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The Self-Compassion Scale is a Valid and Theoretically Coherent Measure of Self-Compassion

Kristin D. Neff

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Kristin D. Neff, Department of Educational Psychology, University of Texas at Austin, 1912 Speedway, Stop D5800, Austin, TX 78712-1289. E-mail: kristin.neff@mail.utexas.edu

Abstract

Recently, the Self-Compassion Scale (SCS) has been criticized for problems with psychometric validity. Further, the use of an overall self-compassion score that includes items representing the lack of self-compassion has been called into question. I argue that the SCS is consistent with my definition of self-compassion, which I see as a dynamic balance between the compassionate versus uncompassionate ways that individuals emotionally respond to pain and failure (with kindness or judgment), cognitively understand their predicament (as part of the human experience or as isolating), and pay attention to suffering (in a mindful or over-identified manner). A summary of new empirical evidence is provided using a bifactor analysis, which indicates that at least 90% of the reliable variance in SCS scores can be explained by an overall self-compassion factor in five different populations, justifying the use of a total scale score. Support for a six-factor structure to the SCS was also found, however, suggesting the scale can be used in a flexible manner depending on the interests of researchers. I also discuss the issue of whether a two factor model of the SCS—which collapses self-kindness, common humanity and mindfulness items into a "self-compassion" factor and self-judgment, isolation and over-identification items into a "self-criticism" factor—makes theoretical sense. Finally, I present new data showing that self-compassion training increases scores on the positive SCS subscales and decreases scores on the negative subscales, supporting the idea that self-compassion represents more compassionate and fewer uncompassionate responses to suffering.

Keywords: Self-Compassion Scale, SCS, subscales, self-compassion, self-criticism, factor structure, Mindful Self-Compassion

Introduction

I have been conducting empirical research on self-compassion for over a decade (Neff, 2003a, 2003b). My understanding of self-compassion was first developed in my personal practice of Buddhist meditation, was made more concrete through my research on the construct, and has subsequently been refined through teaching thousands of people how to be more self-compassionate in the Mindful Self-Compassion program (Germer & Neff, 2003). As a scientist-practitioner of self-compassion, these first person and second person perspectives have powerfully informed my understanding and interpretation of third person empirical investigations into the topic (Lane & Corrie, 2007).

Recently, the self-report scale I initially created to measure self-compassion—the Self-Compassion Scale (Neff, 2003a)—has been criticized for problems with psychometric validity as well as theoretical consistency with the construct of self-compassion. I address these concerns systematically in this article. First, I present my views on how to define self-compassion, a summary of new empirical evidence regarding the factor structure of the SCS, discussion of whether or not subscale items referring to the lack of self-compassion should be included in an overall measure of self-compassion, and new data concerning the simultaneous impact of self-compassion training on compassionate and uncompassionate responses to suffering.

What is Self-Compassion?

My conceptualization of self-compassion is drawn primarily from writings of Buddhist teachers in the Insight tradition (e.g., Brach, 2003; Kornfield, 1993; Salzberg, 1997). From this point of view, self-compassion simply represents compassion turned inward, and refers to how we relate to ourselves in instances of perceived failure, inadequacy or personal suffering. As I define it,

self-compassion entails three main components, each of which has a positive and negative pole that represents compassionate versus uncompassionate behavior: self-kindness versus self-judgment, a sense of common humanity versus isolation, and mindfulness versus over-identification. These various components, in combination, represent a self-compassionate frame of mind. Self-kindness entails being gentle, supportive and understanding towards oneself. Rather than harshly judging oneself for personal shortcomings, the self is offered warmth and unconditional acceptance. It also involves actively soothing and comforting oneself in times of distress. Common humanity involves recognizing the shared human experience, understanding that all humans fail and make mistakes, that all people lead imperfect lives. Rather than feeling isolated by one's imperfection—egocentrically feeling as if "I" am the only one who has failed or am suffering—one takes a broader and more connected perspective with regard to personal shortcomings and individual difficulties. Mindfulness, the third component of self-compassion, involves being aware of one's present moment experience of suffering with clarity and balance, without being caught up in an exaggerated storyline about negative aspects of oneself or one's life experience, a process that is termed "over-identification."

The various components of self-compassion are conceptually distinct and tap into different ways that individuals emotionally respond to pain and failure (with kindness or judgment), cognitively understand their predicament (as part of the human experience or as isolating), and pay attention to suffering (in a mindful or over-identified manner). While these components are separable and do not co-vary in a lockstep manner, they do mutually impact one another. For instance, mindfulness of emotional pain (e.g., "This is hard.") facilitates a kind and warm response (e.g., "What can I do to take care of myself right now?") and decreases feelings of over-identification (e.g., "It's not the end of the world."). Remembering that failure is part of

the human experience (e.g. "It's normal to mess up sometimes.") decreases egocentric feelings of isolation (e.g., "It's not just me.") and increases mindfulness (e.g., "I can see my mistake clearly."), just as being kind and understanding toward oneself when confronting personal inadequacies (e.g., "It's okay not to be perfect.") can lessen harsh self-judgment (e.g., "Maybe I don't have to feel so ashamed.") and increase feelings of common humanity (e.g., "I guess many people struggle with these issues.").

