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**The Development and Validation of the State Self-Compassion Scale (Long- and Short Form)**

Kristin D. Neff<sup>1</sup>, István Tóth-Király<sup>2</sup>, Marissa C. Knox<sup>1</sup>, Ashley Kuchar<sup>1</sup>, Oliver Davidson<sup>1</sup>

<sup>1</sup> University of Texas at Austin, TX, USA  
<sup>2</sup> Concordia University, Montreal, QC, Canada

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**Corresponding author:**

Kristin D. Neff  
Department of Educational Psychology  
University of Texas at Austin  
1912 Speedway, Suite 504, Austin, TX 78712-1289, USA  
Email: kneff@austin.utexas.edu

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## **The Development and Validation of the State Self-Compassion Scale (Long- and Short Form)**

### **Abstract**

**Objectives:** The purpose of this research was to create two state measures of self-compassion based on the Self-Compassion Scale (SCS): an 18-item State Self-Compassion Scale-Long form (SSCS-L) that could be used to measure the six components of self-compassion, and a six-item State Self-Compassion Scale-Short form (SSCS-S) that could be used as a proxy measure of global state self-compassion.

**Methods:** Study 1 ( $N=588$ ) used a community sample to select items for the SSCS-L and SSCS-S. Confirmatory Factor Analyses, Exploratory Structural Equation Modeling, and bifactor modeling were used to analyze the factor structure of the SSCS-L and SSCS-S. Predictive validity was assessed by examining associations with positive and negative affect. Study 2 ( $N=411$ ) used a student sample to examine the psychometric properties of the SSCS-L and SSCS-S after a self-compassion mindstate induction (SCMI) to determine if its factor structure would remain unchanged after manipulation. Study 3 ( $N=139$ ) examined the reliability of the SSCS-S alone.

**Results:** The SSCS-L had excellent psychometric properties and SSCS-S was also adequate. A bifactor-ESEM representation (with one global factor and six components) was supported for the SSCS-L, and a single factor was supported for the SSCS-S. Both scales were reliable. Psychometric properties were unchanged after the experimental manipulation of self-compassion. A total state self-compassion score and subscales scores were associated with positive and negative affect in the expected directions.

**Conclusion:** The SSCS-L and SSCS-S appear to be valid measures of state self-compassion.

**Keywords:** self-compassion; state self-compassion scale; self-compassion manipulation; experimental study; bifactor-ESEM

Research into self-compassion has grown exponentially since the construct was first defined and measured by Neff (2003a, 2003b) over fifteen years ago. Self-compassion is a healthy way of relating to oneself in times of suffering, and applies to situations of failure, perceived inadequacy, or general life difficulties. As defined by Neff (2003b), a self-compassionate mindset represents the balance between increased compassionate and decreased uncompassionate self-responding to personal struggle. Specifically, it entails six distinct components that are all necessary for self-compassion: increased self-kindness, common humanity, and mindfulness as well as reduced self-judgment, isolation, and over-identification. Self-kindness involves being supportive, caring, and understanding towards oneself in times of pain. Common humanity occurs when we recognize that all humans fail and make mistakes, so the experience of imperfection connects us to others. Mindfulness in the context of self-compassion means that one is aware of the present moment experience of suffering with perspective and balance. Self-judgment involves harshly criticizing oneself for one's failings and inadequacies. Isolation means we feel alone and cut off from others in the experience of suffering. Over-identification occurs when one becomes carried away with one's suffering to the point that perspective is lost.

Neff (2016) proposes that the elements of self-compassion can be loosely organized into three domains of responding to suffering: affective, cognitive, and attentional. These are conceptually distinct and tap into more compassionate and less uncompassionate ways that individuals emotionally respond to suffering (with more kindness and less judgment), cognitively understand suffering (as part of the human experience rather than as isolating), and pay attention to suffering (in a more mindful and less over-identified manner). While the six elements of self-compassion are separable, they are thought to mutually impact one another and interact as a balanced system so that they co-occur and change in tandem. The system-level balance of these six elements represents a self-compassionate state of mind.

Various measures of self-compassion exist. For instance, Gilbert et al. (2017) have created a measure of self-compassion that assesses two elements: engagement with suffering and action taken to alleviate it. Gu, Baer, Cavanagh, Kuyken, and Strauss (2019) have created a measure of self-compassion that assesses five elements: recognizing suffering; understanding the universality of suffering; feeling moved by suffering; tolerating uncomfortable feelings aroused in response to suffering; and the motivation to alleviate suffering. However, the vast majority of research on self-compassion has been conducted with the Self-Compassion Scale (SCS; Neff, 2003a), which is designed to measure the trait of self-compassion as conceptualized by Neff (2003b). The SCS contains 26 items written in a face-valid manner that assess how often individuals engage in the cognitive, attentional, and emotional behaviors associated with more compassionate and fewer uncompassionate responses to feelings of personal inadequacy and general life difficulties. The SCS has six subscales that can be used separately to represent the six components of self-compassion, or be combined to create a total score that represents the global mindset of self-compassion. Neff et al. (2019) argue that each of the three compassionate and uncompassionate components are conceptually meaningful and differentially contribute to the global self-compassion construct, and that differences between the positive and negative items within conceptual domains represent more than a simple wording effect. This is evidenced by factor analyses of the SCS which do not support a three-factor solution (Brenner et al., 2017; Coroiu et al., 2018; Neff, 2003a), and findings that the compassionate and uncompassionate components differentially explain the link between self-compassion and psychopathology (Neff et al., 2018, 2019). The validity of the factor structure of the SCS has been confirmed in 23 samples (Neff et al., 2019; Neff, Tóth-Király & Colosimo, 2018; Tóth-Király, Bóthe, & Orosz, 2017). Tóth-Király and Neff (2020) also demonstrated that the factor structure of the SCS is invariant across culture, gender, age, and population type (e.g., student, community or clinical) in 18 international samples.

A large body of research indicates that self-compassion is linked to wellbeing (Zessin, Dickhäuser, & Garbade, 2015). For example, higher total scores on the SCS have been associated with higher levels of positive emotions such as life satisfaction, optimism, and happiness (Hollis-Walker, & Colosimo, 2011; Neff, Rude, & Kirkpatrick, 2007) as well as lower levels of negative emotions like depression, anxiety, and stress (MacBeth & Gumley, 2012). While all six components of self-compassion contribute to wellbeing, reductions in psychopathology appear to be driven more powerfully by the lessened uncompassionate self-responding (i.e., reduced self-judgment, isolation, and over-identification) entailed by a self-compassionate mindset (Neff et al., 2018). Most research using the SCS has used a total self-compassion score, but examination of the six components can be

useful in examining specific wellbeing outcomes. For example, Körner et al. (2015) examined the link between the six self-compassion subscales and the trait of 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 use of the subscales helps to illuminate the mechanisms of action of self-compassion to impact outcomes.

The majority of research on self-compassion has been cross-sectional, and has used the SCS to examine trait levels of self-compassion and its relationship to other psychological traits. This approach, however, limits researchers' ability to make causal inferences. To address this limitation, there is an increasing trend toward examining how *change* in self-compassion impacts wellbeing. Some scholars have examined the efficacy of self-compassion interventions. For instance, Neff and Germer (2013) developed an eight-week self-compassion training program called Mindful Self-Compassion (MSC) that has been shown to increase self-compassion and enhance wellbeing for up to a year (see also Bluth et al., 2015; Delaney, 2018; Finlay-Jones et al., 2017; and Friis et al., 2016). Ferrari and colleagues (2019) recently conducted a meta-analysis of 27 randomized-controlled trials of self-compassion interventions and found moderate to strong effect sizes in terms of increases in self-compassion and reductions in psychopathology, supporting the causal impact of self-compassion on wellbeing. They also found that all six subscales of the SCS changed significantly as a result of training, supporting the idea that the six components of self-compassion operate as a system.

Another promising experimental approach to the study of self-compassion involves inducing a self-compassionate mindstate. One of the first studies to attempt to induce a self-compassionate mindstate was conducted by Leary et al. (2007), who asked participants to recall a past event that made them feel badly about themselves then guided them through a series of writing prompts designed to evoke self-compassion. The study found that compared to control conditions, those in the self-compassionate writing condition experienced a greater decrease in negative affect. Several researchers have used this induction in experimental studies of self-compassion (e.g. Blackie & Kocovski, 2018; Odou & Brinker, 2014; Zabelina & Robinson, 2010). Other researchers have used variations on this writing task or different approaches such as guided meditation (e.g., Arimitsu & Hofmann, 2015; Breines & Chen, 2012; Diedrich et al., 2014; Kirschner et al., 2019) to determine if changes in state self-compassion impact wellbeing.

A limitation in the experimental study of self-compassion, however, stems from the fact that currently there is not a validated measure of state self-compassion. Researchers have typically created ad hoc measures of state self-compassion which involved taking a few items from the trait SCS and changing the wording to present tense, to determine the degree of change observed in self-compassion after experimental induction (e.g., Blackie & Kocovski, 2018; Breines & Chen, 2012; Kirschner et al., 2019; Lindsay & Creswell, 2014; Pepping et al., 2015). However, these researchers have not presented psychometric evidence for the validity of these measures beyond calculating reliability. Also, these ad hoc measures have typically been designed to measure overall levels of self-compassion but not its components. A state scale that could assess the six components would be useful as it would allow for researchers to more clearly assess the mechanisms of action of self-compassion in terms of impacting wellbeing. It would also make it possible to determine if all six components change simultaneously, confirming that they operate together in real time.

However, a brief proxy measure of state self-compassion scale would also be useful when used as a manipulation check for experimental studies, or when examination of the six components of self-compassion was not required. Several psychologists (e.g. Burisch, 1997; Gosling et al., 2003) have demonstrated the value of very brief measures of constructs which, although not generally as psychometrically valid as their longer counterparts, greatly reduce participant burden and enable the inclusion of a measure in research that might not otherwise be possible due to time constraints.

For this reason, the series of studies presented here were designed to create and validate two measures of state self-compassion based on Neff's theoretical model - a state self-compassion scale long form (SSCS-L) that can assess a global self-compassionate mindstate and its six constituent components, as well as a state self-compassion scale short form (SSCS-S) that can be used as a proxy measure of a global self-compassionate mindstate.

We planned to validate the factor structure of the SSCS-L using the same set of analyses used by Neff et al. (2019) to examine the trait SCS. There has been controversy over whether or not self-

compassion should be measured as a global construct, or if the subscales representing compassionate versus uncompassionate self-responding should be measured as two separate factors representing self-compassion and "self-coldness" (Brenner et al., 2018; López et al., 2015; Muris, Otgaar, & Petrocchi, 2016). Psychometric analyses of the use of one versus two global factors have provided mixed results, in part because many studies have used psychometric approaches that were theoretically inconsistent with analyzing self-compassion as a multidimensional system, such as the use of an *uncorrelated* two-factor model (Brenner et al., 2017; Coroiu et al., 2018) or an item response theory model, which assumes underlying unidimensionality (Halamová et al., 2020). Neff et al. (2019) systematically compared different factor structures for the SCS in 20 international samples. They used Confirmatory Factor Analysis (CFA) and exploratory structural equation modeling (ESEM) in addition to bifactor models to compare a one-factor, correlated two-factor, and correlated six-factor solution to the SCS. Bifactor-ESEM analyses are most appropriate for modeling multidimensional constructs thought to operate as a system (Morin, Arens, & Marsh, 2016). Results supported the use of six specific factors or a single global factor in every sample examined (explaining 95% of the reliable variance in item responding) but not two separate factors.

We conducted a series of studies in order to create and validate the SSCS-L and SSCS-S. The first study was designed to develop the SSCS-L and evaluate its psychometric properties. We expected to find optimal fit for one general self-compassion factor and six specific factors. We also expected superior fit of one global factor over two global factors, supporting the idea that self-compassion operates as a single system in state form, as has been found for the trait of self-compassion. We planned to identify a subset of items from the SSCS-L to create a short form that would be reliable and correlate highly with the SSCS-L general factor, so that it could serve as a proxy measure of global state self-compassion. We took into account the breadth of content of the construct by including an item from each component, following previously established guidelines for creating a short form of a questionnaire (Marsh et al., 2005, 2010). We examined predictive validity for the scales by examining associations with positive and negative affect. Study 2 was designed to cross-validate the structure of the SSCS-S and SSCS-L using scale items that were selected in Study 1, and to determine if these scales can be effectively used to measure change after a self-compassion mindstate induction (SCMI). We chose a student sample for cross-validation given that research on self-compassion is often conducted with undergraduates (Tóth-Király & Neff, 2020). The purpose of Study 3 was to replicate findings with the SSCS-S from Study 2 when the six items were given on their own as opposed to being embedded in the longer SSCS-L, an important step in the development of short form measures (Smith et al., 2000).

### Study 1

Our goal was to create measures of state self-compassion that were as brief as possible to reduce participant burden and to facilitate their use in experimental settings. We planned to create the SSCS-L with three items per subscale - the minimum number of items needed for adequate model identification (Kline, 2015). We planned to create the SSCS-S with one item per subscale - the minimum need to create a brief but comprehensive and face-valid proxy measure of global state self-compassion (Smith et al., 2000). Brief measures are useful when researchers have limited time resources or when the constructs are measured multiple times (e.g., during experiments or interventions; Danner et al., 2019; Konrath et al., 2014, 2018). In addition to examining reliability, we examined whether the SSCS-S items would have a unitary factor structure given that specification of a complex multidimensional model was not possible. We were unsure how strong model fit would be, because research demonstrates that SCS items do not form a single factor (Neff et al., 2019). We also wanted to determine if the SSCS-S was correlated strongly enough with the SSCS-L to suggest it could serve as a proxy measure.

