003a, 2003b). Neff (2003a) defines self-compassion as comprising three main elements: a sense of common humanity vs. personal isolation, mindfulness vs. identification with painful thoughts and emotions, and self-kindness vs. self-judgment. These components are theorized to combine and mutually interact to create a self-compassionate frame of mind. Self-compassion can be viewed as a state (i.e. the degree to which an individual evidences self-compassion in a particular moment) and as a trait (i.e. the extent to which an individual tends to act and feel self-compassionately across situations and across time).

The first element of self-compassion, common humanity, involves recognizing that all humans fail and make mistakes. This perspective enables individuals to develop a
sense of universality that helps them to cope with personal shortcomings and individual
difficulties, rather than feeling isolated. One’s own flawed state is acknowledged as part
of the shared human condition so that greater understanding is taken toward personal
shortcomings and hardships. Mindfulness, the second component of self-compassion,
involves a moment-to-moment awareness of one’s present suffering without judgment.
A mindful person is cognizant of her or his present thoughts, sensations, behaviors, and
emotions in a clear and balanced manner without exaggerating or over-identifying with
negative aspects of oneself or one’s circumstances. Self-kindness, the third aspect of
self-compassion, entails being gentle, supportive, and understanding toward oneself.
Rather than attacking and berating oneself for personal inadequacies, the individual
adopts an attitude of warmth and unconditional regard toward oneself. An approach of
self-kindness manifests itself in soothing and comforting oneself in times of distress
(Neff, 2003a, 2003b)

The topic of self-compassion has received considerable research attention since
2003, the year that self-compassion was first described and operationalized by Neff
(2003a, 2003b). One of the most consistent findings in the research literature is that
self-compassion is inversely related to various forms of psychological distress (e.g. mal-
adaptive perfectionism; Neff, 2003a) and psychopathology (Barnard & Curry, 2011). In
fact, a recent metaanalysis of 20 studies (MacBeth & Gumley, 2012) found large effect
sizes when examining the associations between self-compassion and depression, anxiety,
and psychological stress.

Self-compassion appears to facilitate resilience against various forms of psychologi-
cal distress by moderating reactions to negative events. In a series of studies, for
instance, Leary, Tate, Adams, Batts Allen, and Hancock (2007) asked undergraduates to
recall unpleasant events, imagine hypothetical situations about failure, loss, and humili-
ation, or perform an embarrassing task. Results indicated that individuals with more self-
compassion demonstrated less negative emotions, more accepting thoughts, and a
greater tendency to put their problems into perspective. In addition, self-compassion has
been implicated as an important protective factor against body dissatisfaction and disor-

Still further, self-compassionate people tend not to ruminate on their negative
thoughts and emotions or suppress them (Neff, 2003a; Neff, Kirkpatrick, & Rude,
2007). Moreover, self-compassion is associated with numerous aspects of mental health
such as happiness, optimism, wisdom, curiosity and exploration, personal initiative, and
emotional intelligence (Heffernan, Quinn Griffin, McNulty, & Fitzpatrick, 2010;
Hollis-Walker & Colosimo, 2011; Neff, Rude, & Kirkpatrick, 2007). In addition, people
who lack self-compassion are more likely to have critical mothers, come from dysfunc-
tional families, and display insecure attachment patterns than those with greater self-
compassion (Neff & McGehee, 2010; Wei, Liao, Ku, & Shaffer, 2011). Finally, low
self-compassion may be associated with problematic substance use. Research has found
that self-compassion was inversely related to addiction severity in a sample of 81
individuals between 16 and 24 years of age (Vettese, Dyer, Li, & Wekerle, 2011). A
second study found an inverse relationship between self-compassion and alcohol use
among undergraduate women who had been emotionally abused (Miron, Orcutt,
Hannan, & Thompson, 2014).

Research suggests that self-compassion can be increased through training, resulting
in improved psychological health. For instance, Neff and Germer (2013) developed an
eight-week intervention to enhance self-compassion skills in daily life. In a randomized, controlled trial with a non-clinical sample, the program significantly increased self-compassion and life satisfaction and decreased anxiety and depression with gains maintained at a one-year follow-up. Furthermore, a second study found that three sessions of self-compassion training for college students led to significant decreases in rumination and significant increases in optimism, self-compassion, and self-efficacy compared to a time management control group (Smeets, Neff, Alberts, & Peters, 2014). Because neither of these studies involved psychotherapy clients, examining self-compassion with college students in a clinical context would be a valuable next step in this area.

To date only a relatively small number of studies have examined self-compassion in clinical populations (e.g. Ferreira, Pinto-Gouveia, & Duarte, 2013; Krieger, Altenstein, Baettig, Doerig, & Holtforth, 2013; Kuyken et al., 2010; Lockard, Hayes, Neff, & Locke, 2014; Najavits et al., 2014; Van Dam, Sheppard, Forsyth, & Earleywine, 2011; Vettese et al., 2011). This body of research has demonstrated that self-compassion is inversely related to clients’ worry, anxiety, depression (Krieger et al., 2013; Van Dam et al., 2011), disordered eating (Ferreira et al., 2013), emotional dysregulation, severity of addiction, and overall psychological symptomology (Najavits et al., 2014; Vettese et al., 2011). Furthermore, self-compassion has been found to mediate the relationship between clients’ history of childhood trauma and emotional dysregulation (Vettese et al., 2011) and appears to enhance the effectiveness of mindfulness-based cognitive therapy for depression (Kuyken et al., 2010).