From my perspective, self-compassion represents the relative balance of compassionate and uncompassionate responses to suffering, and the lack of self-compassion is as important to the definition of the trait as the presence of it. Theoretically, if there were two individuals who displayed roughly the same levels of self-kindness, common humanity and mindfulness, but the second individual felt a little bit more self-judgmental, isolated and over-identified than the first, the second would be considered less self-compassionate. In other words, I view self-compassion as a dynamic system that represents a synergistic state of interaction between the key elements of self-kindness, self-judgment, common humanity, isolation, mindfulness and over-identification (Thelen, 2005).

Since the construct was introduced to empirical literature over a decade ago, research on self-compassion has grown at an exponential rate. One of the most consistent findings is that self-compassion is related to psychological wellbeing (Barnard & Curry, 2011; Zessin, Dickhauser & Garbadee, 2015). In fact, one meta-analysis (MacBeth & Gumley, 2012) found a large effect size when examining the link between self-compassion and depression, anxiety, and stress in 20 studies. Moreover, self-compassion is directly associated with psychological strengths such as happiness, optimism, and life satisfaction (Hollis-Walker & Colosimo, 2011; Neff, Rude & Kirkpatrick, 2007), as well as being linked to increased motivation, health

behaviors, positive body image, and resilient coping (e.g., Albertson, Neff, & Dill-Shackleford, 2014; Allen, Goldwasser & Leary, 2012; Breines & Chen, 2012; Sbarra, Smith & Mehl, 2012).

The Self-Compassion Scale

The vast majority of research on self-compassion has been conducted using the Self-Compassion Scale (Neff, 2003a), which assesses trait levels of self-compassion. The scale was developed to explicitly represent the thoughts, emotions and behaviors associated with the various components of self-compassion. It includes items that measure how often people respond to feelings of inadequacy or suffering with *self-kindness* (e.g., "I try to be loving towards myself when I'm feeling emotional pain"), *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"), *isolation* (e.g., "When I think about my inadequacies it tends to make me feel more separate and cut off from the rest of the world"), *mindfulness* (e.g., "When something painful happens I try to take a balanced view of the situation"), and *over-identification* (e.g., "When I'm feeling down I tend to obsess and fixate on everything that's wrong").

Responses are given on a 5-point scale from "Almost Never" to "Almost Always." Items representing uncompassionate responses to suffering are reverse-coded so that higher scores represent a lower frequency of these responses. Then, means are calculated for each subscale, and a grand mean is calculated that represents an overall measure of self-compassion. The reason items representing the lack of self-compassion are written in a manner that requires reverse scoring is to avoid the need to negate a negatively worded item. For instance, an item that assessed the lack of self-judgment written as "I am not disapproving and judgmental about my own flaws and inadequacies," would require a response of "almost never" by people high in self-

judgment. Thus, items representing uncompassionate behavior are written in a manner that makes them easier to respond to.

The SCS was developed using an undergraduate sample. Confirmatory factor analyses were used to confirm that scale items fit as intended with the proposed a priori theoretical model (Furr & Bacharach, 2008). An initial CFA found an adequate fit to a six-factor inter-correlated model, and a second CFA found a marginal fit to a single higher-order factor that could explain the inter-correlations between subscales. The factor structure of the scale was cross-validated in a second student sample. These findings were interpreted as evidence that the subscales could be examined separately or else that a total score could be used, depending on the interest of the researcher.

There is ample evidence for the reliability and validity of the SCS. The internal reliability of the SCS has been found to be consistently high in studies across a wide variety of populations suggesting that all SCS items are inter-correlated in a satisfactory manner (e.g., Allen, Goldwasser & Leary, 2012; Neff & Pommier, 2013; Werner et al., 2012). The large body of research indicating that scores on the SCS predict wellbeing constitutes strong predictive validity. The SCS also demonstrates known groups validity: undergraduate and community adults evidence significantly lower scores on the SCS than individuals who practice Buddhist meditation, as would be expected given the Buddhist roots of the construct (Neff, 2003a; Neff & Pommier, 2013). The scale demonstrates good convergent validity as well. For instance, therapists' ratings of how "self-compassionate" individuals were (using a single item) after a brief interaction were significantly correlated with self-reported SCS scores (Neff, Kirpatrick & Rude, 2007), and there was a strong association (.70) between self-reported and partner-reported scores on the SCS among couples in long-term romantic relationships (Neff & Beretvas, 2013).

Similarly, high levels of agreement (.77) were found between independent coders using SCS items to rate the level of self-compassion displayed in brief verbal dialogues (Sbarra et al., 2012). These findings suggest that the SCS measure behaviors that are clearly observable by others.