We included measures of positive and negative affect to provide predictive validity for both scales. Previous research with the trait SCS has shown self-compassion to be positively linked to positive affect and negatively linked to negative affect (Neff et al., 2018), and we expected to find this same relationship with the SSCS-L and SSCS-S. Additional measures to assess discriminant, convergent, or criterion validity were not included given the extensive construct validity that already exists for the SCS (Neff & Tóth-Király, in press).

### Method

#### *Participants*

Participants were recruited from Mechanical Turk, a labor marketplace, which has been shown to produce reliable data even at low levels of remuneration (Buhrmester, Kwang, & Gosling, 2011). Mechanical Turk workers located in the US who had at least a 95% HIT approval rate were invited to participate in the study. Workers who agreed to participate were paid \$1.00 to fill out a five-minute survey. Appropriate IRB approval was obtained. There were originally 614 respondents to the study, but 26 failed to pass an attention check and were therefore excluded. A total of 588 participants were retained in this study. The mean age was 35.2 (SD = 10.1, range 18-74). In terms of self-reported gender, 58% identified as male, 40.6% as female, while the remaining identified as other or did not wish to indicate. In terms of self-reported race/ethnicity, 68.4% were White; 12.1% Asian, 8.0% Black, 7.1% Hispanic, and 6.8% other. In terms of education, 0.9% did not finish high school, 7% had a high school diploma, 21.4% had some college, 12.8% had an associate's degree, 42.5% had a bachelor's degree, and 15.1% had a graduate degree.

### ***Procedures***

Participants were told that the purpose of the study was to examine self-attitudes when experiencing painful or difficult emotions. They next filled out basic demographic questions, followed by 26 state self-compassion items, followed by a measure of positive and negative affect. Two attention check items were included that instructed participants to select a certain response to ensure they were paying attention.

### ***Measures***

**State Self-Compassion Scale item pool.** The trait SCS is a 26-item measure that assesses the general tendency to respond self-compassionately by directing respondents to think about "How I typically act toward myself in difficult times." Items are designed to tap into different types of suffering including feelings of personal inadequacy, mistakes and failures, and life difficulties. Response options for the trait SCS range from 1 (almost never) to 5 (almost always), assessing the trait of self-compassion over time. To create a state version of the SCS, we followed the procedure used by other researchers when creating state measures of traits such as emotion regulation (Lavender et al., 2017) or rumination (Marchetti et al., 2018). First, we rewrote the 26 SCS items so that they included present moment language. For instance, "I'm kind to myself when I'm experiencing suffering" became "I'm being kind to myself." We also modified the response instructions. Because it was necessary that responses to items be focused on a single instance of suffering occurring in the moment given that self-compassion is a response to suffering, participants were directed to "Think about a situation you are experiencing right now that is painful or difficult. It could be some challenge in your life, or perhaps you are feeling inadequate in some way. Please indicate how well each statement applies to how you are feeling toward yourself right now as you think about this situation." Items were created that referred to the type of response itself, independent of whether life difficulties or personal inadequacies were being considered. For instance, "When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world" was rewritten as "I'm feeling separate and cut off from the rest of the world." Response options ranged from 1 (not at all true for me) to 5 (very true for me), allowing for assessment of participants' current level of self-compassion. Note that items representing self-judgment, isolation, and over-identification were reverse coded to indicate their relative absence.

**Positive and Negative Affect (PANAS).** The PANAS (Watson, Clark, & Tellegen, 1988) is a 20-item self-report measure of positive and negative mood states. Participants are asked to rate how they are feeling in the moment using a series of adjectives (e.g. strong, distressed). Responses are given on a scale of 1 (very slightly or not at all) to 5 (extremely). A mean is taken of the negative items for negative affect, and a mean of the positive items for positive affect. We used this version of the PANAS because it is reliable and has been validated in a number of studies (e.g., Crawford & Henry, 2004), and has also been used in prior studies with the SCS (e.g., Neff et al., 2018). Both subscales were found to be reliable in the current study: positive affect ( $\alpha = .909$ ); negative affect ( $\alpha = .917$ ).

### ***Data Analyses***

We validated the factor structure of the SSCS-L drawing on methods used in recently conducted studies of the SCS (Neff, Tóth-Király, & Colosimo, 2018; Neff et al., 2019; Tóth-Király, Bőthe, & Orosz, 2017). Neff et al. (2019) propose that the system-level interaction of the elements of self-compassion are best modeled via the bifactor exploratory structural equation modeling (bifactor-ESEM) framework (Morin, Arens, & Marsh, 2016; Morin, Myers, & Lee, 2018). Despite the word "exploratory" in the name of this approach, bifactor-ESEM can be used in both an exploratory and

confirmatory manner (Morin, Marsh, & Nagengast, 2013). This framework is designed to explicitly identify two sources of construct-relevant psychometric multidimensionality that is present in measures assessing multidimensional constructs. The first source pertains to the assessment of coexisting global and specific constructs with bifactor modeling being able to model the associations of the global and specific factors on the questionnaire items (see also Reise, 2012). The second source refers to the fact that questionnaire items are likely to manifest at least some degree of true score association with distinct, yet conceptually similar constructs. This calls for the application of ESEM (Marsh et al., 2014), which allows the explicit expression of item cross-loadings as opposed to the overly strict Confirmatory Factor Analysis (CFA). It has been argued that ignoring these sources of construct-relevant psychometric multidimensionality could lead to biased results and unsatisfactory representations of the construct at hand (Asparouhov, Muthén, & Morin, 2015; Morin et al., 2016; Murray & Johnson, 2013).

Therefore, we used the bifactor ESEM framework and contrasted alternative factor solutions as proposed by Morin et al. (2016) as well as Tóth-Király et al., (2018): (i) one-factor CFA; (ii) two-factor CFA and ESEM specifying two correlated factors (representing compassionate and reduced uncompassionate self-responding); (iii) six-factor CFA and ESEM (representing the six components of self-compassion); (iv) bifactor CFA and ESEM (representing a global self-compassion factor and its six components); and (v) two-bifactor CFA and ESEM (representing two correlated global factors of compassionate and reduced uncompassionate self-responding, each with three specific components).

In CFA, items were only allowed to load on their target factor, cross-loadings were constrained to zero, but correlations between the factors were freely estimated. In ESEM, target loadings, cross-loadings, and factor correlations were all estimated while cross-loadings were constrained to be as close to zero as possible (Browne, 2001). In bifactor-CFA, all items were allowed to simultaneously load on one general-factor (G-factor) and on one a priori specific factor (S-factor), while all factors were orthogonal to one another and not allowed to correlate. The bifactor-ESEM model was specified similarly to its bifactor-CFA counterpart, but item cross-loadings were estimated on other specific factors and “targeted” to be as close to zero as possible. In bifactor models including two global factors, these factors were allowed to correlate. All analyses were performed in Mplus 8 (Muthén & Muthén, 2019) with the weighted least squares mean- and variance-adjusted estimator (WLSMV) which has been shown to be superior for ordinal indicators (such as Likert ratings) compared to maximum-likelihood-based estimators particularly in the case of five or fewer response options (e.g., Bandalos, 2014; Finney & DiStefano, 2013). To evaluate the SSCS-S we used a single-factor CFA (there is no difference between ESEM and CFA when specifying a single factor).

**Model Evaluation.** Following common practices (Marsh et al., 2005), we relied on goodness-of-fit indices in interpreting our models as having good or excellent fit: the Comparative Fit Index (CFI;  $\geq .95$  for good,  $\geq .90$  for acceptable), the Tucker–Lewis index (TLI;  $\geq .95$  for good,  $\geq .90$  for acceptable), the Root-Mean-Square Error of Approximation (RMSEA;  $\leq .06$  for good,  $\leq .08$  for acceptable) with its 90% confidence interval, and the standardized root mean square residual (SRMR;  $\leq .05$  for good,  $\leq .10$  for acceptable). It is important to keep in mind that model evaluation should not be based solely on fit indices, but it should also include a close inspection of the parameter estimates (e.g., factor loadings, cross-loadings, and factor correlations) as well as the theoretical conformity of each model (Marsh, Hau, & Wen, 2004; Morin et al., 2016). In the first-order CFA and ESEM comparison, the ESEM solution should be preferred as long as the factors remain well-defined, the size of the cross-loadings reasonable and the size of the correlations are decreased. In the comparison of selected first-order models and corresponding bifactor solutions, the bifactor model should be preferred as long as it has (i) similar or improved fit; (ii) a well-defined global factor; and (iii) at least some reasonably well-defined specific factors. In addition, the size of the correlation between the two global factors in the two-bifactor models should be examined to evaluate the degree of overlap between the factors. For model comparison, we considered the changes ( $\Delta$ ) in model fit and relied on the proposed guidelines of Chen et al. (2007) as well as Cheung and Rensvold (2002): improvements in CFI, TLI, and SRMR of at least .010 or decreases in RMSEA of at least .015 indicate a better fitting model.

**Reliability.** We relied on multiple indicators to assess the reliability of the optimal solution. First, we calculated Cronbach’s alpha ( $\alpha$ ) for observed scores, using the commonly-reported cut-off values of .70 and .80 to indicate adequate reliability (Nunnally, 1978). We also used McDonald’s (1970) model-based composite reliability (CR) which is calculated from the standardized factor loadings and the corresponding measurement errors and provides a more realistic estimate of reliability,

especially for bifactor models. Given that most of the reliability is accounted for by the G-factor in a bifactor model, it is not as critical for *all* S-factors to be well-defined (Morin et al., 2016). In fact, this is often the case for bifactor models when the global factor explains most of the reliable variance in item responding. While the presence of *some* well-defined S-factors provides support for the bifactor-ESEM solution, there will be some S-factors which only serve to control for the residual specificities shared among a subset of indicators. Following Perreira et al. (2018), we considered CRs above .50 to be satisfactory. We also calculated omega ( $\omega$ ) and omega hierarchical (omegaH,  $\omega_H$ ) indices, which are particularly informative for bifactor models (Brunner, Nagy, & Wilhelm, 2012; Rodriguez, Reise, & Haviland, 2016).  $\omega$  represents the percentage of variance in total scores accounted for by the general and the specific factors, while  $\omega_H$  describes the percentage of variance in total scores that is attributed to the G-factor only. To determine the amount of reliable variance in the G-factor that is not due to error,  $\omega_H$  is divided by  $\omega$ . Reise, Bonifay, and Haviland (2013) suggest 75% or higher as the ideal amount of variance to justify use of a total score. To estimate the remaining reliable variance attributed to S-factors,  $\omega_H$  is subtracted from  $\omega$  (Rodriguez et al., 2016).

**Associations with predictive validity measures.** We assessed the degree of association of the SSCS-L and SSCS-S with positive and negative affect via Pearson product-moment correlations. Effect sizes were evaluated according to thresholds established by Cohen (1988): correlations of  $r = .10 - .30$  were considered small,  $.30 - .50$  were considered medium, and over  $.50$  were considered large.

## Results

To select items for the SSCS-L, we followed the procedure used by Pommier, Neff, and Tóth-Király (2020) and Neff et al. (2020) in creating other adaptations of the Self-Compassion Scale. First, we analyzed the 26 modified items using a six-factor correlated ESEM model (results pertaining to this preliminary model are reported in Table S1 of the online supplements), and selected three items per factor (Kline, 2015) that had (i) strong target loadings (ideally higher than .500, but not lower than .300; see Morin et al., 2018), (ii) relatively low cross-loadings (ideally lower than .300; see Morin et al., 2018), (iii) adequate content validity, and (iv) performed well in subsequently re-estimated measurement models. The aim of item reduction was to create a shorter scale that retained the psychometric properties of the original version. The 18 items that we retained were used in all subsequent analyses (see Table 1).

Model fit indices for all potential models are reported in Table 2. The 1- and 2-factor solutions did not demonstrate a good fit (especially when considering RMSEA), suggesting that these are not optimal representations. The fit of the six-factor CFA solution was good, although the fit of the six-factor ESEM solution was substantially improved ( $\Delta CFI = +.015$ ,  $\Delta TLI = +.016$ ,  $\Delta RMSEA = -.027$ ;  $\Delta SRMR = -.017$ ). Examination of the parameter estimates (see Table 3) reveal that the factors were well-defined in both the CFA and ESEM solutions (CFA:  $\lambda = .592$  to  $.910$ ,  $M = .830$ ; ESEM:  $\lambda = .328$  to  $.998$ ,  $M = .622$ ), but the inter-factor correlations were much higher in CFA ( $r = .520$  to  $.880$ ,  $M = .750$ ) than in ESEM ( $r = .298$  to  $.662$ ,  $M = .488$ ). Although multiple cross-loadings were statistically significant in the ESEM solution, these were lower than the target loadings, suggesting that they do not undermine the definition of the factors. Still, the presence of multiple statistically significant cross-loadings reinforces the need to explicitly take into account this source of psychometric multidimensionality and thus the ESEM solution was preferred.

In the following step, we examined the bifactor solutions. The bifactor-ESEM solution had better fit than the bifactor-CFA solution, suggesting that ESEM is better able to capture the system level interaction of self-compassion items than CFA. We then examined whether the inclusion of one global factor (representing self-compassion) or two global factors (representing compassionate and uncompassionate self-responding) was supported. The two-bifactor CFA solution had worse fit than the bifactor-ESEM solution ( $\Delta CFI = -.026$ ,  $\Delta TLI = -.030$ ,  $\Delta RMSEA = +.051$ ;  $\Delta SRMR = +.027$ ). Moreover, the correlation between the two global factors in the CFA solution was so high ( $r = .887$ ,  $p < .001$ ) that it suggests conceptual redundancy. Although the fit of the two-bifactor ESEM solution was comparable to that of the bifactor-ESEM solution (see Table 2), the inspection of parameter estimates (Table 4) revealed that the two global factors were poorly defined by their loadings with the majority of them not being statistically significant (compassionate self-responding:  $\lambda = .042$  to  $.410$ ,  $M = .192$ ; uncompassionate self-responding:  $\lambda = .005$  to  $.405$ ,  $M = .191$ ), arguing against the need to incorporate a second G-factor.