Each of the studies referenced in the preceding paragraph used the Self-Compassion Scale (SCS; Neff, 2003a), a 26-item measure of self-compassion. Recently, a briefer 12-item measure, the Self-Compassion Scale-Short Form (SCS-SF), has been developed (Raes, Pommier, Neff, & Van Gucht, 2011). The SCS-SF might be more suitable in clinical settings than the long form because it takes less time to administer and score. At present, the psychometric properties of the SCS-SF with psychotherapy clients are largely unknown. In one of the few studies that used the SCS-SF with a clinical sample, among patients with disordered eating (Kelly, Carter, Zuroff, & Borairi, 2013), scores on the SCS-SF were related in predicted ways to shame and responsiveness to treatment, providing preliminary evidence of the instrument’s construct validity. A second study found further evidence of the construct validity of the SCS-SF in that it partially mediated relationships among shame, rumination, and sexual behavior in a sample of male clients (Reid, Temko, Moghaddam, & Fong, 2014). A third study (Lockard et al., 2014) found that the SCS-SF demonstrated that male clients tended to report more self-compassion than female clients (as has been found in non-clinical samples; Neff, 2003a), and that clients who had been in therapy previously reported less self-compassion than clients who had never been in therapy.

In order to have confidence in findings from future research conducted with clinical samples and to ensure its accuracy with clients, however, the construct validity of the SCS-SF needs to be more firmly established across a variety of forms and levels of psychological distress. It would also be useful to both clinicians and future researchers to know how SCS-SF scores are associated with varying types of psychological symptoms.

One clinical population for whom self-compassion might be particularly relevant is college students who are receiving counseling. Data indicate that the prevalence and severity of significant mental health problems are increasing among college students (Center for Collegiate Mental Health, 2015). More than 1 in 3 undergraduates report
feeling so depressed it was difficult to function” at least once in the previous year, and 1 in 10 students reported seriously considering suicide within the last year (American College Health Association, 2008). Approximately two million students sought counseling on U.S. campuses in 2010 (Gallagher, 2011), and compared with students in general, these students are more depressed, hostile, and anxious, are three times more likely to report high levels of suicide ideation, and are five times more likely to have made a previous suicide attempt (McAleavey et al., 2012).

**Hypotheses**

Thus, the purpose of the present study was to further determine the construct validity of the SCS-SF, specifically among college students receiving psychological treatment. First, we examined the factor structure of the SCS-SF. In developing the SCS-SF, Raes et al. (2011) reported findings from a confirmatory factor analysis that suggested a good fit between their data and a model with six two-item factors and a higher order factor. We sought to examine the support for this model among college students in counseling. It seemed particularly important to do so because Raes et al. did not follow conventional standards of conducting an exploratory factor analysis prior to conducting a confirmatory factor analysis. Furthermore, in developing the 26-item SCS, Neff (2003a) conducted an exploratory factor analysis but did not report the factor structure that emerged from it. Since the results of exploratory factor analyses were not reported for either the SCS-SF or the parent instrument on which it is based, we did not make predictions about the factor structure that would emerge in our sample. We did make a number of specific predictions, however, related to the SCS-SF.

1. We hypothesized that scores on the SCS-SF would be significantly related to a variety of forms of psychological distress that are common among college students, including depression, social anxiety, generalized anxiety, hostility, academic distress, eating concerns, family concerns, and substance use. Our reasoning was based on previous research indicating that self-compassion has been found to be negatively associated with various markers of psychological distress (Krieger et al., 2013; MacBeth & Gumley, 2012; Van Dam et al., 2011; Vettese et al., 2011).

2. Because self-compassion involves a recognition of one’s common humanity, it was expected that clients with more self-compassion would seek out and receive support from others, whereas clients with less self-compassion would tend to isolate themselves. Thus, we hypothesized that SCS-SF scores would be significantly related to perceived support from family and friends.

3. Furthermore, consistent with findings from a non-clinical sample (Neff, 2003a), we expected that SCS-SF scores would be significantly related to maladaptive perfectionism, but would be unrelated to non-problematic aspects of perfectionism, such as having high standards and a preference for order (Rice & Slaney, 2002).

4. Still further, scores on the SCS-SF were expected to be significantly related to suicidal ideation, suicidal behavior, and non-suicidal self-injurious behavior. It was thought that a compassionate attitude toward one’s self would mitigate thoughts and actions intended to cause self-harm, as found in previous research (Tanaka, Wekerle, Schmuck, & Paglia-Boak, 2011).
Finally, SCS-SF scores were predicted to be significantly related to problematic alcohol use and binge drinking. Our rationale here was that students who had less self-compassion might engage in alcohol abuse to cope with their problems, rather than addressing them with mindfulness, self-kindness, and a recognition of one’s common humanity. Consistent with this reasoning, a previous study of late adolescents who were maltreated as children found that scores on the SCS-SF were inversely related to scores on a measure of problematic drinking (Tanaka et al., 2011).