The SCS demonstrates good discriminate validity and is not significantly associated with social desirability (Neff, 2003a). Research has shown that self-compassion can be empirically differentiated from self-esteem. While global self-esteem scores (Rosenberg, 1965) and scores on the SCS are moderately correlated, self-compassion is a stronger negative predictor of social comparison and contingent self-worth than self-esteem, and unlike self-esteem, is not significantly correlated with narcissism (Neff & Vonk, 2009). Self-compassion can also be differentiated from self-criticism. Although a key feature of self-compassion is the lack of self-judgment, overall SCS scores still negatively predict anxiety and depression when controlling for self-criticism and negative affect (Neff, 2003a; Neff, Kirkpatrick & Rude, 2007).

The Factor Structure of the SCS

Recently, the generalizability of the factor structure of the SCS across various populations has been called into question. Most studies that have re-examined the factor structure of the SCS have been conducted in the context of validating translations of the scale. The large majority of translations have replicated the six-factor structure of the scale (e.g., Arimitsu, 2014; Azizi, Mohammadkhani, Lotfi, & Bahramkhani, 2013; Castilho, Pinto-Gouveia, & Duarte, 2015; Chen, Yan & Zhou, 2011; Garcia-Campayo et al., 2014; Hupfield & Ruffieux, 2011; Lee & Lee, 2010; Mantzios, Wilson & Giannou, 2013; Petrocchi, Ottaviani & Couyoumdjian, 2013). While not all examined the second higher order model, those which did yielded inconsistent findings. For example, a higher order factor was found with a Chinese student and Portuguese clinical and

community samples (Castilho, Pinto-Gouveia, & Duarte, 2015; Chen et al., 2011), but not with German and Italian student and community samples (Hupfield & Ruffieux, 2011; Petrocchi et al, 2013) or a second Portuguese clinical sample (Costa, Marôco, Pinto-Gouveia, Ferreira & Castilho, 2015). Caution should be used before assuming that findings obtained with translations can be automatically generalized to the original language version of a scale, however, given potential issues with the quality of translations or else cultural factors impacting findings (Behling & Law, 2000).

Williams, Dalgleish, Karl, and Kuyken (2014) conducted one of the few studies attempting to replicate the factor structure of the original English SCS, examining a community, meditator and clinical sample of individuals with recurrent depression living in the United Kingdom. CFAs were used in each sample to examine SCS item fit to a one-factor model, a six-factor correlated model, and a higher order model. The authors concluded that the one-factor and higher order models did not fit the data acceptably. The six-factor correlated model fit the data more favorably than the remaining models in all populations examined, and demonstrated an adequate fit for the community sample. The authors concluded that the SCS is better suited to measuring the six components of self-compassion separately than to measuring an overarching construct of self-compassion.

However, there are other ways to model whether or not an overall self-compassion score can be validly interpreted. It may be that use of a second, higher-order model is not the best approach. Another psychometric approach is a bifactor model (Reise, Bonifay & Haviland, 2013; Reise, Moore & Haviland, 2010), which is designed to assess the multidimensionality of psychological measures. The bifactor model is one in which each item loads on a general or "target" factor in addition to their respective subscale or "group" factor. Thus, using this model

with the SCS, the target factor is the general self-compassion factor and the group factors consist of the six subscale factors. In a bifactor model, the target factor is assumed to impact individual item responses, and the ways in which individual items form group factors are also modeled. Moreover, none of the factors (target or group) are allowed to correlate in a bifactor model (see Figure 1 for an example). This is because the association between scores on the items is already accounted for by the overall factor of self-compassion. In contrast, a higher-order model (see Figure 2 for an example) posits that the target factor explains the correlation of the subscale factors, and makes the strong assumption that there is no direct effect of the target factor on individual items (Reise, Moore, & Haviland, 2010). In some ways, the bifactor model is a superior way to represent my conceptualization of self-compassion, given than self-compassion is theorized to directly manifest in the particular ways that individuals respond to suffering (as represented by SCS scale items). Moreover, this theoretical model doesn't presume that self-compassionate behavior is determined by the six components in a linear fashion, but instead proposes that the synergistic interaction between these various ways of relating to oneself create a self-compassionate state of mind that is more than the sum of its (subscale) parts.

One of the advantages of a bifactor model is that it allows for the calculation of an omega index which is used to estimate the percentage of variance in item responses that may be attributed to the general or target factor (Hancock & Mueller, 2001), providing a more tangible criterion for researchers to decide whether the scale is "good enough" for their research purposes than degree of model fit alone (Reise, Moore & Haviland, 2010). For instance, even if a scale is shown to have sub-optimal model estimates, if the large majority of observed variance in item responses is explained by the target construct, this provides some sense of confidence that the

scale can be used to measure the intended target with minimal likelihood of confounds (Reise, Bonifay & Haviland, 2013).