Overall, the bifactor-ESEM solution appeared to be optimal, a conclusion that is supported by



the examination of parameter estimates and a well-defined self-compassion G-factor ( $\lambda = .497$  to  $.827$ ,  $M = .721$ ). Even though items presented weaker associations with the S-factors over and above this G-factor, the S-factors still retained at least some specificity not explained by the G-factor as apparent by their average factor loadings: self-kindness ( $\lambda = .335$  to  $.424$ ,  $M = .382$ ), self-judgment ( $\lambda = .279$  to  $.389$ ,  $M = .352$ ), common humanity ( $\lambda = .464$  to  $.665$ ,  $M = .555$ ), isolation ( $\lambda = .176$  to  $.680$ ,  $M = .422$ ), mindfulness ( $\lambda = .203$  to  $.376$ ,  $M = .288$ ), and overidentification ( $\lambda = .142$  to  $.483$ ,  $M = .348$ ).

Reliability indicators are reported in Table 5 and show that Cronbach's alpha and McDonald's CR were excellent for the total score, while the six components also had adequate reliability using Cronbach's alpha and CR. CR scores assess the bifactor model, meaning that CR for the subscale scores represent the variance remaining in the specific factors after the global factor is accounted for (Morin et al., 2018). As for the omega indicators, 95.2% of the reliable variance could be attributed to the G-factor, whereas 4.7% could be attributed to the S-factors over and above the G-factor.

To construct a face-valid short-form of the state measure, we selected one item (with the highest factor loading on the G-factor) from each of the six specific factors in the bifactor-ESEM solution (see Table 1). We also verified that these items had adequate content validity (Marsh et al., 2010). A single-factor CFA demonstrated good model fit for our chosen six items ( $\chi^2 = 99.012$ ,  $df = 9$ ,  $CFI = .978$ ,  $TLI = .963$ ,  $RMSEA = .130$  [.108, .154],  $SRMR = .029$ ) save for RMSEA which tends to be overinflated under conditions of low degrees of freedom (Kenny et al., 2015). The six-item scale also demonstrated high levels of internal consistency ( $\alpha = .864$ ).

Zero-order correlations between all variables are presented in Table 6. The SSCS-L and SSCS-S were very strongly correlated. Global self-compassion as measured by the SSCS-L and SSCS-S had a large positive association with positive affect and a large negative association with negative affect using both. In terms of the SSCS-L subscales, significant positive correlations with positive affect were found: a large effect size for self-kindness and mindfulness and medium effect sizes for the other four subscales. Significant negative correlations with negative affect were also found: a medium effect size for self-kindness and common humanity and large effect sizes for the other four subscales.

## Discussion

Results suggested that the 18 items selected for SSCS-L had psychometrically robust properties and could appropriately measure Neff's (2003b, 2016) conceptualization of self-compassion. Bifactor-ESEM analyses found excellent fit for a model of self-compassion as a single global factor with six constituent components. Although fit for the correlated two-bifactor ESEM model was also excellent, two global factors were not well differentiated by factor loadings. The large majority of the reliable variance in item responding could be attributed to the G-factor, whereas a much smaller amount was attributed to the S-factors over and above the G-factor. However, the fact that less reliable variance was attributed to the S-factors does not mean that these items (i.e., the six components) do not tap into key aspects of self-compassion. Indeed, our results show that it is important to account for their specificity.

Global self-compassion had a strong positive link to positive affect and a strong negative link to negative affect. These results are similar to what has been found with the trait SCS, where large correlations were also observed (Neff et al., 2018). The six subscales of the SSCS-L were significantly associated with mood in the expected direction. There was a general trend for components representing compassionate self-responding to be more strongly linked with positive affect, and those representing reduced uncompassionate self-responding to be more strongly linked to negative affect. This general pattern has also been found with the trait SCS (Neff et al., 2018). Thus, findings support the predictive validity of the SSCS-L and SSCS-S.

The six-item SSCS-S was found to have a unitary factor structure and adequate reliability. It also had a very strong correlation with the SSCS-L. The strength of associations between the SSCS-S and positive and negative affect were similar to those found with the SSCS-L total score. This suggests that the SSCS-S is a good proxy measure of global state self-compassion.

## Study 2

Study 2 had three important goals. The first was to cross-validate the factor structure of the SSCS-L (using the 18 items selected for the scale in Study 1) and assess the reliability of the 6-item SSCS-S in a student sample. The second was to determine if the SSCS-L and SSCS-S could be effectively used to measure changes in state self-compassion after an SCMI, and if the psychometric properties of the measures would be robust after change. The third was to examine whether the six

subscales of the SSCS-L would change to approximately to the same degree after an SCMI, indicating whether or not the six components change in tandem as a system.

## **Method**

### ***Participants***

Participants were recruited from an Educational Psychology subject pool at a large Southwestern university. Appropriate IRB approval was obtained. A total of 519 signed up for the study. Note that we excluded participants who did not complete the writing task ( $n = 4$ ) or who failed a compliance check ( $n = 22$  in the self-compassion condition;  $n = 82$  in the control condition). Thus, we retained 411 participants in this study ( $n = 232$  in the self-compassion condition;  $n = 179$  in the control condition). Their mean age was 20.60 ( $SD = 1.96$ , range 18-30). In terms of self-reported gender, 31.1% identified as male, 67.2% identified as female, and the remaining identified as other or did not wish to indicate. In terms of self-reported race/ethnicity, 43.6% were White, 26% Asian, 19.5% Hispanic, 6.1% Black, and 4.6% other.

### ***Procedure***

At the beginning of the study, participants were instructed to "think about a particular situation you are experiencing right now that is painful or difficult. It could be some struggle in your life, or perhaps you are feeling inadequate in some way. Please don't think of a situation in which you are upset with someone else, but instead think of a situation where you are feeling badly about yourself or else you are going through a hard time. Decide on a single situation that you will focus on throughout this study." Participants were then asked to rate the difficulty of their situation. Participants were next asked to fill out pre-test measures (SSCS-L and PANAS) with reference to the situation.

Subsequently, participants were told "We would now like you to take part in a brief exercise, to see if it is helpful in dealing with this painful or difficult situation." They were then randomly assigned to the SCMI condition or the neutral control condition, and completed the writing tasks with reference to the same situation. A minimum of 200 characters was required after each writing prompt. Participants were told that their responses would be anonymous and confidential.

Participants next completed a compliance check to determine whether they followed the writing instructions they were given. This was especially important for participants in the control condition, who would be assigned their writing task just after completing the SSCS-L, and could assume they should be writing to themselves self-compassionately if they were not paying attention. We only examined the responses of participants who passed the compliance check.

Next, participants filled out post-test measures (SSCS-L and PANAS) with reference to the situation. Finally, participants were asked to provide basic demographic information.

**SCMI.** We based our SCMI loosely on the writing task developed by Leary et al. (2007). This task asks participants to recall a past event that made them feel badly about themselves then guides them through a series of writing prompts designed to evoke the various components of self-compassion. The first prompt is designed to increase feelings of common humanity by asking participants to list ways in which other people have also experienced similar events. The second prompt focuses on self-kindness, and asks participants to write a paragraph expressing understanding and concern to themselves in the same way that they might express concern to a friend who had experienced a similar event. The third prompt is designed to induce mindfulness by instructing participants to "describe their feelings about the event in an objective and unemotional fashion" (Leary et al., 2007, p. 899).

While this induction has been found to successfully increase state self-compassion (Blackie & Kocovski, 2018; Harwood & Kocovski, 2017; Odou & Brinker, 2014; Zabelina & Robinson, 2010), it has features that are inconsistent with Neff's model. For instance, mindfulness in the context of self-compassion does not entail being unemotional. Rather, it entails accepting and validating one's difficult emotions (Neff & Dahm, 2014). Moreover, while common humanity involves knowing that others experience similar difficulties, it is not simply a matter of social comparison but also involves a sense of connectedness and the understanding that imperfection is a part of being human. We therefore wanted to create an SCMI that was more consistent with Neff's (2003b) theory.

Our SCMI was based on a practice known as the Self-Compassion Break found in the Mindful Self-Compassion program (Germer & Neff, 2019). In this practice, individuals are first instructed to bring mindful awareness to a difficult situation, so they can accept and validate their painful feelings. Examples of self-compassionate language are given such as "this is really hard right now." They are next instructed to remember common humanity, recognizing that they are not alone in their struggle.

Examples are given such as "everyone is imperfect, I'm not alone." They are then instructed to be kind to themselves, giving themselves the type of care, understanding, and support they would normally show to a good friend. Examples are given such as "I'm here for you." Finally, participants are invited to reflect on their experience so that the message of self-compassion can be absorbed and integrated.

The SCMI writing task followed a similar pattern. It first invited participants to write mindfully about the feelings evoked by the difficulty, second to consider the common humanity of the difficulty, and third to write to themselves with kindness, with examples given for each writing prompt. Finally, participants were invited to reflect on what they had written (see Appendix C in the online supplement for the full instructions). The neutral control condition was designed to be parallel to the SCMI. The control condition asked participants to first write about the difficult situation in a descriptive manner (parallel to mindfulness), second to indicate who was involved in the situation (parallel to common humanity), and third to describe any words spoken in the situation (parallel to self-kindness), with examples provided after each writing prompt. Finally, they were asked to reflect on what they had written. The parallel nature of the control condition ensured that participants in both conditions were focused on the difficult situation, with only participants in the self-compassion condition actively changing their responses to it. (See appendix D in the supplementary materials.)

### *Measures*

**Situation Difficulty.** Participants were asked to indicate how difficult their situation was on a scale of 1 (a little difficult), 2 (somewhat difficult), 3 (moderately difficult), 4 (very difficult), to 5 (extremely difficult). Most participants chose a fairly difficult situation to think about:  $M=3.31$  ( $SD = .891$ ), range 1-5.

**Compliance check.** Participants indicated what they had just been asked to do: (A) Write about your feelings in an accepting and validating way, consider how going through difficult situations is part of being human, write to yourself like a supportive friend; (B) Write about the situation and try to figure out how to solve the problem; or (C) Write the details of the situation, who is involved and what was said with as much detail as possible. Those in the SCMI condition passed the compliance check if they responded A and the neutral controls if they responded C.

**SSCS-L.** The 18 items selected for the SSCS-L in study 1 were re-ordered to better distribute items representing various self-compassion components (see Table 1). A complete copy of the measure, including instructions, can be found in Appendix A of the online supplement.

**SSCS-S.** The 6 items that formed the SSCS-S were included as part of the 18 SSCS-L (see Table 1). A complete copy of the measure, including instructions, can be found in Appendix B of the online supplement.

**PANAS.** The PANAS was once again given to assess positive and negative affect (see Study 1), but this time participants were instructed to rate their mood with reference to the difficult situation being considered in the study. The PANAS subscales were found to be reliable at pre-test: positive affect ( $\alpha = .905$ ), negative affect ( $\alpha = .868$ ); and at post-test: positive affect ( $\alpha = .923$ ), negative affect ( $\alpha = .913$ ).

### *Statistical Analyses*

For the purpose of psychometric cross-validation of the SSCS-L and SSCS-S at pre-test and post-test, we followed the same analytic steps as in Study 1. To examine whether there was significant change in outcomes within the SCMI and the control conditions separately, we performed a one-way repeated measures analyses of variance (ANOVA). Skewness (varying between  $-.559$  and  $.740$ ,  $M = .030$ ) and kurtosis (varying between  $-.717$  and  $-.090$ ,  $M = -.445$ ) values were within the established guidelines (between  $-1$  and  $+1$ ) of Muthén and Kaplan (1985), justifying the use of parametric tests. To test across conditions, we performed  $2 \times 2$  repeated-measures ANOVA with CONDITION (self-compassion vs. control) as a between-subjects factor, and TIME (pre-experiment and post-experiment) as a within-subjects factor. We reported partial eta squared as a measure of effect size. We used Cohen's (1988) interpretations of partial eta squared, which is  $.01$  as small,  $.06$  as medium, and  $.14$  and above as large.

## **Results**

### *Psychometric Analyses*

We conducted psychometric analyses on the SSCS-L pre-test and post-test scores in order to cross-validate its factor structure. Model fit results for pre-test and post-test are presented in Table 2. As found in Study 1, the bifactor-ESEM solution was superior to all other solutions. When examining

pre-test scores, we found that the bifactor-ESEM model had better fit than the bifactor CFA model ( $\Delta\text{CFI} = +.061$ ,  $\Delta\text{TLI} = +.072$ ,  $\Delta\text{RMSEA} = -.050$ ;  $\Delta\text{SRMR} = -.040$ ). An examination of the parameter estimates for the bifactor-ESEM solution (see Table S2) resulted in a well-defined self-compassion G-factor ( $\lambda = .299$  to  $.724$ ,  $M = .565$ ) where all factor loadings were significant. The self-kindness ( $\lambda = .325$  to  $.678$ ,  $M = .455$ ), self-judgment ( $\lambda = .253$  to  $.656$ ,  $M = .435$ ), common humanity ( $\lambda = .514$  to  $.650$ ,  $M = .599$ ), isolation ( $\lambda = .325$  to  $.512$ ,  $M = .435$ ), and over-identification ( $\lambda = .224$  to  $.534$ ,  $M = .343$ ) S-factors retained a moderate amount of specificity beyond the G-factor, while the mindfulness S-factors ( $\lambda = -.021$  to  $.401$ ,  $M = .185$ ) retained a lower amount of specificity. We then compared the bifactor-ESEM solution to the correlated two-bifactor solutions. The correlated two-bifactor CFA solution had worse fit ( $\Delta\text{CFI} = -.046$ ,  $\Delta\text{TLI} = -.053$ ,  $\Delta\text{RMSEA} = +.040$ ;  $\Delta\text{SRMR} = +.034$ ), and once again the correlation between the two global factors was so high ( $r = .833$ ,  $p < .001$ ) that it calls into question the distinction of these two global factors. Although model fit for the correlated two-bifactor ESEM solution was similar to the bifactor-ESEM solution, when examining parameter estimates (see Table S3), factor loadings again indicated that the two global factors were not well-defined and had mostly non-significant factor loadings (compassionate self-responding:  $\lambda = .016$  to  $.519$ ,  $M = .280$ ; uncompassionate self-responding:  $\lambda = .049$  to  $.675$ ,  $M = .346$ ). This argues against the two-bifactor solution.