Method

Participants
Participants in this study were college students receiving services at campus counseling centers that were members of the Center for Collegiate Mental Health (CCMH). CCMH is a practice–research network of college and university counseling centers that collects standardized data, which are then pooled, analyzed, and used as the basis for reports that support clinical work, research, training, and advocacy (Hayes, Locke, & Castonguay, 2011). Participants were receiving mental health services from 10 university counseling centers located in 6 different states throughout each geographic region of the United States (i.e. northeast, Midwest, south, and west). A total of 1609 clients participated in the study; 69% were women and 31% were men. The majority of students (63.4%) were enrolled in public colleges or universities, and the rest were enrolled in private institutions. In terms of ethnicity and race, 59% of the students were European American/White, 13% were African American/Black, 13% were Hispanic/Latino/a, 8% were Asian American, 4% identified as multiracial, and 2% identified as “other.” The majority of students identified as heterosexual (89%), followed by bisexual (3%), gay (2%), questioning (2%), and lesbian (2%). Regarding class standing, 20% were first-year students, 19% were sophomores, 24% were juniors, 21% were seniors, 15% were graduate students, and .8% identified their class standing as “other.” The age of participants ranged from 18 to 63 years with an average of 22.74 years (SD = 5.63). Nearly, 85% of students were 25 years of age or younger. Fifty-seven percent of students reported they had never received any previous form of mental health counseling and 73% reported they had never taken psychiatric medication.

Measures

Self-Compassion Scale-Short Form
The SCS-SF (Raes et al., 2011) is a 12-item version of the original 26-item SCS (Neff, 2003a). The SCS-SF was created by Raes et al. by choosing 12 items from the SCS (2 from each of 6 subscales) that had high correlations with both the total score on the SCS and their respective subscale scores, and that “reflected the breadth of the original subscale content” (p. 252). The SCS-SF thus was designed to measure the main components of self-compassion: self-kindness (e.g. “I try to be understanding and patient toward aspects of my personality I don’t like”) vs. self-judgment (e.g. “I’m disapproving and judgmental about my own flaws and inadequacies”); common humanity (e.g. “I try to see my failings as part of the human condition”) vs. isolation (e.g. “When I’m
feeling down, I tend to feel like most other people are probably happier than I am”); and mindfulness (“When something painful happens I try to take a balanced view of the situation”) vs. over-identification (e.g. “When I’m feeling down I tend to obsess and fixate on everything that’s wrong”). After selecting 12 items from the SCS to form the SCS-SF, Raes et al. then conducted a confirmatory factor analysis with a Dutch sample that examined the fit between the data and a model with six 2-item factors and an overall factor. Acceptable fit indices were reported; the root mean square error of approximation was .08; the standardized root mean square residual was .07; the comparative fit index was .97; and the non-normed fit index was .96. Nearly identical values were obtained subsequently from a confirmatory factor analysis conducted on data obtained from undergraduates at the University of Texas.

Item responses on the SCS-SF are indicated using a 5-point scale ranging from 1 (almost never) to 5 (almost always). A total score is calculated by taking the mean of the 12 items after reverse scoring negatively worded items; higher scores reflect greater self-compassion. The overall score on the SCS-SF has demonstrated adequate internal consistency with estimates of Cronbach’s alpha around .85 (Kelly et al., 2013; Raes et al., 2011). The test–retest reliability over a span of five months was found to be .71 (Raes et al., 2011). Total scores on the SCS-SF also have been found to correlate highly (.98) with the 26-item SCS (Raes et al., 2011). In the present study, Cronbach’s alpha for the 12 items was found to be .85, reflecting adequate internal consistency, and all 12 items contributed positively to the internal consistency estimate for the total score.

Counseling Center Assessment of Psychological Symptoms-62 (CCAPS-62)

The CCAPS-62 (Locke et al., 2011) is a 62-item measure designed to assess a range of psychological symptoms common among college students. It has eight subscales: Depression, Generalized Anxiety, Social Anxiety, Eating Concerns, Substance Use, Hostility, Academic Distress, and Family Concerns. The subscales have demonstrated acceptable internal consistency and test–retest reliability estimates, as well as evidence of convergent validity in clinical and non-clinical samples of college students (Locke et al., 2011; McAleavey et al., 2012). In particular, for the 13-item Depression subscale (e.g. “I feel worthless”), the internal consistency estimate is .92, one-week test–retest reliability has been estimated at .93 for students who are not in counseling, Depression scores correlate highly with scores on both the Beck Depression Inventory (BDI; \( r = .82 \)) and Patient Health Questionnaire-9 (PHQ-9; \( r = .77 \)) among counseling center clients, and scores are higher for college student clients diagnosed with major depression or dysthymia (\( M = 2.34, SD = .74 \)) than for clients without either diagnosis (\( M = 1.44, SD = .87 \); Locke et al., 2011; McAleavey et al., 2012).

For the nine-item Generalized Anxiety subscale (e.g. “I feel tense”), the internal consistency estimate is .85, one-week test–retest reliability for students not in counseling is .78, scores correlate highly with scores on the Beck Anxiety Inventory among counseling center clients, and scores are higher for college student clients diagnosed with generalized anxiety disorder (\( M = 2.23, SD = .79 \)) than for clients without such a diagnosis (\( M = 1.57, SD = .88 \); Locke et al., 2011; McAleavey et al., 2012).

For the seven-item Social Anxiety subscale (e.g. “I am uncomfortable around people I don’t know”), the internal consistency estimate is .87, one-week test–retest reliability for students not in counseling is .83, scores correlate highly with scores on the Social
Phobia Diagnostic Questionnaire among counseling center clients ($r = .75$), and scores are higher for clients diagnosed with social phobia ($M = 2.96$, $SD = .67$) than for clients without such a diagnosis ($M = 1.77$, $SD = .92$; Locke et al., 2011; McAleavey et al., 2012).