A recent study (Neff, Whittaker & Karl, 2015) examined the factor structure of the SCS using a six-factor correlated model, a higher order model, and a bi-factor model in five distinct populations: college undergraduates ($N = 222$), individuals practicing Buddhist meditation ($N = 215$), psychologically health community adults ($N = 719$), dysphoric community adults ($N = 675$) reporting moderate or severe levels of anxiety and/or depression via self-report (but who were not clinically evaluated), and the same clinical sample of individuals ($N = 390$) with a diagnosed history of recurrent depression previously examined by Williams et al. (2014). Overall, the six-factor correlated model appeared to fit the data more satisfactorily than the higher order factor model or the bifactor model in all samples. The higher order model showed a poor fit in all samples, suggesting that this approach is not a good way to model the relationship between SCS items, subscale factors and a general factor of self-compassion. Indicators examining the bifactor model suggested acceptable fit in the student, meditator, and healthy samples. While model fit was suboptimal in the dysphoric and clinical samples, results suggested that an overall self-compassion factor could be interpreted with some confidence even in these samples. Omega index estimates suggested that the overall self-compassion factor accounted for at least 90% of the reliable variance in all populations examined, including the clinical sample. For most researchers interested in examining overall self-compassion levels, the fact that such a large percentage of the variance in SCS scores can be accounted for by a general factor of self-compassion will likely be considered adequate justification for using a total scale score. Overall, results suggest that the SCS can be used to analyze the six subscale elements of self-compassion

separately or else as an overall measure of self-compassion, according to the interests of the researcher.

For those researchers who are primarily interested in using a total SCS score, it should be noted that 12-item short form of the SCS (SCS-SF; Raes et al., 2012) was found to have a near perfect correlation with the long form across samples, suggesting that it can be used with some confidence as a proxy measure of the long form in a variety of populations, including those with mental health issues. It should be noted that the SCS-SF is not recommended for use in examining the six components separately because subscales have poor reliability.

Given that the second higher-order model wasn't supported in any of the samples examined, and that a bifactor model appears to be a superior way to model self-compassion as I have defined it, results suggest that future attempts to validate translations of the SCS or to examine the properties of the SCS in specific populations should not attempt to justify use of a total SCS score using a higher-order model. Instead, researchers should examine a bifactor model (including estimating the amount of reliable variance that can be attributed to a overall self-compassion score with an omega index) in addition to a six-factor correlated model to determine validity.

Should the SCS include Subscales Representing the Lack of Self-compassion?

Some scholars have argued that the SCS should not measure uncompassionate behavior in its assessment of self-compassion, but should only include items representing compassionate behavior. For instance, Muris (2015) questioned the validity of the SCS because half of the items do not measure the three key components of what he calls "true" self-compassion, which are self-kindness, common humanity, and mindfulness, but rather assess their counterparts of self-

judgment, isolation, and over-identification. The inclusion of these items (reverse scored) are thought to inflate the inverse association between self-compassion and psychopathology, as his own data with youths suggests the subscales representing uncompassionate behavior tend to be more strongly correlated with negative psychological outcomes than those measuring compassionate behavior. Muris concluded his critique by claiming that researchers should only use the three positive subscales of the SCS, and suggested that including the negative subscales represents a mismeasure of self-compassion. What Muris failed to mention, however, is that the SCS precisely measures self-compassion as I have defined it (Neff, 2003a, 2003b). Of course, one can argue that the definition of self-compassion should not include the lack of uncompassionate behavior in the first place, but this is a different argument.

Muris is not alone in critiquing the inclusion of subscales representing uncompassionate behavior in an overall measure of self-compassion, however. Costa et al. (2015), who examined a Portuguese translation of the SCS, and also López et al. (2015), who examined a Dutch translation, have also argued against using a total self-compassion score that includes the three negative subscales. Instead, they proposed a two-factor model for the SCS. Based on analyses of scale items using EFA, they argued that items drawn from the three positive subscales of self-kindness, common humanity and mindfulness subscales should be subsumed under a single factor termed "self-compassion" and items drawn from the three negative subscales of self-judgment, isolation, and over-identification should subsumed under a single factor termed "self-criticism." These two factors are considered to be orthogonal. Of course, EFA is known to be sensitive to positive versus negative affect, and there may have been a method effect which accounted for the fact that all positive items tended to load on one factor and all negative items on another that had little to do with substantive item content (DiStefano & Motl, 2006; Woods,

2006). There are other conceptual problems with subsuming the positive and negative subscales into two factors, however, and assuming that there are no distinctions within factors.

The two factor approach is theoretically justified by López et al. (2015) and Costa et al. (2015) with reference to Gilbert's (2005) model of social mentalities, in which the self-soothing aspect of "self-compassion" is thought to tap into the mammalian contentment and safeness system (parasympathetic nervous system) while the harsh response of "self-criticism" is thought to tap into the threat defense system (sympathetic nervous system). Because these two systems are distinct at the physiological level, it is argued that they should not be simultaneously represented in an overall scale score. While the sympathetic and parasympathetic nervous systems can be understood as distinct, this does not mean they are completely isolated and unrelated to one another, and in fact research suggests the two systems continuously interact and co-vary (Porges, 2001). There is no reason, therefore, why a single summary score cannot be used to assess the relative balance between the two (e.g., the extent to which one system is activated while the other is deactivated), especially given that aspects of each are measured as separate factors before being combined into an overall self-compassion score. In fact, one of the indicators of contentment in an organism is the lack of threat (Gilbert, 2009), suggesting that the lack of a threat response is relevant to measuring the sense of safety conveyed by self-kindness, common humanity, and mindfulness. Also, given that Gilbert himself includes non-judgment as a key attribute of compassion (Gilbert, 2010), it can be argued that the inclusion of items assessing the absence of self-judgment is not inconsistent with his theoretical perspective.