Model fit for post-test scores on the SSCS-L (see Table 2) were almost identical to pre-test scores. Similarly, parameter estimates for bifactor CFA and ESEM solutions at post-test (see Table S4) as well as the correlated two-bifactor solutions (see Table S5) were highly similar to those found at pre-test.

Reliability indicators for the SSCS-L total score and subscale scores at both pre-test and post-test are reported in Table 5. Both Cronbach's alpha and composite reliability levels were adequate for the total score and acceptable-to-adequate for the subscales. However, composite reliability for pre-test mindfulness was poor. Omega and omega hierarchical indicators suggested that at both pre-test and post-test the large majority of the reliable variance in item responding was attributable to the G-factor (91.2% and 93.3%, respectively), while a significant portion could also be attributed to the S-factors.

When examining the psychometric properties of the SSCS-S at pre-test, model fit for a single factor was good ( $\chi^2 = 30.204$ ,  $df = 9$ ,  $\text{CFI} = .972$ ,  $\text{TLI} = .954$ ,  $\text{RMSEA} = .076$  [.047, .106],  $\text{SRMR} = .028$ ). At post-test model fit was adequate based on the CFI and SRMR ( $\chi^2 = 119.886$ ,  $df = 9$ ,  $\text{CFI} = .932$ ,  $\text{TLI} = .887$ ,  $\text{RMSEA} = .173$  [.146, .201],  $\text{SRMR} = .045$ ), although TLI was marginal and RMSEA was inflated. Adequate internal consistency both at pre-test ( $\alpha = .716$ ) and post-test ( $\alpha = .814$ ) was observed.

Zero-order correlations for the pre- and post-scores of all variables at pre-test and post-test are reported in Table 7. The SSCS-S had a very strong correlation with SSCS-L both at pre- and post-test. Patterns of association with positive and negative affect were in the expected directions. Total self-compassion had a medium correlation with positive and negative affect at pre-test. At post-test, total self-compassion had a medium correlation with positive affect and a large correlation with negative affect. In terms of the association of the six subscales with mood, significant positive correlations were found with positive affect at pre-test: a medium effect size for self-kindness and small effect sizes for the other five components. For positive affect at post-test, significant positive correlations were found: a small effect size for self-judgment and over-identification and medium effect sizes for the other four components. For negative affect at pre-test, significant negative correlations were found: a small effect size for common humanity and medium effect sizes for the other five components. For negative affect at post-test, significant negative correlations were found: a large effect size for self-judgment and isolation and medium effect sizes for the other four components.

#### ***Change in state self-compassion after the SCMI***

The exact means and standard deviations of measures at pre-test and post-test are reported in Table 8. We examined whether there were statistically significant differences between the SCMI and control groups in any of the study measures at pre-test, and none were found (all  $ps > .04$ ). When examining pre- to post- changes for the SCMI condition, there were substantial increases in total self-compassion and the six components. There were also substantial increases in positive affect and decreases in negative affect. Analyses (see Table 9) found all these changes were significant with large effect sizes. In the control condition, the degree of change in study measures was markedly smaller. Analyses found no significant changes in self-compassion or any of its components using the SSCS-L.

There was a slight but significant increase in self-compassion using the SCSS-S, an increase in positive affect and decrease in negative affect, but with very small effect sizes. When comparing across conditions, the experimental group had significantly larger changes than the control group. As can be seen in Table 9, TIME  $\times$  CONDITION interactions were statistically significant for all measures. Eta-squared indicated that a large effect size was obtained for total SSCS-L score and positive affect, medium effect sizes for total SSCS-S score, self-kindness, common humanity, isolation, mindfulness and negative affect, and small effect sizes for self-judgment and over-identification.

### **Discussion**

These results provide further evidence for the validity of the SSCS-L and SSCS-S as measures of state self-compassion. First, the factor structure of the SSCS-L was cross-validated in a student sample, and a bifactor ESEM representation of state self-compassion had excellent fit. Once again, although a two-bifactor ESEM representation also had excellent fit, parameter estimates indicated that two global positive and negative factors were not well differentiated as evidenced by factor loadings. Notably, the psychometric properties of the SSCS-L remained unchanged even after experimental manipulation, suggesting that it is a robust measure of state self-compassion.

The total SSCS-L and the six subscales generally had adequate internal consistency prior to and after the mindset manipulation. Both Cronbach's alpha and composite reliability levels were adequate for the total score and acceptable-to-adequate for the subscales, with the exception of composite reliability for the pre-test mindfulness subscale. However, this finding was not particularly concerning for multiple reasons. First, composite reliability assesses the reliability of specific factors only after taking the global factor into account. Second, composite reliability for the mindfulness subscale greatly increased at post-test, suggesting that the low values were time-specific. Third, Cronbach's alpha, which assessed the reliability of mindfulness items without parceling out variance due to the global factor, was adequate. Omega indicators suggested that at pre-test and post-test the large majority of the reliable variance in item responding was attributable to a global self-compassion factor, while a significant portion could also be attributed to the specific factors.

All SSCS-L subscales were significantly linked to mood in the expected direction at pre-test and post-test. There was a tendency for components representing compassionate self-responding to be more strongly linked with positive affect, and for those representing reduced uncompassionate self-responding to be more strongly linked to negative affect, providing predictive validity for the SSCS-L.

The six item SSCS-S was found to have a unitary factor structure and adequate internal consistency at pre-test and post-test. As was found in Study 1, the SSCS-S had a very strong correlation with the SSCS-L both at pre- and post-test. The strength of associations of the SSCS-S with positive and negative affect were also highly similar to those found with the SSCS-L.

When examining pre-to-post changes for the SCMI condition, there were substantial increases in total self-compassion and the six components. The degree of change in the six components was almost identical, especially when comparing compassionate and reduced uncompassionate responding within emotional, cognitive, and attentional domains. There were also substantial increases in positive affect and decreases in negative affect, and all changes were significant with large effect sizes. This suggests that the SCMI was effective in inducing self-compassion and that the SSCS-L was able to effectively detect change in self-compassion and its components. Findings also provide further support for the idea that the components of self-compassion operate as a system and that compassionate and uncompassionate self-responding operate in tandem.

In the control condition, the degree of change in study measures was markedly smaller. Analyses found no significant changes in self-compassion or any of its components using the SSCS-L. There was a slight but significant increase in self-compassion using the SCSS-S, an increase in positive affect and decrease in negative affect, but with very small effect sizes. It is likely that simply having a chance to write about the difficult situation in the control condition helped participants respond to their difficulty in a healthier manner (Pennebaker, 1997). When comparing across conditions, however, the experimental group displayed significantly larger changes than the control group. A large effect size was obtained for total SSCS-L score and positive affect, medium effect sizes for total SSCS-S score, self-kindness, common humanity, isolation, mindfulness and negative affect, and small effect sizes for self-judgment and over-identification. This confirms the ability of the SSCS-L to detect differential change in the six components of self-compassion.

Note that experimental findings did not substantially differ whether the SSCS-L or SSCS-S

was used, suggesting the SSCS-S is an adequate proxy measure of state self-compassion. There were some small differences, however. While effect sizes for degree of change in self-compassion using both measures were approximately the same in the experimental condition, there was a very small but significant increase with the SSCS-S but not the SSCS-L for controls. When comparing across the SCMI and control conditions, moreover, the effect size for change in self-compassion was larger for the SSCS-L than the SSCS-S. While it is unclear exactly why this was the case, it may be because the SSCS-S has only six items and has more error.

### Study 3

The purpose of Study 3 was to examine the ability of the SSCS-S to assess change in state self-compassion after an SCMI when the six items were given on their own and not embedded within a larger set of items (i.e., the 18 item SSCS-L). An important step in developing brief measures that are derived from longer measures involves examining how the items function in an independent sample (Smith et al., 2000). We wanted to replicate findings from Study 2, determining if the SSCS-S would still have a unitary factor structure, be reliable at pre-test and post-test, and if similar associations with positive and negative affect would be found.

#### Method

##### Participants

Participants were recruited from an Educational Psychology subject pool at a large Southwestern university. Appropriate IRB approval was obtained. A total of 171 individuals participated in this study. Note that we excluded participants who did not complete the writing task ( $n = 2$ ) or who failed the compliance check: ( $n = 7$  in the self-compassion condition;  $n = 23$  in the control condition). Thus, we retained 139 participants in this study: ( $n = 79$  in the self-compassion condition;  $n = 60$  in the control condition). Their mean age was 20.49 ( $SD = 1.81$ , range 18-30). In terms of self-reported gender, 36.7% identified as male, 62.6% identified as female, and the remaining identified as other or did not wish to indicate. The sample was relatively diverse. In terms of self-reported race/ethnicity, 35.3% were White, 28.8% Asian, 22.3% Hispanic, 10.1% Black, and 3.6% other.

##### Procedure

The procedures were identical to those of Study 2, with the only difference being that the SSCS-S was given instead of the SSCS-L.

##### Measures

**Situation Difficulty.** The same question was used as in Study 2. Most participants thought about a fairly difficult situation:  $M = 3.42$  ( $SD = .939$ ), range 1-5.

**SSCS-S.** See description in Study 2.

**PANAS.** See Study 1 for a description. Both subscales were found to be reliable at pre-test for positive affect ( $\alpha = .882$ ) and negative affect ( $\alpha = .890$ ), and also at post-test for positive affect ( $\alpha = .918$ ) and negative affect ( $\alpha = .907$ ).

##### Data Analyses

As in Study 2, we used a single-factor CFA to determine the factor structure of the SSCS-S. Statistical evaluation of the SCMI effectiveness was also the same as in Study 2.

##### Results

The factor structure for the 6-item measure was good at pre-test ( $\chi^2 = 23.936$ ,  $df = 9$ ,  $CFI = .955$ ,  $TLI = .925$ ,  $RMSEA = .109$  [.057, .163],  $SRMR = .038$ ). It was also acceptable at post-test ( $\chi^2 = 46.256$ ,  $df = 9$ ,  $CFI = .927$ ,  $TLI = .878$ ,  $RMSEA = .173$  [.125, .223],  $SRMR = .051$ ), although once again TLI was marginal and RMSEA was inflated. Reliability for the SSCS-S was adequate both at pre-test ( $\alpha = .759$ ) and post-test ( $\alpha = .789$ ). The SSCS-S had a significant medium correlation with positive affect ( $r = .337$ ,  $p < .001$ ) and negative affect ( $r = -.417$ ,  $p < .001$ ) at pre-test. It also had a significant medium correlation with positive affect ( $r = .373$ ,  $p < .001$ ) and negative affect ( $r = -.478$ ,  $p < .001$ ) at post-test. Table 8 presents mean scores on the SSCS-S and the PANAS at pre- and post-test. We examined whether there were statistically significant differences in study measures between the experimental and control groups at pre-test, and none were found (all  $ps > .399$ ). Self-compassion and positive affect increased and negative affect decreased substantially in the SCMI condition, but not in the control condition. Looking at participants in the SCMI condition, all pre-to-post changes were significant with large effect sizes (see Table 9). In contrast, no significant changes were observed in the control condition. When comparing across conditions, all  $TIME \times CONDITION$  interactions were statistically significant: There was a large effect size for self-compassion and negative affect, and a

medium effect size for positive affect.

### **Discussion**

Findings provide additional confidence in the use of the SSCS-S as a brief measure of state self-compassion. Findings using the SSCS-S replicated those of Study 2, when the six items were embedded in the 18 SSCS-L items. The scale had a unitary factor structure and was reliable at both pre- and post-test. Medium sized correlations with positive and negative affect were observed in the expected directions at both pre- and post-test. A large effect size was observed for change in state self-compassion after experimentally inducing self-compassion, suggesting that the SSCS-S can be used effectively in experimental settings.

### **General Discussion**

The three studies presented here suggest that the SSCS-L and the SSCS-S are valid and reliable measures of state self-compassion. First, the SSCS-L appears to have excellent psychometric properties, and a bifactor-ESEM model of one general factor (representing a self-compassionate mindset) and six specific factors (representing the six components of self-compassion) was found to be optimal in both a community and student sample. Moreover, the good psychometric properties of the SSCS-L were maintained even after the level of state self-compassion was changed through experimental manipulation, providing confidence in findings. Our results contribute to the accumulating empirical evidence (e.g., Neff et al., 2020; Neff, Tóth-Király, & Colosimo, 2018; Neff et al., 2019; Tóth-Király et al., 2017) that self-compassion and its components are best analyzed with a framework that takes construct-relevant psychometric multidimensionality into account, and that the bifactor-ESEM representation of one general and six specific factors best reflects the dimensionality of self-compassion.

Our results also show that the global self-compassion factor accounts for a substantial amount of variance in item responding (reflecting respondents' global levels of self-compassion), whereas the specific factors (non-redundant estimates of the unique aspects of the six components beyond the global levels) appear to account for a small-to-moderate amount of item variance. However, this is less concerning in studies where bifactor operationalizations are adopted (e.g., Garn et al., 2019; Gillet et al., 2019) in which a well-defined G-factor only needs to be accompanied by some well-defined S-factors (Morin et al., 2018). Observing weakly-defined S-factors in a bifactor solution simply suggests that, in the sample at hand, the items used to assess the specific component provide a clearer reflection of global levels of self-compassion than that of the specific component. Still, future studies should investigate the relative contribution and predictive ability of the S-factors over and above that of the G-factor.