For the nine-item Eating Concerns subscale (e.g. “When I start eating I can’t stop”), the internal consistency estimate is .88, one-week test–retest reliability for students not in counseling is .89, scores correlate highly with scores on the Eating Attitudes Test-26 among counseling center clients ($r = .58$), and scores are higher for clients diagnosed with an eating disorder ($M = 2.50$, $SD = .90$) than for clients without such a diagnosis ($M = .91$, $SD = .80$; Locke et al., 2011; McAleavey et al., 2012).

Substance Use contains six items, five of which pertain to problematic alcohol use (e.g. “I have done something I have regretted because of drinking”). The internal consistency for the Substance Use subscale has been estimated at .85, one-week test–retest reliability for students who are not in treatment is .87, scores on this subscale correlate highly with scores on the Alcohol Use Disorders Identification Test among counseling center clients ($r = .60$), and scores are higher for college student clients diagnosed with an alcohol use disorder ($M = 2.13$, $SD = .89$) than for clients without such a diagnosis ($M = .69$, $SD = .79$; Locke et al., 2011; McAleavey et al., 2012).

For the seven-item Hostility subscale (e.g. “I have difficulty controlling my temper”), the internal consistency estimate is .83, one-week test–retest reliability for students not in counseling is .91 and scores correlate highly with scores on the Trait Anger Inventory among counseling center clients ($r = .67$; Locke et al., 2011; McAleavey et al., 2012).

For the five-item Academic Distress subscale (e.g. “I am unable to keep up with my schoolwork”), the internal consistency estimate is .78, one-week test–retest reliability for students not in counseling is .92, and scores correlate highly with scores on the Academic Adjustment subscale of the Student Adaptation to College Questionnaire among counseling center clients ($r = -.68$; Locke et al., 2011; McAleavey et al., 2012).

For the six-item Family Distress subscale (e.g. “My family gets on my nerves”), the internal consistency estimate is .81, one-week test–retest reliability for students not in counseling is .92, and scores correlate highly with scores on the Self-Report Family Inventory among counseling center clients ($r = .65$; Locke et al., 2011; McAleavey et al., 2012). In the present study, the internal consistency estimates were .90 for Depression, .85 for Generalized Anxiety, .84 for Social Anxiety, .89 for Eating Concerns, .85 for Substance Use, .87 for Hostility, .82 for Academic Distress, and .84 for Family Concerns.

**Standardized data set (SDS)**

The SDS contains demographic, cultural, and mental health history questions frequently asked of students during an initial appointment at a university counseling center (CCMH, 2015). For example, items ask students to identify their sexual orientation, gender, religiosity, and prior use of mental health services. The SDS includes two questions on social support: “I get the emotional help and support I need from my family” and “I get the emotional help and support I need from my social network (e.g. friends and acquaintances).” It also includes a question on binge drinking that assesses the number of times within the previous two weeks that clients had “5 or more drinks in a...
row” (4 for women). Responses range from 1 (Never) to 6 ($10^5$ times). Further, the SDS assesses whether clients ever “purposely injured yourself without suicidal intent,” “seriously considered attempting suicide,” or “made a suicide attempt.” These questions were formatted so that students indicated “how many times” they had engaged in the behavior (never, one time, 2–3 times, 4–5 times, or more than 5 times). Responses were dichotomized to indicate whether a student had ever, or never, engaged in the behavior.

**Almost Perfect Scale-Revised (APS-R)**
The APS-R contains 23 items that are rated from 1 (strongly disagree) to 7 (strongly agree) to measure three aspects of perfectionism: High Standards, Order, and Discrepancy (Slaney, Rice, Mobley, Trippi, & Ashby, 2001). High Standards comprises seven items and reflects performance-related expectations that individuals have for themselves. Order consists of four items and measures one’s desire for neatness and organization. Discrepancy contains 12 items and measures the degree to which individuals perceive themselves as failing to meet personal standards. Discrepancy scores reflect maladaptive aspects of perfectionism, as they have been found to be associated with depression, anxiety, and poor self-esteem (Rice & Slaney, 2002). Evidence supports the factor structure, discriminant validity, and concurrent validity of the APS-R (Elion, Wang, Slaney, & French, 2012; Slaney et al., 2001). In the present study, internal consistency estimates were $\alpha = .88$ for High Standards, $\alpha = .87$ for Order, and $\alpha = .95$ for Discrepancy.

**Alcohol Use Disorders Identification Test**
The AUDIT (Saunders, Aasland, Babor, de la Fuente, & Grant, 1993) is a widely used 10-item measure of problematic alcohol use. It discriminates between alcoholics and non-drinkers (Saunders et al., 1993) and performs comparably or favorably relative to other measures of problematic drinking among adolescents (Knight, Sherritt, Harris, Gates, & Chang, 2003). In this sample, the Cronbach’s alpha was 0.85.