Conceptualizing the SCS in bi-dimensional terms also poses theoretical problems in that referring to the three positive components as "self-compassion" and the three negative components as "self-criticism" collapses important distinctions between how people emotionally

respond to suffering (with kindness or self-judgment), cognitively understand their suffering (with a sense of common humanity or isolation) and pay attention to their suffering (mindfully or in an over-identified manner). Not only are these different ways of responding to suffering likely to tap into differing neurological and physiological systems (Brewer et al., 2011; Hutcherson, Seppala & Gross, 2014), a two-factor solution to the SCS would greatly limit its ability to explore the differential contribution that the various components of self-compassion make to wellbeing. For example, Körner et al. (2015) examined the link between the six self-compassion subscales and depression in a large community sample using regression analyses, and found that isolation predicted 18% of the variance in depressive symptomology, followed by over-identification and self-kindness which each predicted 2%, and mindfulness and self-judgment, which each predicted 1%. The finding that isolation was a stronger predictor of depression than self-judgment and over-identification suggests that use of a single "self-criticism" factor would have obscured the unique role played by perceived isolation, and misattributed the link to self-judgment.

Isolation represents an egocentric response to suffering that has received much less research attention as it relates to psychopathology than self-judgment or over-identification, which overlap with other known risk factors such as self-criticism and rumination (Blatt, D'Afflitti & Quinlan, 1976; Nolen-Hoekesema, 1991). Isolation refers to the assumption that one should be perfect, that imperfection is somehow abnormal, that "I" am the only one who has failed, made a mistake, or is suffering in some way. It most closely resembles the concept of adolescent egocentrism discussed in developmental psychology (Elkind, 1967), which often manifests as "the personal fable", the belief that one's personal experience is unique and unrelated to that of others (Lapsley, FitzGerald, Rice & Jackson, 1989). This form of

egocentrism has mainly been examined in the context of adolescent risk-taking (Alberts, Elkind & Ginsberg, 2007), however, and not in the context of how individuals relate to experiences of personal inadequacy and suffering. It should be noted that this conceptualization of isolation has little to do with other constructs like social isolation and loneliness (Rubin & Coplan, 2004; Weiss, 1973). One could be at an intimate gathering of close family and friends, for instance, but if you trip and smash headfirst into the dinner table you might feel isolated in your suffering despite ample social support. It is important to retain the ability of the SCS to assess isolation separately from self-judgment and over-identification, therefore, in order to provide potentially novel insights into the causes of psychopathology. Retaining all six factors may also help elucidate the unique ways in which teaching people how to be more self-compassionate enhances wellbeing.

Insights from Teaching Self-compassion

One of the reasons I believe that a self-compassion state of mind is best conceptualized as involving fewer uncompassionate as well as more compassionate responses to suffering is because teaching people how to be more self-compassionate impacts both simultaneously. Measuring self-compassion with the positive subscales only would likely underestimate the power of self-compassion to enhance psychological wellbeing because it wouldn't represent the lower levels of self-judgment, isolation and over-identification involved in a more self-compassionate stance. In fact, the assertion that the SCS inflates the link between self-compassion and wellbeing is called into question by numerous studies that have obtained similar results without the SCS, but which have instead examined the role of self-compassion in wellbeing via interventions or experimental mood manipulations. For instance, higher scores on

the SCS have been associated with greater levels of happiness, optimism, life satisfaction, body appreciation, perceived competence, and motivation (Hollis-Walker & Colosimo, 2011; Neff, Hsieh & Dejitthirat, 2005; Neff, Pisitsungkagarn & Hsieh, 2008; Neff, Rude, & Kirkpatrick, 2007); lower levels of depression, anxiety, stress, rumination, self-criticism, perfectionism, body shame and fear of failure (Breines, Toole, Tu, & Chen, 2014; Finlay-Jones, Rees, & Kane, 2015; Neff, 2003a; Neff, Hseih, & Dejitthirat, 2005; Raes, 2010), and healthier physiological responses to stress (Breines, Thoma et al., 2014; Friis, Johnson, Cutfield & Consedine, 2015).

The same pattern of results have been obtained in studies examining self-compassion interventions, which have also been found to increase optimism, happiness, life satisfaction, self-efficacy and body appreciation; to decrease depression, anxiety, stress, rumination, self-criticism, perfectionism, and body shame (Albertson et al., 2014; Mosewich, Crocker, Kowalski & DeLongis, 2013; Neff & Germer, 2013; Shapira & Mongrain, 2010; Smeets, Neff, Alberts & Peters, 2014); and to engender healthier physiological response to stress (Arch et al., 2014). Similarly, experimental studies designed to induce a self-compassionate mood (i.e. using writing prompts that foster self-kindness, common humanity and mindfulness in response to suffering) have been shown to increase positive affect and motivation but also to decrease negative emotions such as anxiety, shame, and depression (Breines & Chen, 2012; Diedrich et al., 2014; Johnson & O'Brien, 2013; Leary, Tate, Adams, Allen & Hancock, 2007; Odou & Brinker, 2014).