Apart from model fit, Cronbach's alpha and model-based composite reliability values indicated that the global self-compassion factor was highly reliable and that the reliability of the specific factors remained acceptable. While omega and omega hierarchical values suggested that the total self-compassion score explained the large proportion of reliable variance in item responding (from 91% to 95% across studies), sufficient amounts remained in the specific factors to corroborate the importance of including them in the measurement model. The fact that the SSCS-L is able to reliably measure change in a global state self-compassion score as well as the six components of self-compassion suggests it will be useful in future research when the goal is to understand the mechanisms of action of self-compassion in relation to wellbeing.

Findings also suggest that the SSCS-S serves as an adequate proxy measure of global state self-compassion when separate measurement of its components is not necessary. First, there was a very strong correlation between the long and short versions (from .922 to .957 across studies). Of course, too much should not be made of this finding because SSCS-S items were included in the SSCS-L and therefore a strong correlation should be expected. In addition, the associations of each with positive and negative affect were highly similar, including when the SSCS-S was examined in a separate sample (Study 3). Cronbach's alpha for the short scale was also acceptable both before and after experimental manipulation, suggesting it can reliably measure change in state self-compassion.

The SSCS-S was found to have a unitary factor structure, and model fit was generally acceptable across studies for most indices. It should be noted that a single-factor CFA was not supported for the SSCS-L, similar to findings with the SCS (Neff et al., 2019). Given that self-compassion is a multidimensional rather than unidimensional construct, we did not necessarily expect a unidimensional factor structure to be confirmed for the SSCS-S. Because most of the variance in item

responding to the SSCS-L is explained by a global factor, however, and the SSCS-S items were chosen based on their factor loadings on that global factor, these findings make sense and help confirm the validity of the SSCS-S as a proxy measure of global state self-compassion. The brevity of the SSCS-S means that it should be especially useful in experimental settings, including as a manipulation check. Although the SSCS-S had slightly worse psychometric properties and was slightly less accurate in terms of assessing change in global self-compassion than the SSCS-L, it can be argued that this is a worthwhile tradeoff for the brevity of the measure when time constraints exist (Gosling et al., 2003).

Results suggest that when precision of measurement is essential, the SSCS-L is a preferred measure of total self-compassion over the SSCS-S. Also, when researchers want to examine the mechanisms of action of self-compassion to create change, use of the SSCS-L is ideal. For example, researchers could use the SSCS-L if they wanted to investigate which components of self-compassion tend to be responsible for changes in state anxiety when a mindstate induction is given after a failure or social stressor. When researchers face time constraints, however, the SSCS-S is an acceptable measure of global state self-compassion.

Results also indicate that the SCMI we created is an effective way to experimentally manipulate self-compassion, yielding increases in global self-compassion with a large effect size. It also yielded significant change in all six components of self-compassion, suggesting that the SCMI induces self-compassion in a manner consistent with Neff's theoretical model (Neff, 2003b; Neff, 2016). The SCMI also increased positive affect and reduced negative affect, with large effect sizes. Although there are several ways to induce a self-compassion mindstate and this research cannot determine which is more effective, it is hoped that the availability of a writing task that is consistent with Neff's theory of self-compassion (Germer & Neff, 2019; Neff, 2003b) will be useful to the field.

Finally, results from these studies help address the debate over whether self-compassion is best thought of as a global construct, or as two independent constructs representing self-compassion and self-coldness (Brenner et al., 2017; López et al., 2015; Muris, Otgaar, & Petrocchi, 2016). Our psychometric analyses supported the view of self-compassion as a single construct composed of six elements rather than two separate factors composed of three elements each. The fit of the bifactor-ESEM model was superior to the two-bifactor CFA model, and although model fit was good for the two-bifactor ESEM model, two separate global factors could not be distinguished by factor loadings. It is also important to note that the correlation between compassionate and reduced uncompassionate self-responding was extremely high in the two-bifactor CFA models ( $r = .887$  in Study 1 and  $r = .833$  in Study 2), which is higher than has typically been found in research with the trait SCS (e.g., Coroiu et al., 2018; Costa et al., 2016; López et al., 2015; Pfattheicher et al., 2017). This finding is likely due to the fact that all items were aimed at the same instance of suffering, and therefore assessed the experience of self-compassion itself as opposed to the tendency to be self-compassionate across different situations. Psychometric findings with the state SCS are therefore even more relevant to understanding the construct of self-compassion than those obtained with the trait SCS, given that they represent self-compassion as it occurs in the moment. Results strongly suggest that increased compassionate and decreased uncompassionate self-responding co-occur in the mindstate of self-compassion.

Moreover, findings indicated that an SCMI created change in the six components of self-compassion to a strikingly similar degree, especially when comparing increased compassionate and reduced uncompassionate self-responding within emotional, cognitive, and attentional domains. This has direct implications for the controversy over the conceptualization of self-compassion. Compassionate and uncompassionate responding did not change independently, they changed together as a system. This same pattern of findings has also been observed after participation in an MSC course (Neff, 2016) and other interventions (Ferrari et al., 2019). Thus, both increased compassionate and reduced uncompassionate self-responding appear to be essential features of a global self-compassionate mindstate.

We recommend use of a total SSCS-L score or the SSCS-S when researchers want to examine the impact of a self-compassionate mindstate on wellbeing in general. When examining mechanisms of action, in other words *how* self-compassion impacts wellbeing, use of the six SSCS-L subscales is recommended. Use of two scores representing compassionate and uncompassionate self-responding is not recommended given that the two factors do not appear to be distinguishable psychometrically. Also, they collapse potentially important distinctions between emotional, cognitive, and attentional domains



of self-responding.

Given that interest in self-compassion is largely driven by the fact that self-compassion is a learnable skill (Ferrari et al., 2019), it is important that researchers examine how *change* in self-compassion and its components leads to wellbeing in order to fully understand the construct. Hopefully availability of the long and short state self-compassion scales will facilitate this endeavor.

### **Limitations and Future Research Directions**

Although the SSCS-L and SSCS-S were examined in both community and student samples, it will also be important to establish whether the state self-compassion scales are effective in other groups such as clinical populations. Also, while the predictive validity of the state scales was confirmed by correlations with positive and negative affect, future studies should aim to establish discriminant, convergent, or criterion validity with additional measures. A limitation of the current study was that the strength of association between the SSCS-S and the SSCS-L was examined with the same set of items, inflating their correlation. Future studies could investigate the association of the SSCS-L and SSCS-S by administering both to the same participants separately with filler questionnaires between them, allowing for a more accurate assessment of their overlap (Smith et al., 2000).

It should also be noted that the state self-compassion scales are intended to measure the construct of self-compassion as defined and measured by Neff (2003a, 2003b), and cannot be used to assess other definitions of self-compassion. Future research may want to develop state measures consistent with other conceptualizations of self-compassion (e.g., Gilbert et al., 2017; Gu et al., 2019) to determine if there are substantive differences between these models in terms of the link between self-compassion and wellbeing. Future studies should also consider using Generalizability Theory to examine the trait-state variance components associated with the SSCS-L and the SSCS-S in order to better distinguish the state and trait of self-compassion (see Medvedev et al., 2017 and Truong et al., 2020 for a similar application with mindfulness).

Overall, the current set of studies suggest that the SSCS-L and SSCS-S are valid and reliable measures of state self-compassion. It is our hope that they will facilitate the experimental study of self-compassion.

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**Table 1***Items, item subscales and item number in the SSCS-L and SSCS-S*

Subscale	SSCS-L#	SSCS-S#	Items
SK	1	1	I'm giving myself the caring and tenderness I need.
SK	7		I'm being kind to myself.
SK	13		I'm being supportive toward myself.
CH	3		I see my difficulties as part of life that everyone goes through.
CH	9	3	I'm remembering that there are lots of others in the world feeling like I am.
CH	15		I'm remembering that difficult feelings are shared by most people.
M	5		I'm keeping my emotions in balanced perspective.
M	11		I'm taking a balanced view of this painful situation.
M	17	6	I'm keeping things in perspective.
SJ	4		I'm being pretty tough on myself.
SJ	10		I'm being a bit cold-hearted towards myself.
SJ	16	5	I feel intolerant and impatient toward myself.
IS	6		I feel separate and cut off from the rest of the world.
IS	12	4	I feel like I'm struggling more than others right now.
IS	18		I'm feeling all alone right now.
OI	2	2	I'm obsessing and fixating on everything that's wrong.
OI	8		I'm getting carried away with my feelings.
OI	14		I'm blowing this painful incident out of proportion.

*Note:* SSCS-L: State Self-Compassion Scale-Long form; SSCS-S: State Self-Compassion Scale-Short form; SK: Self-Kindness; CH: Common Humanity; M: Mindfulness; SJ: Self-Judgment; IS: Isolation; OI: Overidentification; See Appendix A for a copy of the SSCS-L and Appendix B for a copy of the SSCS-S.

**Table 2***Goodness-of-fit indices for the estimated solutions for the SSCS-L*

Models	$\chi^2$	df	CFI	TLI	RMSEA [90% CI]	SRMR
<i>Study 1 (N = 588)</i>						
One-factor CFA	2211.079*	135	.892	.878	.162 [.156, .168]	.069
Two-factor CFA	1555.755*	134	.926	.916	.134 [.128, .140]	.054
Two-factor ESEM	1241.273*	118	.942	.924	.127 [.121, .134]	.039
Six-factor CFA	490.653*	120	.981	.975	.072 [.066, .079]	.027
Six-factor ESEM	130.553*	60	.996	.991	.045 [.034, .055]	.010
Bifactor CFA	850.823*	117	.962	.950	.103 [.097, .110]	.044
Bifactor ESEM	86.510*	48	.998	.994	.037 [.024, .049]	.008
Two-Bifactor CFA	647.245*	116	.972	.964	.088 [.082, .095]	.035
Two-Bifactor ESEM	57.018*	41	.999	.997	.026 [.001, .041]	.007
<i>Study 2 (N = 411) Pre-test</i>						
One-factor CFA	1072.482*	135	.819	.795	.130 [.123, .137]	.077
Two-factor CFA	790.814*	134	.873	.855	.109 [.102, .117]	.066
Two-factor ESEM	497.946*	118	.927	.905	.089 [.081, .097]	.044
Six-factor CFA	253.699*	120	.974	.967	.052 [.043, .061]	.036
Six-factor ESEM	98.900*	60	.992	.981	.040 [.025, .053]	.016
Bifactor CFA	460.371*	117	.934	.913	.085 [.076, .093]	.053
Bifactor ESEM	71.773*	48	.995	.985	.035 [.016, .051]	.013
Two-Bifactor CFA	382.362*	116	.949	.932	.075 [.067, .083]	.047
Two-Bifactor ESEM	43.394*	41	1	.998	.012 [.000, .036]	.010
<i>Study 2 (N = 411) Post-test</i>						
One-factor CFA	1899.398*	135	.820	.796	.178 [.171, .185]	.090
Two-factor CFA	1269.731*	134	.884	.868	.144 [.136, .151]	.071
Two-factor ESEM	862.638*	118	.924	.901	.124 [.116, .132]	.045
Six-factor CFA	276.420*	120	.984	.980	.056 [.048, .065]	.028
Six-factor ESEM	123.798*	60	.993	.983	.051 [.038, .064]	.013
Bifactor CFA	696.669*	117	.941	.923	.110 [.102, .118]	.055
Bifactor ESEM	89.268*	48	.996	.987	.046 [.031, .060]	.011
Two-Bifactor CFA	464.131*	116	.964	.953	.085 [.077, .094]	.043
Two-Bifactor ESEM	63.399	41	.998	.991	.036 [.017, .053]	.009

*Note.* SSCS-L: State Self-Compassion Scale-Long form; CFA: Confirmatory factor analysis; ESEM: Exploratory structural equation modeling;  $\chi^2$ : weighted least square chi-square test of exact fit; df: Degrees of freedom; CFI: Comparative fit index; TLI: Tucker-Lewis index; RMSEA: Root mean square error of approximation; 90% CI: 90% confidence interval of the RMSEA.; SRMR: standardized root mean square residual; \* $p < .01$ .