**Procedure**
Data for this study were collected by the CCMH during the 2012–2013 academic year. Of the 132 institutions that contributed data to CCMH during the 2012–2013 academic year, 10 counseling centers agreed to administer the SCS-SF and APS-R in addition to the CCAPS-62 and SDS. Some counseling centers also administered the AUDIT as a routine part of clinical practice. All schools contributing data to CCMH received Institutional Review Board (IRB) approval prior to participating in the study. Participating counseling centers were recruited on a voluntary basis via e-mail to members of CCMH, and each center made appropriate modifications to their IRB to account for administering the SCS-SF and APS-R. Counseling centers then administered the SCS-SF and APS-R at intake along with the SDS, CCAPS-62, and AUDIT. The order in which instruments were completed varied according to individual procedures at each of the 10 counseling centers. For students who provided consent, all data were then de-identified and uploaded to CCMH.
Statistical analyses

First, we sought to examine the factor structure of the SCS-SF by conducting a principal components analysis (PCA) with a randomly selected half of the sample (the calibration sample) followed by a series of confirmatory factor analyses with the remainder of the sample (the validation sample). We used PCA rather than traditional factor analysis because we were interested in an empirically derived solution to variability in the data, rather than a primarily theoretical one. Due to the problems described previously with the development of both the SCS and the SCS-SF, we were uncertain that the proposed theoretical structure of the SCS-SF would be replicated in the current study. Thus, we believed that PCA was a more appropriate data analytic approach. The data were split into two random samples, a calibration sample and a validation sample, each containing half of the data. A PCA followed by a varimax rotation was conducted on the calibration sample using SPSS 22 for Macintosh. The number of factors to be retained was determined through parallel analysis and examination of a screen plot. Items with factor loadings greater than .40 were retained. We then conducted confirmatory factor analyses using RStudio to test the factor structure of the SCS-SF that was proposed by Raes et al. (2011), as well as other models that seemed plausible based on the PCA.

To test Hypothesis 1, Pearson correlation coefficients were computed to determine if SCS-SF scores were significantly related to scores on each of the CCAPS-62 subscales. To test Hypothesis 2, Pearson correlation coefficients were computed to determine if SCS-SF scores were related to scores on an SDS item measuring perceived support from family and a second SDS item measuring perceived support from friends. To test Hypothesis 3, correlations between scores on the SCS-SF and APS-R subscales were calculated to provide evidence of concurrent and discriminant validity. In particular, we expected that SCS-SF scores would be significantly related to scores on the APS-R Discrepancy subscale, which reflects maladaptive aspects of perfectionism, but would be unrelated to scores on Standards and Order, which do not reflect problematic aspects of perfectionism (Rice & Slaney, 2002). To test Hypothesis 4, ANOVAs were conducted to determine if scores on the SCS-SF were significantly different among clients who had and had not ever engaged in suicidal ideation, suicidal behavior, and non-suicidal self-injurious behavior. Finally, to test Hypothesis 5, correlations between scores on the SCS-SF and scores on the AUDIT and SDS item related to binge drinking were calculated. SCS-SF scores were predicted to be significantly related to scores on the AUDIT and the binge drinking item.

Results

The PCA, which was conducted on the calibration sample, yielded two factors. Factor one, which contained six negatively worded items, had an eigenvalue of 4.60 and accounted for 38.30% of the variance. This factor, which contained items reflecting impatience, intolerance, disapproval, and judgment toward oneself, as well as obsession, fixation, and feelings of aloneness, was named Self Disparagement. The internal consistency estimate for this subscale was .87. Factor two, which contained six positively worded items, had an eigenvalue of 2.12 and accounted for 17.68% of the variance. This factor, which contained items reflecting understanding, tenderness, patience, and
care toward the self, as well as a balanced and universal perspective, was named Self Care. The internal consistency estimate for this subscale was .79. The rotated subscale loadings and item stems are depicted in Table 1.

The PCA was followed up with multiple confirmatory factor analyses on the validation sample. Specifically, we conducted three confirmatory factor analyses using robust diagonally weighted least squares estimation. Goodness of fit was evaluated using the comparative fit index (CFI), Tucker–Lewis index (TLI), root mean square error of approximation (RMSEA), the standardized root mean residual (SRMR), and chi-squared. When evaluating CFI and TLI, values above .95 indicate acceptable model fit (Hu & Bentler, 1999). For RMSEA, values below .08 indicate acceptable model fit, and for SRMR, values less than .10 indicate acceptable fit (Schermelleh-Engel, Moosbrugger, & Müller, 2003). In evaluating chi-square, values less than three times the model’s degrees of freedom were taken to indicate acceptable model fit (Schermelleh-Engel et al., 2003).

Since the internal consistency estimate for the SCS-SF was fairly high, we first conducted a CFA that tested a model in which all 12 items loaded onto a single factor. This model did not provide an adequate fit to the data, CFI = .72, TLI = .66, RMSEA = .19, SRMR = .11, $\chi^2$ (54) = 1525.46, $p < .001$. We then tested the two-factor model that resulted from the exploratory PCA. All items loaded significantly on their intended factors ($p < .001$), and the two factors were significantly correlated ($r = -.43$, $p < .001$). Results reflected marginally acceptable model fit, CFI = 0.95, TLI = 0.93, RMSEA = 0.08, SRMR = .05, $\chi^2$ (53) = 339.57, $p < .001$. Parameter estimates are shown in Table 2.

Table 1. Principle components analysis factor loadings.