Presumably, when individuals are helped to be more self-compassionate, what happens is that they experience a decrease in uncompassionate responding at the same time. For instance, Mosewich et al. (2013), found that a brief one-week self-compassion intervention for female athletes led to a significant decrease in rumination, self-criticism and perfectionistic concern related to their performance mistakes compared to a control group. To date, however, no

published research has documented the effect that self-compassion training has on the six SCS subscales, but has instead relied on use of a total SCS score. For this reason, I reanalyzed the data obtained in a randomized controlled trial of MSC (Neff & Germer, 2013) to more closely examine changes in subscale scores and their link to enhanced wellbeing. Almost all of the practices taught in the eight-week Mindful Self-Compassion (MSC) program (Germer & Neff, 2013), which is designed to increase self-compassion skills in daily life, address compassionate and uncompassionate behaviors simultaneously. As an example, small group discussion of personal suffering is used to increase feelings of common humanity and to decrease feelings of isolation and self-judgment. A variety of exercises help participants to directly replace critical inner dialogues with kind and supportive ones that acknowledge the shared nature of imperfection. And mindfulness practices such as awareness of emotions in the body are taught to help participants disentangle from over-identification with the storyline driving emotional reactions, facilitating active self-soothing.

I examined pre-post changes in the 26-item SCS for the 24 participants who took part in the intervention. The evaluation of the program also examined changes in wellbeing using measures of happiness (Lyubomirsky & Lepper, 1999), life-satisfaction (Diener, Emmons, Larsen, & Griffin, 1985), depression (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), anxiety (Spielberger, Gorsuch, & Lushene, 1970) and stress (Cohen, Kamarck, & Mermelstein, 1983).

Matched pairs *t*-tests were used to examine pre-post changes in study outcomes. As reported in Neff and Germer (2013), the intervention group demonstrated significant increases in mean levels of happiness (14%) and life satisfaction (24%), as well as significant decreases in mean levels of depression (24%), anxiety (20%) and stress (10%). Pre- and post-test levels of the six subscales of the SCS, as well as the total SCS score, are presented in Table 1. As can be seen,

the degree of change in the self-kindness, common humanity and mindfulness subscale scores, as well as self-judgment, isolation and over-identification subscale scores, were equally substantial. I next examined whether changes in SCS subscale scores were associated with increased wellbeing using pre-post residual change scores.

In order to determine which of the subscale change scores most strongly predicted particular wellbeing change scores, I used stepwise regression to determine which subscale factors remained significant after accounting for the impact of the other subscales. Results were as follows: for happiness, self-kindness was the only significant predictor ($B = .64$, $p \leq .001$); for life satisfaction, mindfulness was the only significant predictor ($B = .54$, $p < .01$); for depression, over-identification was the only significant predictor ($B = .80$, $p < .001$); for stress, isolation was the only significant predictor ($B = .68$, $p < .001$), and for anxiety, self-kindness ($B = -.53$, $p < .01$) was the strongest predictor, followed by over-identification ($B = .41$, $p < .05$). These analyses suggested that in general, increases in compassionate behaviors were more directly related to increased positive states of mind like happiness and life-satisfaction, and that decreases in uncompassionate behaviors were more directly related to reductions in negative mind-states like depression, stress, and anxiety. It may be the case, in fact, that the main way that self-compassion enhances positive wellbeing is via the increased self-kindness, common humanity, and mindfulness associated with a compassionate mind-state, and that the main way it reduces psychopathology is via decreased self-judgment, isolation, and over-identification. Findings with anxiety were an exception, however, and suggest feelings of self-kindness may also have an important role in ameliorating outcomes associated with activation of the threat defense system such as anxiety. For this reason, it's important not to be too simplistic in interpreting the association of positive and negative aspects of self-compassion with positive and negative mental

health outcomes.

Moreover, caution should be used when interpreting the results of regression analyses, because they can obscure the fact that not only were changes in most of the six subscales significantly related to one another, they were also related to changes in both positive and negative wellbeing. The zero-order correlations between change scores in all variables are presented in Table 2. Increased self-kindness, common humanity and mindfulness tended to predict decreased depression, stress and anxiety in addition to increased happiness and life-satisfaction, while lessened self-judgment, isolation and over-identification tended to predict increased happiness and life-satisfaction in addition to decreased depression, stress, and anxiety. Although isolating variables through techniques such as linear regression is an important aspect of scientific inquiry, reality is better conceptualized as a dynamic, interactive system composed of multiple factors simultaneously impacting one another (Thelen, 2005). To attribute cause to any one factor independent of other related factors can give a skewed perception of how things are actually operating. Overall, the results of this reanalysis suggest that MSC training increases compassionate responses and also decreases uncompassionate responses to suffering, and that these changes help explain the link between self-compassion and psychological health. Put another way, findings support the idea that a self-compassionate state of heart and mind is a dynamic system that arises out of a particular balance between the six elements of self-compassion. Looked at from one point of view, these elements combine to create a single experience, but looked at from another point of view, the elements operate somewhat independently and can be examined separately. Just as one can view a tree as a tree, or else view it in terms of its parts - roots, trunk, branches, leaves, etc., one can view self-compassion as a whole or as a collection of elements, depending on one's research interests.