**Table 3***Standardized factor loadings for the correlated six-factor and bifactor CFA and ESEM models for the SSCS-L in Study 1 (N = 588)*

	CFA		ESEM					Bifactor CFA		Bifactor ESEM						
	SF	SK	SJ	CH	IS	MI	OI	SC	SF	SC	SK	SJ	CH	IS	MI	OI
SK1	.874**	<b>.689**</b>	.174**	.048	.004	-.002	.088*	.801**	.334**	<b>.824**</b>	<b>.335**</b>	.003	.015	-.089**	-.111**	-.057
SK2	.901**	<b>.748**</b>	.130**	-.066	.141**	.204**	-.127**	.821**	.378**	<b>.796**</b>	<b>.424**</b>	.075**	.025	.068**	.112**	-.092**
SK3	.910**	<b>.695**</b>	.137**	.064*	.025	.189**	-.057*	.829**	.384**	<b>.807**</b>	<b>.386**</b>	.039	.098**	-.019	.092**	-.053*
SJ1	.773**	.111**	<b>.684**</b>	.024	-.018	-.066	.144**	.685**	.441**	<b>.697**</b>	.019	<b>.389**</b>	-.147**	.001	-.035	.097**
SJ2	.885**	.105**	<b>.568**</b>	.150**	.106**	-.081*	.175**	.802**	.312**	<b>.807**</b>	.011	<b>.279**</b>	-.049*	.052**	-.081**	.082**
SJ3	.880**	.186**	<b>.675**</b>	.045	.090*	-.031	.029	.794**	.383**	<b>.779**</b>	.097**	<b>.387**</b>	-.098**	.089**	-.005	.056*
CH1	.790**	-.018	-.043	<b>.726**</b>	.106**	-.013	.084*	.607**	.473**	<b>.619**</b>	-.044	-.149**	<b>.464**</b>	-.002	-.007	-.072
CH2	.856**	-.034	.056	<b>.804**</b>	.058	.058	-.043	.650**	.556**	<b>.634**</b>	-.009	-.055	<b>.537**</b>	.008	.096**	-.091**
CH3	.851**	-.019	.123**	<b>.857**</b>	-.044	.158**	-.181**	.643**	.585**	<b>.587**</b>	.119**	-.015	<b>.665**</b>	.001	.139**	-.004
IS1	.848**	-.007	.086	.120**	<b>.715**</b>	-.095**	.088	.708**	.545**	<b>.730**</b>	-.081**	.039	.004	<b>.410**</b>	-.093**	-.053
IS2	.819**	.171**	-.033	.132**	<b>.472**</b>	-.107*	.278**	.713**	.243**	<b>.758**</b>	-.094**	-.060	-.026	<b>.176**</b>	-.088*	-.107**
IS3	.860**	-.028	.040	-.070**	<b>.998**</b>	.155**	-.148**	.719**	.498**	<b>.697**</b>	.061**	.065**	.011	<b>.680**</b>	.024	.065**
MI1	.793**	.176**	-.014	.090*	.089*	<b>.406**</b>	.317**	.755**	.167**	<b>.735**</b>	.052*	-.061	.075**	-.018	<b>.203**</b>	.228**
MI2	.823**	.286**	-.107*	.285**	.035	<b>.445**</b>	.131**	.778**	.301**	<b>.732**</b>	.087**	-.051*	.242**	-.047*	<b>.376**</b>	.006
MI3	.883**	.274**	-.013	.236**	.076*	<b>.328**</b>	.239**	.832**	.331**	<b>.827**</b>	.009	-.024	.121**	-.057**	<b>.286**</b>	-.011
OI1	.791**	.165**	.132**	-.079*	.185**	-.006	<b>.520**</b>	.697**	.210**	<b>.739**</b>	-.085*	.014	-.194**	-.010	-.105**	<b>.142**</b>
OI2	.819**	-.135**	.252**	.012	.147**	.309**	<b>.440**</b>	.710**	.460**	<b>.707**</b>	-.085**	.082**	-.049	.054*	.063*	<b>.418**</b>
OI3	.592**	-.182**	.276**	-.052	-.031	.339**	<b>.420**</b>	.493**	.493**	<b>.497**</b>	-.064*	.096**	-.075*	-.036	.070*	<b>.483**</b>

*Note.* SSCS-L: State Self-Compassion Scale-Long form; CFA: confirmatory factor analysis; ESEM: exploratory structural equation modeling; SF: Loading on respective specific factor when cross-loadings constrained to zero; SK: Self-Kindness; SJ: Self-Judgment (reverse-coded); CH: Common Humanity; IS: Isolation (reverse-coded); MI: Mindfulness; OI: Overidentification (reverse-coded); SC: Self-Compassion General factor; Target loadings in bold.; \* $p < .05$ ; \*\* $p < .01$ .



**Table 4***Standardized factor loadings for the correlated two-bifactor CFA and ESEM solutions for the SSCS-L in Study 1 (N = 588)*

	Correlated Two-bifactor CFA			Correlated Two-bifactor ESEM							
	CS	RUS	SF	CS	RUS	SK	SJ	CH	IS	MI	OI
SK1	.823**		.274**	-.158		<b>.762**</b>	.268**	.274**	.207**	.056	.286**
SK2	.844**		.322**	-.149		<b>.709**</b>	.265**	.133	.335**	.409**	.075
SK3	.851**		.332**	-.136		<b>.655**</b>	.304**	.291**	.235**	.316**	.153**
SJ1		.841**	.409**		.263	.383**	<b>.387</b>	.072	.325**	.192**	.270**
SJ2		.719**	.201**		.405**	.425**	<b>.426**</b>	.240**	.380**	.114	.333**
SJ3		.832**	.277**		.297*	.448**	<b>.475**</b>	.135**	.391**	.209**	.233**
CH1	.620**		.455**	-.226*		.247**	.044	<b>.630**</b>	.248**	.170	.149**
CH2	.663**		.540**	-.255		.248**	.094	<b>.649**</b>	.242**	.286**	.084*
CH3	.656**		.570**	-.410*		.217**	.154**	<b>.644**</b>	.159**	.381**	.043
IS1		.734**	.521**		-.005	.270**	.250*	.255**	<b>.691**</b>	.075	.222**
IS2		.742**	.177**		.090	.383**	.072	.287**	<b>.552**</b>	.113	.263**
IS3		.747**	.446**		-.169	.206**	.400**	.152**	<b>.766**</b>	.205**	.180**
MI1	.776**		-.083	-.042		.339**	.200**	.293**	.213**	<b>.413**</b>	.432**
MI2	.795**		-.252**	-.079		.387**	.137**	.447**	.189**	<b>.511**</b>	.210**
MI3	.851**		-.281**	.275		.469**	.213**	.566**	.202**	<b>.418**</b>	.255**
OI1		.721**	.154**		.256**	.399**	.036	.092	.402**	.151	<b>.522**</b>
OI2		.736**	.395**		.124	.188**	.325**	.164**	.286**	.306**	<b>.577**</b>
OI3		.512**	.505**		.114	.081*	.330**	.076	.086	.243**	<b>.561**</b>

*Note.* CFA: confirmatory factor analysis; ESEM: exploratory structural equation modeling; SF: loading on respective specific factor when cross-loadings constrained to zero; SK: Self-Kindness; SJ: Self-Judgment (reverse-coded); CH: Common Humanity; IS: Isolation (reverse-coded); MI: Mindfulness; OI: Overidentification (reverse-coded); SC: Self-Compassion General factor; Target loadings in bold.; \* $p < .05$ ; \*\* $p < .01$ .

**Table 5**

*Cronbach's alpha based on observed scores, composite reliability and omega reliability indices for the SSCS-L based on the final bifactor-ESEM models*

	$\alpha$	CR	$\omega$	$\omega$ H	GF	SF
<i>Study 1 (N = 588)</i>						
Total SSCS-L	.944	.972	.973	.926	.952	.047
Self-kindness	.898	.717	—	—	—	—
Self-judgment	.852	.583	—	—	—	—
Common humanity	.839	.767	—	—	—	—
Isolation	.830	.702	—	—	—	—
Mindfulness	.841	.477	—	—	—	—
Overidentification	.733	.481	—	—	—	—
<i>Study 2 (N = 411) pre-test</i>						
Total SSCS-L	.883	.932	.938	.855	.912	.083
Self-kindness	.820	.695	—	—	—	—
Self-judgment	.713	.587	—	—	—	—
Common humanity	.694	.694	—	—	—	—
Isolation	.682	.545	—	—	—	—
Mindfulness	.724	.195	—	—	—	—
Overidentification	.672	.431	—	—	—	—
<i>Study 2 (N = 411) post-test</i>						
Total SSCS-L	.925	.966	.968	.903	.933	.065
Self-kindness	.861	.558	—	—	—	—
Self-judgment	.803	.546	—	—	—	—
Common humanity	.849	.850	—	—	—	—
Isolation	.798	.694	—	—	—	—
Mindfulness	.836	.558	—	—	—	—
Overidentification	.729	.530	—	—	—	—

*Note.* SSCS-L: State Self-Compassion Scale-Long form; ESEM: exploratory structural equation modeling;  $\alpha$ : Cronbach's alpha; CR: McDonald's model-based composite reliability;  $\omega$ : omega;  $\omega$ H: omega hierarchical; GF: reliable variance explained by the general factor; SF: reliable variance explained by the specific factors. \* $p < .05$ ; \*\* $p < .01$ .

**Table 6***Zero-order correlations in Study 1 (N = 588)*

	M (SD)	1	2	3	4	5	6	7	8	9
1. Total SSCS-L	3.09 (0.90)	—								
2. Total SSCS-S	2.98 (0.99)	.957**	—							
3. Self-kindness	2.89 (1.13)	.873**	.846**	—						
4. Self-judgment	3.03 (1.16)	.856**	.822**	.728**	—					
5. Common Humanity	3.07 (1.08)	.739**	.706**	.607**	.455**	—				
6. Isolation	3.09 (1.19)	.833**	.799**	.658**	.689**	.527**	—			
7. Mindfulness	3.17 (1.00)	.873**	.828**	.748**	.656**	.690**	.623**	—		
8. Overidentification	3.32 (1.00)	.781**	.741**	.575**	.694**	.398**	.598**	.643**	—	
9. Positive affect	2.62 (0.88)	.547**	.540**	.574**	.422**	.425**	.416**	.538**	.336**	—
10. Negative affect	1.86 (0.82)	-.598**	-.557**	-.459**	-.523**	-.344**	-.514**	-.514**	-.527**	-.267**

*Note.* SSCS-L: State Self-Compassion Scale-Long form; SSCS-S: State Self-Compassion Scale-Short form; Note that Self-judgment, Isolation, and Overidentification items are reverse coded to indicate their relative absence.; M: mean; SD: standard deviation; \*\* $p < .01$ .

**Table 7***Zero-order correlations between the pre- (below the diagonal) and post-scores (above the diagonal) in Study 2 (N = 411)*

	1	2	3	4	5	6	7	8	9	10
1. Total SSCS-L	—	.948**	.851**	.789**	.653**	.803**	.847**	.745**	.400**	-.589**
2. Total SSCS-S	.922**	—	.795**	.730**	.648**	.770**	.797**	.702**	.397**	-.577**
3. Self-kindness	.792**	.735**	—	.623**	.554**	.584**	.768**	.483**	.440**	-.460**
4. Self-judgment	.725**	.654**	.527**	—	.281**	.540**	.563**	.676**	.237**	-.505**
5. Common Humanity	.549**	.551**	.395**	.115*	—	.454**	.548**	.234**	.359**	-.316**
6. Isolation	.749**	.686**	.506**	.436**	.273**	—	.593**	.553**	.312**	-.556**
7. Mindfulness	.809**	.743**	.615**	.472**	.470**	.503**	—	.535**	.343**	-.468**
8. Overidentification	.751**	.665**	.452**	.595**	.182**	.499**	.542**	—	.189**	-.443**
9. Positive affect	.339**	.307**	.391**	.144**	.260**	.284**	.275**	.138**	—	-.069
10. Negative affect	-.467**	-.441**	-.340**	-.371**	-.193**	-.433**	-.335**	-.356**	-.031	—

*Note.* SSCS-L: State Self-Compassion Scale-Long form; SSCS-S: State Self-Compassion Scale-Short form. Note that Self-judgment, Isolation, and Overidentification items are reverse coded to indicate their relative absence; \* $p < .05$ ; \*\* $p < .01$ .

**Table 8***Pre- and post- means and standard deviations separated by condition for Study 2 (N = 411) and Study 3 (N = 139)*

		Experimental condition			Control condition		
		Pre	Post	% change	Pre	Post	% change
Study 2	1. Total SSCS-L	3.07 (0.65)	3.58 (0.70)	+10.2%	3.04 (0.68)	3.09 (0.75)	+1%
	2. Total SSCS-S	3.00 (0.74)	3.57 (0.74)	+11.4%	2.95 (0.76)	3.05 (0.81)	+2%
	3. Self-kindness	2.94 (0.87)	3.46 (0.91)	+10.4%	2.96 (0.87)	2.99 (0.93)	+0.6%
	4. Self-judgment	2.86 (0.95)	3.38 (0.95)	+10.4%	2.81 (0.95)	2.92 (1.04)	+2.2%
	5. Common Humanity	3.36 (0.89)	3.94 (0.84)	+11.6%	3.29 (0.93)	3.24 (1.00)	-1%
	6. Isolation	3.19 (0.99)	3.76 (0.95)	+11.4%	3.18 (1.03)	3.29 (1.12)	+2.2%
	7. Mindfulness	3.06 (0.76)	3.52 (0.80)	+9.2%	3.05 (0.83)	3.09 (0.93)	+0.8%
	8. Overidentification	3.00 (0.92)	3.42 (0.91)	+8.4%	2.96 (0.93)	3.02 (0.99)	+1.2%
	9. Positive affect	2.42 (0.87)	2.79 (0.95)	+7.4%	2.37 (0.88)	2.22 (0.90)	-3%
	10. Negative affect	2.60 (0.86)	1.98 (0.80)	-12.4%	2.61 (0.88)	2.41 (0.94)	-4%
Study 3	1. Total SSCS-S	2.98 (0.80)	3.75 (0.66)	+15.4%	2.91 (0.79)	3.01 (0.80)	+2%
	2. Positive affect	2.54 (0.84)	2.89 (0.91)	+7%	2.42 (0.80)	2.34 (0.92)	-1.6%
	3. Negative affect	2.67 (1.00)	1.96 (0.77)	-14.2%	2.60 (0.79)	2.57 (0.93)	-0.6%

*Note.* SSCS-L: State Self-Compassion Scale Long form; SSCS-S: State Self-Compassion Scale Short form. Note that Self-judgment, Isolation, and Overidentification items are reverse coded to indicate their relative absence.