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>When I fail at something important to me I become consumed by feelings of inadequacy</td>
<td>.800</td>
</tr>
<tr>
<td>2</td>
<td>I try to be understanding and patient toward those aspects of my personality I don’t like</td>
<td>.096</td>
</tr>
<tr>
<td>3</td>
<td>When something painful happens I try to take a balanced view of the situation</td>
<td>.139</td>
</tr>
<tr>
<td>4</td>
<td>When I’m feeling down, I tend to feel like most other people are probably happier than I am</td>
<td>.623</td>
</tr>
<tr>
<td>5</td>
<td>I try to see my failings as part of the human condition.</td>
<td>.027</td>
</tr>
<tr>
<td>6</td>
<td>When I’m going through a very hard time, I give myself the caring and tenderness I need</td>
<td>.344</td>
</tr>
<tr>
<td>7</td>
<td>When something upsets me I try to keep my emotions in balance</td>
<td>.154</td>
</tr>
<tr>
<td>8</td>
<td>When I fail at something that’s important to me, I tend to feel alone in my failure</td>
<td>.783</td>
</tr>
<tr>
<td>9</td>
<td>When I’m feeling down I tend to obsess and fixate on everything that’s wrong</td>
<td>.771</td>
</tr>
<tr>
<td>10</td>
<td>When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people</td>
<td>.099</td>
</tr>
<tr>
<td>11</td>
<td>I’m disapproving and judgmental about my own flaws and inadequacies</td>
<td>.814</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>.756</td>
</tr>
</tbody>
</table>

Note: Item loadings in bold are above .400 cutoff criterion.
The third CFA sought to test the theoretically driven model derived from Raes et al. (2011) in which the development of the SCS-SF was described. In this model, the 12 items loaded onto six 2-item factors (Self-kindness: items 2 and 6, Self-judgment: items 11 and 12, Common Humanity: items 5 and 10, Isolation: items 4 and 8, Mindfulness: 3 and 7, Over-identified: 1 and 9), along with a higher order, general factor. This model did not provide an adequate fit to the data, CFI = 0.78, TLI = 0.70, RMSEA = 0.17, SRMR = 0.10, $\chi^2$ (48) = 1191.73, $p < .001$. Thus, the best fit to the data was provided by the two-factor model that emerged from the PCA.

After examining the structural validity of the SCS-SF, attention was devoted to gathering additional evidence regarding the validity of the instrument by testing a series of hypotheses. As reflected in Table 3, and consistent with Hypothesis 1, the total score on the SCS-SF and the subscale scores on Self Disparagement and Self Care were all significantly related to each CCAPS-62 subscale score, with the exception of Substance Use; scores on this subscale were unrelated to Self Care and were significantly correlated with Self Disparagement and the total score on the SCS-SF, although these correlations were very small ($< .10$).

### Table 2. Unstandardized and standardized factor loadings for the two-factor model.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Item</th>
<th>Unstandardized (SE)</th>
<th>Standardized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Disparagement</td>
<td>1</td>
<td>1.00 (–)</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>.77 (.05)</td>
<td>.59</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>.95 (.04)</td>
<td>.73</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>.97 (.05)</td>
<td>.73</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>1.07 (.05)</td>
<td>.81</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>.97 (.05)</td>
<td>.76</td>
</tr>
<tr>
<td>Self Care</td>
<td>2</td>
<td>1.00 (–)</td>
<td>.53</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1.24 (.12)</td>
<td>.64</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1.15 (.12)</td>
<td>.55</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>1.40 (.13)</td>
<td>.73</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>1.11 (.12)</td>
<td>.57</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>1.03 (.11)</td>
<td>.52</td>
</tr>
</tbody>
</table>

Note: Dashes (–) indicate that the standard error was not estimated.

### Table 3. Correlations among SCS-SF scores and CCAPS-62 scores.

<table>
<thead>
<tr>
<th>CCAPS-62 subscale</th>
<th>Correlation with SCS-SF</th>
<th>Correlation with Self Disparagement</th>
<th>Correlation with Self Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>$-.67^*$</td>
<td>$.65^*$</td>
<td>$-.43^*$</td>
</tr>
<tr>
<td>Social anxiety</td>
<td>$-.57^*$</td>
<td>$.55*$</td>
<td>$-.37^*$</td>
</tr>
<tr>
<td>Generalized anxiety</td>
<td>$-.51^*$</td>
<td>$.52*$</td>
<td>$-.29^*$</td>
</tr>
<tr>
<td>Hostility</td>
<td>$-.45^*$</td>
<td>$.43*$</td>
<td>$-.29^*$</td>
</tr>
<tr>
<td>Academic distress</td>
<td>$-.41^*$</td>
<td>$.39*$</td>
<td>$-.27^*$</td>
</tr>
<tr>
<td>Eating concerns</td>
<td>$-.33^*$</td>
<td>$.34*$</td>
<td>$-.19^*$</td>
</tr>
<tr>
<td>Family concerns</td>
<td>$-.27^*$</td>
<td>$.29*$</td>
<td>$-.14^*$</td>
</tr>
<tr>
<td>Substance use</td>
<td>$-.08^*$</td>
<td>$.09*$</td>
<td>$.06$</td>
</tr>
</tbody>
</table>

*$p < .001$. 

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Next, as predicted by Hypothesis 2, the total score on the SCS-SF was directly related to SDS items measuring perceived support from clients’ family members \((r = .21, p < .001)\) and friends \((r = .31, p < .001)\). A similar pattern was observed for the Self Care subscale, whose scores were modestly related to perceived support from family members \((r = .10, p < .001)\) and friends \((r = .23, p < .001)\). Self Disparagement scores were inversely related to perceived support from family members \((r = -.21, p < .001)\) and friends \((r = -.27, p < .001)\).