Directions for Future Research

The SCS appears to be a psychometrically valid and theoretically coherent measure of self-compassion. The way that the SCS is currently structured provides a great deal of flexibility for researchers in terms of using the SCS in a way that best addresses their particular research questions and theoretical perspectives. Most researchers will probably continue to be primarily interested in examining self-compassion as an overall construct, because it is more parsimonious to conceptualize it as a single state of mind that encompasses the various ways that individuals emotionally respond, cognitively understand, and pay attention to their feelings of personal inadequacy and experiences of suffering. Use of a single scale score also simplifies statistical analyses. Given that research interest in self-compassion is often motivated by its potential implications for intervention, moreover, and the fact that teaching people to be more self-compassionate tends to address all six components simultaneously, use of an overall SCS score is likely to be the preferred way of representing the link between self-compassion and wellbeing for many.

However, there are times when researchers may decide that analyzing the six subscales separately is most appropriate. One might want to determine if some groups of people struggle with certain aspects of self-compassion more than others, for instance, or understand which elements of self-compassion are most strongly related to particular wellbeing outcomes. There is only a small literature that has examined subscale scores separately, and this is a promising area of future research that will hopefully yield new insights into how self-compassion functions at a more detailed level of analysis. Researchers can also use composite scores if this approach best addresses research questions. For example, Körner et al. (2015) also examined the link between

self-compassion and depression by averaging scores on the self-kindness, common humanity and mindfulness subscales into a "self-compassion" composite, while averaging scores on the self-judgment, isolation, and over-identification subscales into a "self-coldness" composite. They found that "self-compassion" moderated the link between "self-coldness" and depression. The use of composite scores to represent the positive and negative components of self-compassion is less problematic than proposing a two-factor solution to the scale, because it does not imply that there are no differences between the subscale items that comprise each composite. If researchers choose to adopt this approach, however, I would suggest they refer to the negative composite score as "uncompassionate" behavior so that false priority is not given to one type of responding over another.

Future research might also be usefully directed at the development of a state measure of self-compassion, which could help assess the present moment impact of adopting a more self-compassionate stance on the various components of self-compassion and state wellbeing. More research on the link between physiology and self-compassion is also needed, especially in terms of understanding the interplay between the sympathetic and parasympathetic nervous system. For instance, when a self-compassionate mind state is adopted, is the threat-defense system deactivated as evidenced by indicators such as reduced cortisol levels? Rockliff, Gilbert, McEwan, Lightman and Glover (2008) found that imagining receiving compassion from an ideally compassionate image tended to decrease cortisol and increase heart-rate variability (associated with the ability to self-soothe when stressed), but results were qualified by individual difference variables and the intervention didn't directly examine self-compassion, making it difficult to interpret results in a straightforward manner. Examining physiological responses after a self-compassion mood induction (e.g., responding to writing prompts that help people

respond to some difficult emotional experience with self-kindness, common humanity, and mindfulness) might yield informative results.

Finally, it appears that the SCS as currently written and analyzed is useful not just for facilitating research, but also for clinicians trying to help their clients learn to be more self-compassionate. Many therapists and counselors have reported to me that they ask their clients to complete the SCS and use it as a catalyst for identifying ways their clients lack self-compassion, as well as helping them to understand how to relate to themselves more compassionately. Currently, however, there are not well-established norms for what "counts" as low, moderate, or high levels of self-compassion, and the creation of such norms could make the use of the SCS in clinical contexts even more useful. Ultimately, most researchers are interested in self-compassion because it is a resource that can potentially help people live happier, healthier lives by responding to personal suffering in a more supportive manner. It appears that the SCS is valid and reliable tool for helping researchers to address that goal.

Compliance with Ethical Standards. The author declares that she has no conflict of interest. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in reported research results.

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Table 1
Pre-test and Post-test Scores for the Total SCS and SCS Subscales Analyzed with Matched-Pairs T-Tests (N = 24)

Outcome	Pre-test *M* (*SD*)	Post-test *M* (*SD*)	% Change
Total SCS	2.71 (0.62)	3.76 (0.60)	38%
Self-Kindness	2.74 (0.87)	3.74 (0.80)	36%
Self-Judgment	3.59 (0.84)	2.45 (0.77)	32%
Common Humanity	2.90 (0.72)	3.88 (0.93)	34%
Isolation	3.68 (0.90)	2.38 (0.88)	35%
Mindfulness	3.31 (0.53)	4.02 (0.61)	21%
Over-Identification	3.39 (0.93)	2.25 (0.79)	33%

Note: Negative subscale items were reverse-coded before calculating a total SCS score.