**Table 9***Statistics for the repeated-measures analyses of variance*

	<u>Within SCMI condition</u>				<u>Within control condition</u>				<u>Between SCMI and control</u>			
	<i>F</i>	dfs	<i>p</i>	Partial eta <sup>2</sup>	<i>F</i>	dfs	<i>p</i>	Partial eta <sup>2</sup>	<i>F</i>	dfs	<i>p</i>	Partial eta <sup>2</sup>
<i>Study 2 (N = 411)</i>												
Total SSCS-L	172.92	1, 231	< .001	.428	1.73	1, 178	.190	.010	66.43	1, 409	< .001	.140
Total SSCS-S	153.16	1, 231	< .001	.399	4.07	1, 178	.045	.022	48.40	1, 409	< .001	.106
Self-kindness	98.35	1, 231	< .001	.299	.37	1, 178	.542	.002	41.89	1, 409	< .001	.093
Self-judgment	80.28	1, 231	< .001	.258	3.58	1, 178	.060	.020	22.46	1, 409	< .001	.052
Com. Humanity	115.38	1, 231	< .001	.333	.72	1, 178	.398	.004	61.16	1, 409	< .001	.130
Isolation	112.75	1, 231	< .001	.328	3.07	1, 178	.082	.017	31.70	1, 409	< .001	.072
Mindfulness	91.53	1, 231	< .001	.284	.61	1, 178	.436	.003	32.83	1, 409	< .001	.074
Overidentification	57.60	1, 231	< .001	.200	1.01	1, 178	.315	.006	17.83	1, 409	< .001	.042
Positive affect	73.47	1, 231	< .001	.241	10.65	1, 177	.001	.057	66.70	1, 408	< .001	.141
Negative affect	189.53	1, 231	< .001	.451	15.01	1, 178	< .001	.078	37.44	1, 409	< .001	.084
<i>Study 3 (N = 139)</i>												
Total SSCS-S	112.78	1, 78	< .001	.591	1.47	1, 59	.230	.024	36.793	1, 137	< .001	.212
Positive affect	36.47	1, 78	< .001	.319	.65	1, 59	.422	.011	15.834	1, 137	< .001	.104
Negative affect	97.51	1, 78	< .001	.556	.09	1, 59	.772	.001	29.236	1, 137	< .001	.176

*Note.* SCMI: Self-Compassion Mindstate Induction; *F*: *F*-value provided for ANOVA; dfs: degrees of freedom; *p*: exact statistical significance associated with *F*-value; SSCS-L: State Self-Compassion Scale Long form; SSCS-S: State Self-Compassion Scale short form.

**Online supplementary materials for:**

The development and validation of the State Self-compassion Scale (long and short form)

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**Table S1**

Standardized parameter estimates for the 26-item six-factor ESEM model of the SSCS-L in Study 1 ( $N = 588$ )

	SK ( $\lambda$ )	SJ ( $\lambda$ )	CH ( $\lambda$ )	IS ( $\lambda$ )	MI ( $\lambda$ )	OI ( $\lambda$ )	MCL
SK05	<b>.605**</b>	.123**	.090**	.255**	-.010	-.021	.100
SK12	<b>.631**</b>	.251**	.060*	.013	.077*	-.017	.084
SK19	<b>.684**</b>	.113**	-.020	.129**	.178**	-.028	.094
SK23	<b>.703**</b>	.094**	.064*	.012	.175**	.018	.073
SK26	<b>.554**</b>	.208**	.149**	-.015	.149**	.071**	.118
SJ01	.091	<b>.398**</b>	.000	.252**	-.046	.127**	.103
SJ08	.106**	<b>.666**</b>	-.002	-.044	-.003	.165**	.064
SJ11	.122**	<b>.668**</b>	.163**	.048	-.103**	.133**	.114
SJ16	.162**	<b>.436**</b>	.001	.238**	.155**	.116**	.134
SJ21	.265**	<b>.592**</b>	.006	.067*	-.056	.135**	.106
CH03	-.030	-.035	<b>.767**</b>	.171**	-.008	-.002	.049
CH07	-.082*	.179**	<b>.849**</b>	.002	.076*	-.124**	.093
CH10	.014	.069	<b>.822**</b>	-.048	.107**	-.085**	.065
CH15	.125**	-.181**	<b>.676**</b>	.135**	.077*	.128**	.129
IS04	.069	.054	.134**	<b>.770**</b>	-.173**	.122**	.110
IS13	.101*	.322**	.087*	<b>.305**</b>	.265**	-.103*	.176
IS18	-.013	.167**	.142**	<b>.459**</b>	.266**	-.035	.125
IS25	.142**	.028	.075*	<b>.689**</b>	-.114**	.166**	.105
MI09	.146**	.037	.159**	-.003	<b>.274**</b>	.400**	.149
MI14	.205**	-.123**	.350**	-.007	<b>.394**</b>	.229**	.183
MI17	.204**	.066	.280**	-.011	<b>.326**</b>	.251**	.162
MI22	.608**	-.154**	.061	.061	<b>.202**</b>	.050	.187
OI02	-.001	.268**	-.136**	.206**	.307**	<b>.309**</b>	.184
OI06	-.111**	.120*	-.079*	.441**	.331**	<b>.286**</b>	.216
OI20	-.081*	.202**	.060	.066	.110*	<b>.610**</b>	.104
OI24	-.022	.140**	-.025	-.129**	.007	<b>.716**</b>	.065

Note. ESEM: exploratory structural equation modeling; SK: Self-Kindness; SJ: Self-Judgement (reverse-coded); CH: Common Humanity; IS: Isolation (reverse-coded); MI: Mindfulness; OI: Overidentification (reverse-coded); MCL: mean cross-loadings for each item.; Target loadings are in bold; Red indicates the final items that have been selected.; \* $p < .05$ ; \*\* $p < .01$ .



**Table S2***Standardized factor loadings for the correlated six-factor and bifactor models of the State Self-Compassion Scale (SSCS-L) at pretest in Study 2 (N = 411)*

	CFA							Bifactor CFA								
	SF	ESEM						SC	SF	Bifactor ESEM						
	SK	SJ	CH	IS	MI	OI	SC	SF	SC	SK	SJ	CH	IS	MI	OI	
SK1	.735**	<b>.683**</b>	.043	.015	.033	.028	-.006	.616**	.406**	<b>.602**</b>	<b>.362**</b>	.088	.055	.047	.128*	-.132*
SK2	.854**	<b>.804**</b>	.105*	.004	.041	.029	-.069	.717**	.506**	<b>.702**</b>	<b>.678**</b>	-.011	.037	-.009	-.073	.056
SK3	.848**	<b>.638**</b>	.077	.066	.085	.153*	-.111*	.723**	.397**	<b>.724**</b>	<b>.325**</b>	.043	.100**	.031	.037	-.189**
SJ1	.613**	.047	<b>.645**</b>	-.013	-.079	-.059	.300**	.452**	.565**	<b>.440**</b>	-.009	<b>.656**</b>	-.147**	-.037	.083	.176**
SJ2	.776**	.226**	<b>.630**</b>	.014	.017	.018	.040	.621**	.501**	<b>.608**</b>	.146**	<b>.396**</b>	-.114*	-.020	-.154**	.099*
SJ3	.734**	.101	<b>.397**</b>	.015	.185**	.140	.030	.618**	.252**	<b>.650**</b>	-.053	<b>.253**</b>	-.115*	.054	-.082	-.090
CH1	.610**	.066	-.239**	<b>.532**</b>	.011	.079	.101	.303**	.511**	<b>.299**</b>	.041	-.188**	<b>.514**</b>	.019	.203**	-.032
CH2	.798**	-.032	.086	<b>.799**</b>	-.019	-.020	.014	.417**	.663**	<b>.414**</b>	.030	-.044	<b>.633**</b>	-.040	.008	-.023
CH3	.694**	-.037	.079	<b>.763**</b>	.031	-.007	-.154**	.351**	.629**	<b>.348**</b>	.058	-.071	<b>.650**</b>	-.006	-.097*	-.082
IS1	.695**	.047	.013	.030	<b>.765**</b>	-.073	-.051	.542**	.545**	<b>.539**</b>	.031	.023	-.028	<b>.512**</b>	-.060	-.030
IS2	.592**	.014	-.105	.150**	<b>.432**</b>	.013	.218**	.488**	.231**	<b>.450**</b>	-.016	-.005	.121*	<b>.325**</b>	.181**	.087
IS3	.795**	.046	-.017	-.063	<b>.739**</b>	.072	.044	.629**	.459**	<b>.633**</b>	.023	-.062	-.094*	<b>.469**</b>	-.091	.104*
MI1	.724**	.231**	-.119*	.011	.031	<b>.379**</b>	.413**	.681**	.220*	<b>.683**</b>	-.012	-.052	.038	-.013	<b>.401**</b>	.107*
MI2	.713**	.250**	-.017	.189**	-.035	<b>.310*</b>	.229**	.660**	.348*	<b>.647**</b>	.070	-.056	.190**	-.065	<b>.176*</b>	.067
MI3	.698**	-.054	.012	.012	.009	<b>.974**</b>	-.163**	.657**	.196*	<b>.717**</b>	-.081*	-.156**	.133**	-.093	<b>-.021</b>	-.083
OI1	.769**	.078	.347**	.022	.209**	.055	<b>.283**</b>	.663**	.316**	<b>.640**</b>	.005	.210**	-.106*	.088	-.024	<b>.221**</b>
OI2	.738**	-.097	.186**	-.006	.244**	.137**	<b>.565**</b>	.632**	.418**	<b>.596**</b>	-.076*	.147**	-.081*	.156**	.170**	<b>.534**</b>
OI3	.502**	-.096	.256**	.024	-.023	.279*	<b>.237*</b>	.418**	.347**	<b>.474**</b>	-.118*	.026	-.064	-.148*	-.105	<b>.275**</b>

*Note.* CFA: confirmatory factor analysis; ESEM: exploratory structural equation modeling; SF: Loading on respective specific factor when cross-loadings constrained to zero; SK: Self-Kindness; SJ: Self-Judgement (reverse-coded); CH: Common Humanity; IS: Isolation (reverse-coded); MI: Mindfulness; OI: Overidentification (reverse-coded); SC: Self-Compassion General factor; Target loadings in bold.; \* $p < .05$ ; \*\* $p < .01$ .

**Table S3**

Standardized factor loadings for the correlated two-bifactor CFA and correlated two-bifactor ESEM solutions of the State Self-Compassion Scale (SSCS-L) at pretest in Study 2 ( $N = 411$ )

	Correlated Two-bifactor CFA			Correlated Two-bifactor ESEM							
	CS	RUS	SF	CS	RUS	SK	SJ	CH	IS	MI	OI
SK1	.649**		.452**	.415*		<b>.455*</b>	.234**	.256*	.165	.112	.124*
SK2	.754**		.351**	.519		<b>.642*</b>	.237	.268*	-.096	.085	.195**
SK3	.758**		.328**	.407*		<b>.554**</b>	.232**	.252**	.136	.274*	.096*
SJ1		.485**	.433**		.174	.146	<b>.534**</b>	-.090	.164	.016	.386**
SJ2		.658**	.565**		.340	.269	<b>.842*</b>	.059	-.202	.134	.127
SJ3		.653**	.185**		.235	.377	<b>.386</b>	-.098	.306	.324	.174*
CH1	.321**		.501**	-.016		.106	-.033	<b>.632**</b>	.069	.225	.009
CH2	.436**		.650**	-.267		.466**	-.020	<b>.554**</b>	.098	.246	.124
CH3	.369**		.619**	-.153		.369**	.000	<b>.524**</b>	-.015	.263**	-.039
IS1		.569**	.533**		.603**	.259*	.069	.116	<b>.140</b>	.235	.080
IS2		.510**	.187**		.375**	.120	.031	.277*	<b>.204</b>	.200	.218*
IS3		.660**	.403**		.675**	.290*	.020	.068	<b>.021</b>	.326**	.211
MI1	.710**		-.085	.331*		.090	.191	.326	.247	<b>.374</b>	.420**
MI2	.691**		-.420	.223		.235*	.197**	.389**	.044	<b>.354**</b>	.291**
MI3	.684**		-.069	.185		.275*	.164**	.211	-.011	<b>.679**</b>	.131*
OI1		.702**	.233**		.283	.360**	.264**	-.035	.153	.183	<b>.492**</b>
OI2		.669**	.347**		.376*	.048	.236	.121	.037	.197	<b>.676**</b>
OI3		.445**	.321**		.049	.172*	.186*	-.041	-.080	.295**	<b>.419**</b>

Note. CFA: confirmatory factor analysis; ESEM: exploratory structural equation modeling; SF: Loading on respective specific factor when cross-loadings constrained to zero; SK: Self-Kindness; SJ: Self-Judgement (reverse-coded); CH: Common Humanity; IS: Isolation (reverse-coded); MI: Mindfulness; OI: Overidentification (reverse-coded); SC: Self-Compassion General factor; Target loadings in bold.; \* $p < .05$ ; \*\* $p < .01$ .