Regarding Hypothesis 3, consistent with expectations, SCS-SF total scores were significantly related to APS-R scores on Discrepancy \((r = -.64, p < .001)\), as were scores on Self Disparagement \((r = .67, p < .001)\) and Self Care \((r = -.33, p < .001)\). With regard to discriminant validity, SCS-SF total scores were unrelated to scores on Standards \((r = .04, p > .01)\), as predicted, as were Self Disparagement scores \((r = .08, p > .001)\); Self Care scores, contrary to expectation, were significantly related to Standards \((r = .18, p < .001)\). Also counter to expectation, SCS-SF total scores were directly related to scores on Order \((r = .11, p < .001)\), as were Self Care scores \((r = .17, p < .001)\). Self Disparagement scores were unrelated to scores on Order \((r = .03, p < .001)\).

In terms of Hypothesis 4, as expected, both Self Disparagement and Self Care scores varied significantly among clients who had ever, and who had never, “purposely injured yourself without suicidal intent” or “seriously considered attempting suicide,” and ever “made a suicide attempt,” although effect sizes were small. Means and standard deviations are presented in Table 4, where higher Self Disparagement scores indicate greater Self Disparagement, and higher Self Care scores indicate greater levels of Self Care.

Finally, regarding Hypothesis 5, contrary to expectation, scores on the AUDIT were unrelated to SCS-SF total scores \((r = -.10)\), as well as to scores on Self Disparagement \((r = .13)\) and Self Care \((r = -.05)\); the sample sizes for these correlations ranged from 242 to 247 and all \(p\) values were .03 or larger. Also counter to prediction, scores from the SDS item measuring frequency of binge drinking were unrelated to SCS-SF total scores \((r = -.02)\), as well as to scores on Self Disparagement \((r = .00)\) and Self Care \((r = -.05)\); all \(p\) values were .04 or larger.

Table 4. SCS-SF total and subscale scores for suicide and self-harm items.

<table>
<thead>
<tr>
<th>SDS item</th>
<th>Total score</th>
<th>Self Disparagement</th>
<th>Self Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>Mean</td>
<td>SD</td>
<td>d</td>
</tr>
<tr>
<td>No previous suicidal ideation</td>
<td>1054</td>
<td>2.94</td>
<td>.72</td>
</tr>
<tr>
<td>Previous suicidal ideation</td>
<td>385</td>
<td>2.46</td>
<td>.66</td>
</tr>
<tr>
<td>No previous suicide attempt</td>
<td>1318</td>
<td>2.84</td>
<td>.73</td>
</tr>
<tr>
<td>Previous suicide attempt</td>
<td>121</td>
<td>2.43</td>
<td>.72</td>
</tr>
<tr>
<td>No previous NSSI</td>
<td>1147</td>
<td>2.89</td>
<td>.73</td>
</tr>
<tr>
<td>Previous NSSI</td>
<td>292</td>
<td>2.46</td>
<td>.67</td>
</tr>
</tbody>
</table>

Note: NSSI = Non-suicidal self-injurious behavior. \(d\) = Cohen’s \(d\) effect size. All between-group comparisons significant on each dependent variable at \(p < .001\).
Discussion
The purpose of this study was to gather and assess data to determine the factor structure and validity of the SCS-SF in a clinical sample. To begin, the previously proposed factor structure of the instrument was not supported in this sample. Although Raes et al. (2011) reported that they derived acceptable fit indices from a confirmatory factor analysis that tested a model with six, 2-item factors and an overall factor, that model did not fit the data well in this study. Several explanations are possible for this difference. First, it could be that the factor structure of the instrument is different in clinical and non-clinical samples. Perhaps in non-clinical samples, the instrument does measure a single construct, namely self-compassion. In clinical samples, it could be that the negatively worded items on the SCS-SF tap into a different construct, one that to our way of thinking reflects self-disparagement, as measured by items pertaining to impatience, isolation, disapproval, and judgment toward oneself. In addition, among college students who are in counseling, the positively worded items on the SCS-SF seem to measure self-care, as reflected in items pertaining to tenderness, patience, and empathy toward the self. This is a more limited construct than the description of self-compassion offered by Neff (2003a), although it may more accurately capture the phenomenon among individuals in psychotherapy.

To summarize the statistical findings regarding the factor structure of the instrument, the strongest support was obtained for a two-factor model with all negatively worded items on one factor (Self Disparagement) and all positively worded items loading on the second factor (Self Care). This model emerged from an exploratory factor analysis with half the sample. Interestingly, a similar two-factor structure was recently reported in a factor analysis of the 26-item SCS with a Portuguese clinical sample (Costa, Maroco, Pinto-Gouveia, Ferreira, & Castilho, 2015). In this study, like ours, all of the positively worded items loaded onto one factor and all of the negatively worded items loaded onto a second factor. Furthermore, in both studies, fit indices were better for a confirmatory factor analysis testing the two-factor model than for any other model that was tested.