All *t*-tests were significant at $p < .01$

Table 2
Zero Order Correlations between Pre-Post Residual Change Scores for the Total SCS, SCS Subscales, and Wellbeing Outcomes (N = 24)

	SCS	SK	SJ	CH	IS	MI	OI	HAP	LS	DEP	STR
SK	.91*	--									
SJ	-.62*	-.50*	--								
CH	.71*	.73*	-.20	--							
IS	-.79*	-.67*	.82*	-.31	--						
MI	.83*	.86*	-.29	.71*	-.44*	--					
OI	-.84*	-.78*	.72*	-.47*	.78*	-.64*	--				
HAP	.69*	.64*	-.48*	.44*	-.54*	.64*	-.60*	--			
LS	.44*	.45*	-.26	.20	-.41*	.54*	-.39†	.49*	--		
DEP	-.58*	-.57*	.49*	-.31	.60*	-.51*	.77*	-.67*	-.44*	--	
STR	-.61*	-.49*	.58*	-.40†	.67*	-.33	.63*	-.58*	-.56*	.55*	
ANX	-.83*	-.85*	.58*	-.57*	.72*	-.74*	.82*	-.84*	-.46*	.76*	.60*

Note. SCS = Total SCS score; SK = Self-Kindness Subscale; SJ = Self-Judgment Subscale; CH = Common Humanity Subscale; IS = Isolation Subscale; MI = Mindfulness Subscale; OI = Over-Identification Subscale; HAP = Happiness; LS = Life-Satisfaction; DEP = Depression; STR = Stress; ANX = Anxiety. Note that the SJ, IS, and OI subscales were reverse-coded before calculating the Total SCS score.
* $p < .05$; † $p < .06$

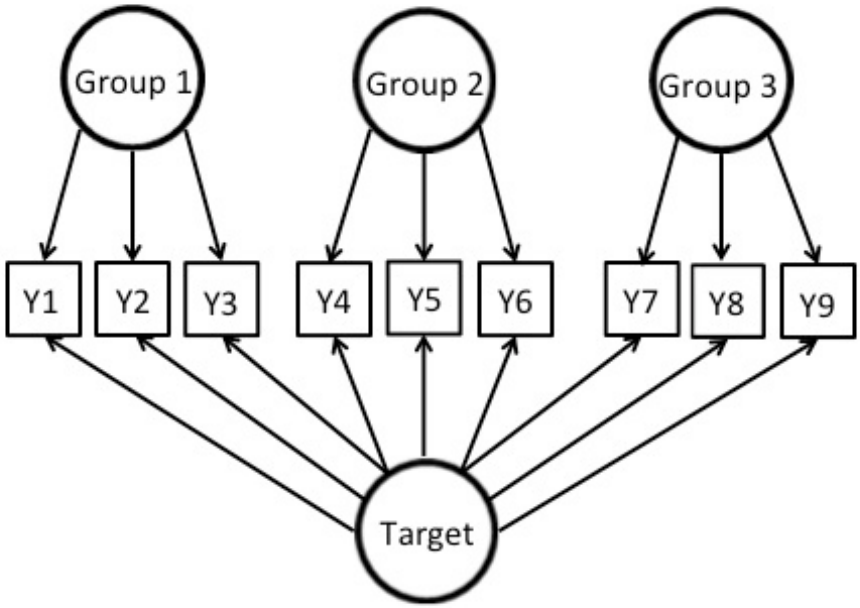

Figure 1. Example of a bifactor model.

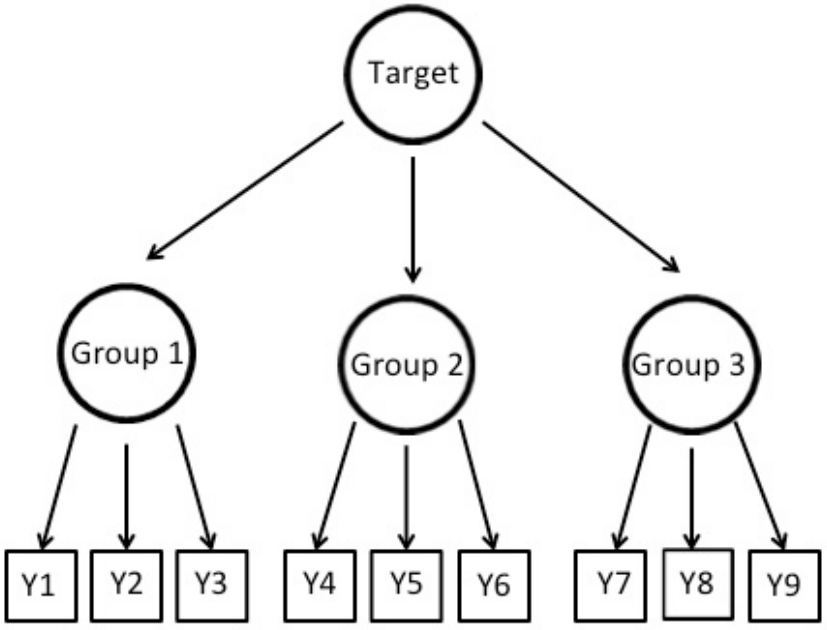

Figure 2. Example of a second higher-order model.