**Table S4**

Standardized factor loadings for the correlated six-factor and bifactor models of the State Self-Compassion Scale (SSCS-L) at posttest in Study 2 (N = 411)

	CFA							ESEM							Bifactor CFA		Bifactor ESEM					
	SF	SK	SJ	CH	IS	MI	OI	SC	SF	SC	SK	SJ	CH	IS	MI	OI						
SK1	.827**	<b>.535**</b>	.063	.164**	-.002	.169**	.058	.765**	.339**	<b>.737**</b>	<b>.353**</b>	-.066*	.155**	-.021	.091*	-.013						
SK2	.860**	<b>.741**</b>	.109*	-.036	.061*	.148*	-.043	.798**	.365**	<b>.785**</b>	<b>.412**</b>	.010	.014	-.008	.102**	-.123**						
SK3	.879**	<b>.353**</b>	.261**	.146**	.138**	.254**	-.143**	.826**	.232**	<b>.807**</b>	<b>.198**</b>	.048	.112**	.023	.121**	-.167**						
SJ1	.738**	.137**	<b>.725**</b>	.005	-.150**	-.053	.233**	.598**	.491**	<b>.753**</b>	-.150**	<b>-.002</b>	-.267**	-.267**	-.306**	.126*						
SJ2	.851**	.090	<b>.675**</b>	.030	.059	.042	.096*	.708**	.548**	<b>.774**</b>	-.017	<b>.112</b>	-.155**	-.056	-.120**	.109**						
SJ3	.807**	.124*	<b>.455**</b>	.065	.228**	-.048	.125*	.695**	.282**	<b>.710**</b>	-.012	<b>.678**</b>	-.059	.058	-.045	.057						
CH1	.839**	.122**	-.131**	<b>.825**</b>	-.014	-.076	.159**	.547**	.614**	<b>.490**</b>	.140**	-.025	<b>.681**</b>	.060*	.045	.081*						
CH2	.876**	-.083	-.003	<b>.879**</b>	-.041	.133**	-.023	.558**	.701**	<b>.516**</b>	-.005	.005	<b>.705**</b>	.011	.146**	-.069*						
CH3	.829**	-.011	.142**	<b>.833**</b>	.068	-.043	-.199**	.531**	.630**	<b>.529**</b>	-.014	-.068*	<b>.641**</b>	.050	-.024	-.226**						
IS1	.833**	.043	.007	-.011	<b>.814**</b>	.004	.002	.668**	.553**	<b>.656**</b>	.030	.019	.036	<b>.499**</b>	-.007	.030						
IS2	.694**	-.023	-.129*	.166**	<b>.500**</b>	-.006	.321**	.583**	.280**	<b>.518**</b>	-.012	.084	.159**	<b>.363**</b>	.062	.254**						
IS3	.891**	.013	.031	-.033	<b>.907**</b>	.051	-.068	.719**	.523**	<b>.724**</b>	-.028	-.011	.010	<b>.594**</b>	-.005	-.063						
MI1	.828**	.260**	-.054	.050	.033	<b>.528**</b>	.161**	.770**	.317**	<b>.736**</b>	.128**	-.070	.093**	.003	<b>.315**</b>	.044						
MI2	.809**	.220**	-.004	.036	.108*	<b>.502**</b>	.073	.757**	.246**	<b>.711**</b>	.131**	.019	.085*	.041	<b>.324**</b>	.005						
MI3	.851**	.058	-.013	.100**	.048	<b>.736**</b>	.054	.790**	.347**	<b>.755**</b>	.036	-.064	.142**	.005	<b>.433**</b>	-.007						
OI1	.845**	.078	.268**	.032	.181**	-.049	<b>.517**</b>	.697**	.380**	<b>.694**</b>	-.066	.097	-.104**	.092**	-.077*	<b>.378**</b>						
OI2	.810**	.032	.145**	-.049	.114**	.168**	<b>.575**</b>	.662**	.540**	<b>.657**</b>	-.006	.022	-.125**	.071**	.037	<b>.509**</b>						
OI3	.511**	-.278**	.232**	-.012	.022	.302**	<b>.349**</b>	.393**	.403**	<b>.427**</b>	-.191**	.008	-.111*	-.005	.073	<b>.316**</b>						

Note. CFA: confirmatory factor analysis; ESEM: exploratory structural equation modeling; SF: Loading on respective specific factor when cross-loadings constrained to zero; SK: Self-Kindness; SJ: Self-Judgement (reverse-coded); CH: Common Humanity; IS: Isolation (reverse-coded); MI: Mindfulness; OI: Overidentification (reverse-coded); SC: Self-Compassion General factor; Target loadings in bold.; \* $p < .05$ ; \*\* $p < .01$ .

**Table S5**

Standardized factor loadings for the correlated two-bifactor CFA and correlated two-bifactor ESEM solutions of the State Self-Compassion Scale (SSCS-L) at posttest in Study 2 ( $N = 411$ )

	Correlated Two-bifactor CFA			Correlated Two-bifactor ESEM							
	CS	RUS	SF	CS	RUS	SK	SJ	CH	IS	MI	OI
SK1	.799**		-.244*	.012		<b>.697**</b>	.113	.311**	.170**	.279	.186*
SK2	.832**		-.289*	-.109		<b>.748**</b>	.218	.214**	.240*	.237*	.091
SK3	.863**		-.090	-.123		<b>.667**</b>	.261	.341**	.282*	.105	.148**
SJ1		.646**	.474**		.563**	.421**	<b>.060</b>	-.092	.631**	.038	.174
SJ2		.760**	.425**		.259*	.459**	<b>.274</b>	.040	.455**	.134	.272
SJ3		.745**	.171**		.251	.291	<b>.802**</b>	.132	.351	.108	.173
CH1	.565**		.597**	.127		.239**	.045	<b>.742**</b>	.145*	.279**	.078
CH2	.576**		.686**	-.014		.240**	.077*	<b>.824**</b>	.136*	.135	.065*
CH3	.549**		.614**	.054		.301**	.025	<b>.770**</b>	.247**	-.011	-.038
IS1		.713**	.502**		-.281*	.300**	.269	.209**	<b>.545**</b>	.154	.238**
IS2		.620**	.201**		-.145	.082	.243	.267**	<b>.430*</b>	.327**	.256*
IS3		.768**	.442**		-.414*	.357**	.286	.220**	<b>.645**</b>	.013	.293**
MI1	.797**		-.238**	-.328*		.492**	.108	.310**	.298**	<b>.318*</b>	.212*
MI2	.782**		-.155*	-.306*		.480**	.209	.314**	.244	<b>.249</b>	.226*
MI3	.817**		-.284**	-.394*		.479**	.138	.405**	.250*	<b>.242</b>	.277**
OI1		.741**	.304**		.186	.217*	.246	.037	.527**	.344*	<b>.361</b>
OI2		.704**	.480**		.154	.240**	.175	.001	.423**	.439*	<b>.455</b>
OI3		.422**	.376**		.210	.108*	.071	.071	.088	-.119	<b>.936**</b>

Note. CFA: confirmatory factor analysis; ESEM: exploratory structural equation modeling; SF: Loading on respective specific factor when cross-loadings constrained to zero; SK: Self-Kindness; SJ: Self-Judgement (reverse-coded); CH: Common Humanity; IS: Isolation (reverse-coded); MI: Mindfulness; OI: Overidentification (reverse-coded); SC: Self-Compassion General factor; Target loadings in bold.; \* $p < .05$ ; \*\* $p < .01$ .

**Appendix A**  
**State Self-Compassion Scale - Long form**

HOW I FEEL TOWARDS MYSELF RIGHT NOW

Think about a situation you are experiencing right now that is painful or difficult. It could be some challenge in your life, or perhaps you are feeling inadequate in some way. Please indicate how well each statement applies to how you are feeling toward yourself right now as you think about this situation, using the following scale:

Not at all true for me					Very true for me
1	2	3	4		5

1. I'm giving myself the caring and tenderness I need.
2. I'm obsessing and fixating on everything that's wrong.
3. I see my difficulties as part of life that everyone goes through.
4. I'm being pretty tough on myself.
5. I'm keeping my emotions in balanced perspective.
6. I feel separate and cut off from the rest of the world.
7. I'm being kind to myself.
8. I'm getting carried away with my feelings.
9. I'm remembering that there are lots of others in the world feeling like I am.
10. I'm being a bit cold-hearted towards myself.
11. I'm taking a balanced view of this painful situation.
12. I feel like I'm struggling more than others right now.
13. I'm being supportive toward myself.
14. I'm blowing this painful incident out of proportion.
15. I'm remembering that difficult feelings are shared by most people.
16. I feel intolerant and impatient toward myself.
17. I'm keeping things in perspective.
18. I'm feeling all alone right now.

**Kindness: 1, 7, 13**

**Self-judgment: 4, 10, 16**

**Common humanity: 3, 9, 15**

**Isolation: 6, 12, 18**

**Mindfulness: 5, 11, 17**

**Over-identification: 2, 8, 14**

**Self-judgment, Isolation, and Over-identification items are reverse-scored. To calculate a total state self-compassion score, take a mean of all 18 items after appropriate reverse-coding.**

**Appendix B**  
**State Self-Compassion Scale - Short form**

HOW I FEEL TOWARDS MYSELF RIGHT NOW

Think about a situation you are experiencing right now that is painful or difficult. It could be some challenge in your life, or perhaps you are feeling inadequate in some way. Please indicate how well each statement applies to how you are feeling toward yourself right now as you think about this situation, using the following scale:

Not at all true for me					Very true for me
1	2	3	4	5	

1. I'm giving myself the caring and tenderness I need.
2. I'm obsessing and fixating on everything that's wrong.
3. I'm remembering that there are lots of others in the world feeling like I am.
4. I feel intolerant and impatient toward myself.
5. I'm keeping things in perspective.
6. I feel like I'm struggling more than others right now.

**Reverse code items 2, 4 and 6 and then take a grand mean to calculate a total state self-compassion score.**

## Appendix C

### Self-Compassionate Mindstate Induction

**[Bolded text in brackets is information for researchers only. Note that the examples of self-compassionate writing given below should be changed so that they are appropriate for the cultural context of participants and the purposes of the study.]**

Please think about a particular situation you are experiencing right now that is painful or difficult. It could be some struggle in your life, or perhaps you are feeling inadequate in some way. Please don't think of a situation in which you are upset with someone else, but instead think of a situation where you are feeling badly about yourself or else you are going through a hard time. Decide on a single situation that you will focus on throughout this study.

**[State measures inserted here, answered in reference to the painful or difficult situation.]**

We would now like you to take part in a brief exercise, to see if it is helpful in dealing with this painful or difficult situation.

#### **[1. Mindfulness writing prompt]**

Please complete this brief writing exercise and follow the instructions as closely as possible.

In the space below, please write about what thoughts and emotions are coming up for you right now regarding this difficult situation.

Note any uncomfortable emotions you may have, such as feeling stressed, ashamed, sad, anxious, and so on.

As you write and notice your feelings, see if you can validate your experience with an attitude of acceptance and non-judgment. Try not to downplay your feelings, but at the same time please try not to exaggerate them either.

(For example, *"I feel frustrated about the fact that my mom doesn't understand why I don't want to come home for Thanksgiving. It's only natural that I want to spend time with my friends. I also feel guilty though because I don't want to hurt her feelings. This is really hard for me right now..."*)

\*Remember-- your responses are completely anonymous and your writing is confidential. Don't worry about spelling, sentence structure, or grammar.

**[SPACE FOR WRITING]**

#### **[2. Common humanity writing prompt]**

In the space below, please write about how other people may share similar feelings when encountering situations like this.

Consider that experiencing difficult situations is a part of being human, and that you are not alone. Although the way people struggle is different and the amount of challenge varies, all people face difficulties in life. What you are experiencing is not abnormal, but is a part of life.

(For example, “*I am not the only one who struggles with these types of holiday situations. Part of being human is learning how to get through times like these. Most people have a difficult transition when they go away to college. It's not just me...*”)

\*Remember-- your responses are completely anonymous and your writing is confidential. Don't worry about spelling, sentence structure, or grammar.

**[SPACE FOR WRITING]**

### **[3. Self-kindness writing prompt]**

In the space below, please write any words of support, encouragement and kindness to yourself that would be helpful to hear right now.

If you are not sure what to say, imagine what you would say to a close friend who was struggling with a similar difficult situation. What words would you use to convey compassion, support, and non-judgmental understanding? Now see if you can use this as inspiration for what to say to yourself.

(For example, “*You're doing the best you can. I'm so sorry you're struggling with this. It's going to be okay. I will help you and support you to get through this...*”)

\*Remember-- your responses are completely anonymous and your writing is confidential. Don't worry about spelling, sentence structure, or grammar.

**[SPACE FOR WRITING]**

Please take some time to read what you wrote to yourself and see how it feels to hear these words of kindness and concern directed towards you.

Notice if anything is particularly comforting or helpful.

Take a few slow, deep breaths as you read your own words. Let yourself receive this support.

**[Attention check and post-test state measures completed in reference to the difficult situation inserted here.]**

## **Appendix D**

### **Control Condition**



**[Bolded text in brackets is information for researchers only. Note that the examples of self-compassionate writing given below should be changed so that they are appropriate for the cultural context of participants and the purposes of the study.]**

Please think about a particular situation you are experiencing right now that is painful or difficult. It could be some struggle in your life, or perhaps you are feeling inadequate in some way. Please don't think of a situation in which you are upset with someone else, but instead think of a situation where you are feeling badly about yourself or else you are going through a hard time. Decide on a single situation that you will focus on throughout this study.

**[State measures inserted here, answered in reference to the painful or difficult situation.]**

We would now like you to take part in a brief exercise, to see if it is helpful in dealing with this painful or difficult situation.

**[1. Description writing prompt]**

Please complete this brief writing exercise and follow the instructions as closely as possible.

In the space below, please write about what exactly is occurring in this difficult situation. Try to be as descriptive as possible.

(For example, *"Our family is having an argument about whether or not I should go home for Thanksgiving break. I want to stay in Austin but my mother feels upset because..."*)

\*Remember-- your responses are completely anonymous and your writing is confidential. Don't worry about spelling, sentence structure, or grammar.

**[SPACE FOR WRITING]**

**[2. People involved writing prompt]**

In the space below, please write about who is involved in the situation if it involves more than just you. Please describe the people involved with as much detail as possible, even if you are the only one involved (in this case describe yourself).

(For example, *"My mother, sister, and brother are taking different sides in the dispute over Thanksgiving. My brother supports me, but my sister doesn't. My sister is two years older and my brother one year younger..."*)

\*Remember-- your responses are completely anonymous and your writing is confidential. Don't worry about spelling, sentence structure, or grammar.

**[SPACE FOR WRITING]**

**[3. Words spoken writing prompt]**

In the space below, please write any words that have been spoken in the situation, either what you have said to yourself, what other people have said to you, or what you have said to other people. Please use as much detail as possible.

(For example, "*I told my mom that I really didn't want to come back for Thanksgiving and that I wanted to rest and hang out with my friends. She told me that I should think of her feelings more...*")

\*Remember-- your responses are completely anonymous and your writing is confidential. Don't worry about spelling, sentence structure, or grammar.

**[SPACE FOR WRITING]**

Please take some time to read what you wrote see if anything particularly stands out for you.

**[Attention check and post-test state measures completed in reference to the difficult situation inserted here.]**