Because Raes et al. (2011) did not report the results of an exploratory factor analysis, it is difficult to know what factor structure would have emerged from their data had they done so. Interestingly, the 26-item SCS was subjected to an exploratory factor analysis (Neff, 2003a), but the resulting factor structure was not reported in that article. Instead, a series of confirmatory factor analyses was conducted with the same sample on which the exploratory factor analysis was conducted. Neff reported that confirmatory factor analyses were conducted on groups of items (to determine if they were best modeled as one or two factors), and a confirmatory factor analysis was conducted on a model with six factors and a higher order factor. That model was deemed to be adequate on the basis of a non-normed fit index of .88 and a CFI of .90. Conventional standards for fit indices, however, indicate that the values reported by Raes et al. are below acceptable levels (Hu & Bentler, 1999), and additional fit indices were not reported for the model. The combination of inadequate or missing fit indices is a meaningful omission, given the lack of confirmatory support found in the current study, the widespread use of the SCS in research on self-compassion, and because Raes et al. chose items for the SCS-SF based on the previously published factor structure of the SCS.

Results from the current study indicate that, for college students in counseling, the SCS-SF may be primarily reflective of self-criticism and disparagement and,
secondarily, self-care and compassion. The CCAPS subscale scores tended to correlate more strongly with Self Disparagement scores than Self Care scores. Furthermore, the correlations between Self Disparagement scores and CCAPS subscale scores tended to resemble the correlations between total SCS-SF scores and CCAPS subscale scores more than was true for Self Care scores. This same pattern was observed for APS-R scores and scores from items measuring social and family support. Whether these same patterns would be observed in other clinical populations or among individuals who are not in treatment is an empirical question awaiting future research.

Although the total and subscale scores on the SCS-SF were related in mostly expected ways to indices of psychological distress, social support, perfectionism, suicide and self-harm, scores were unrelated or minimally related to problematic alcohol use. These findings are inconsistent with research by Tanaka et al. (2011) that found that self-compassion was negatively related to problematic alcohol use in a sample of late adolescents. Important differences between the samples might account for the fact that findings from Tanaka et al. were not replicated in this study. The participants in Tanaka et al. were slightly younger, all had been maltreated as children, and they were not necessarily in therapy. Also, previous research has found that, unlike other areas of psychological distress (e.g. anxiety, depression, eating concerns), distress related to alcohol use among college students is similar among those who do and do not seek help from campus counseling centers (CCMH, 2015). This may be due to the prevalent culture of alcohol abuse on college campuses. That is, students in the general campus population do not view their drinking as problematic and therefore do not seek help for it, and when students seek help from their campus counseling center, they do not view alcohol as a primary concern (CCMH, 2015). This raises the question as to whether the non-significant correlations with indices of problematic alcohol use ought to be viewed as a lack of support for the construct validity of the SCS-SF or as evidence of the need for a better understanding of college students’ drinking behaviors.

Taken as a whole, results from this study call into question the previously published factor structure of the SCS-SF and they provide fairly strong evidence for a two-factor structure that may be useful in a clinical setting for college students. Based on data from more than 1500 individuals, it appears that university counseling center clients whose self-attitudes reflect more disparagement and less of a caring stance have more distress related to depression, anxiety, social anxiety, hostility, eating concerns, academics, and family problems. Furthermore, they report receiving less support from family and friends, more maladaptive perfectionism, more suicidal ideation, a greater number of suicide attempts, and more non-suicidal self-injurious behavior, such as cutting or burning one’s self.

Findings suggest that self-compassion may be related to the long-standing nature of clients’ mental health concerns. This proposition is consistent with data from the current study that showed that clients who had ever seriously considered suicide, made a suicide attempt, or engaged in other self-injurious behavior evidenced more self-disparagement and less self-care than clients without such histories. The design of the present study does not allow causality to be determined, but a number of scenarios are possible. It could be that a critical, non-caring stance toward the self contributes to self-harm; that individuals who have thought seriously about suicide or engaged in self-injurious behavior are more disparaging of themselves as a result; and that each promotes the other in a self-perpetuating and dangerous cycle.
In terms of treatment implications, the strong correlations between scores on the SCS-SF and the CCAPS Depression subscale suggest that college student clients who struggle with distress related to depression may be particularly prone to self-disparagement and a lack of self-care. Counseling might beneficially target these attitudes as a means of alleviating depression. Therapists could administer the SCS-SF repeatedly over the course of treatment to determine if self-care or self-disparagement is changing, and they could discuss with clients their perceptions of what is causing these changes. One possibility along these lines is that the compassion and unconditional regard that therapists demonstrate toward clients could be internalized by clients, thereby fostering more accepting and less critical attitudes toward the self.

It is important to keep the limitations of this study in mind when interpreting its findings. First, we did not have access to clients’ presenting concerns or diagnoses. As such, we were unable to determine what led them to seek counseling (e.g. a relationship break-up or legal difficulties) and how those factors may have affected their self-compassion. Moreover, this study examined the SCS-SF at one time point, the start of treatment. Therefore, the validity of the SCS-SF over the course of treatment is unknown. Future research might profitably examine the relationship of the SCS-SF to clinically relevant factors, such as engagement in treatment, symptom relief over the course of counseling, and improved functionality, to help further establish the validity and clinical utility of the SCS-SF. Finally, due to the previously unreported factor structure of the SCS-SF that was discovered in this study, additional studies are needed that would help establish the factor structure and the content, cultural, and predictive validity of the SCS-SF for psychotherapy clients, especially those who are not college students. Limitations notwithstanding, the preliminary evidence from this study strongly suggests that the SCS-SF may have use in a college student clinical setting as an instrument that measures both self-caring and self-disparaging attitudes among clients.

Disclosure statement
No potential conflict of interest was reported by the authors.

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References


