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Development and validation of the Self-Compassion Scale for Youth

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Abstract

We present a series of studies on the development and validation of the Self-Compassion Scale - Youth version (SCS-Y), which is intended for use with early adolescents in middle school. Study 1 (N = 279, M_{age} = 12.17) describes the selection of 17 items out of a pool of 36 potential items, with three items each representing the subscales of self-kindness, mindfulness, common humanity, self-judgment, isolation, and two items representing over-identification. Using state-of-the-art psychometric analyses ideal for examining multidimensional constructs like self-compassion - bifactor exploratory structural equation modeling (bifactor-ESEM) - findings supported the use of a general self-compassion score and six subscale scores. Study 2 cross-validated the factor structure of the SCS-Y with a second sample of youths (N = 402, M_{age} = 12.43). Study 3 found support for the test-retest reliability of the SCS-Y (N = 102, M_{age} = 12.52). Study 4 (N = 212, M_{age} = 12.18) established construct validity for the SCS-Y by demonstrating that SCS-Y scores were significantly associated with mindfulness, happiness, life-satisfaction, depression, resilience, and achievement goal orientation in expected directions. Overall, findings suggest that the SCS-Y is a reliable and valid measure of self-compassion for use with youths.

Development and validation of the Self-Compassion Scale for Youth

The construct of self-compassion was first operationally defined and introduced into the psychological literature a decade and a half ago (Neff, 2003b). A self-compassionate mindset is thought to represent the balance between increased compassionate and reduced uncompassionate self-responding when faced with personal inadequacy or life difficulties: increased self-kindness, common humanity and mindfulness and reduced self-judgment, isolation, and over-identification (Neff, 2016). Self-kindness entails being warm, supportive, and understanding towards oneself. Common humanity involves recognizing the shared human experience of imperfection, understanding that all humans fail and make mistakes. Mindfulness involves being aware of one's present moment experience of suffering with equanimity and balance. Self-judgment entails harshly criticizing oneself for one's failings. Isolation involves feeling alone in the experience of suffering. Over-identification occurs when one is fused with one's suffering to the point that perspective is lost. The various components of self-compassion are conceptually distinct and tap into different 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 system (Neff, 2016).

Most of the research on self-compassion has been conducted with the Self-Compassion Scale (SCS; Neff, 2003a), which is designed to measure Neff's (2003b) conceptualization of self-compassion and was developed with college undergraduates. The SCS contains 26 items written in a face-valid manner that assess the cognitive 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 or combined to create a total score.

There has been controversy over whether or not self-compassion should be measured as a global construct, or if the positive and negative subscales representing compassionate versus uncompassionate self-responding should be measured as two separate factors (Cleare, Gumley, Cleare & O'Connor, 2018; Costa et al., 2015; Muris & Petrocchi, 2017). Psychometric analyses have provided mixed results, in part because many studies have used approaches that were inconsistent with analyzing self-compassion as a multidimensional system - for instance, use of an *uncorrelated* two-bifactor model (Brenner, Heath, Vogel & Credé, 2017; Coroiu et al., 2018) or use of item response theory, which assumes underlying unidimensionality (Halamová et al., in press).

To address this controversy, Neff et al. (2019) compared one-factor, correlated two-factor, correlated six-factor, one-bifactor and correlated two-bifactor models using confirmatory factor analysis (CFA) and exploratory structural equation modeling (ESEM) in 20 international samples. The bifactor-ESEM analyses are particularly appropriate for modeling multidimensional constructs thought to operate as a system (see below). First-order analyses using both CFA and ESEM supported the use of six but not one or two first-order factors. Second-order analyses using CFA did not support either a single or two-bifactor model. ESEM analyses found excellent fit for both a single and correlated two-bifactor model, but factor loadings indicated that separate positive and negative factors were poorly specified in a two-bifactor model. In contrast, factor loadings on a single self-compassion dimension were strong, and 95% of the reliable variance in item responding could be explained by a general self-compassion factor. Results support the use of six subscale scores or a total score for the SCS, but not separate positive and negative scores.

These findings are buttressed by research on how the components of self-compassion are configured within individuals. Phillips (2019) used latent profile analyses in two samples

to examine profiles or patterns of scores on the various SCS subscales and found only three patterns - high in the three positive and low in the three negative subscales, low in the three positive and high in the three negative subscales, or moderate in both. There were no individuals who were high or low in both compassionate and uncompassionate responding, suggesting they form a balanced system and are not independent.

A large body of research indicates that self-compassion is linked to well-being (Zessin, Dickhäuser & Garbade, 2015). For example, higher scores on the SCS have been associated with greater levels of happiness, optimism, life satisfaction, and achievement goals (Hollis-Walker & Colosimo, 2011; Neff, Hsieh & Dejitthirat, 2005; Neff, Rude, & Kirkpatrick, 2007); healthier physiological responses to stress (Breines et al., 2014); and lower levels of depression, anxiety, and stress (MacBeth & Gumley, 2012), with medium to large effect sizes. While all six components of self-compassion contribute to well-being, reductions in psychopathology appear to be largely driven by the lessened negative self-responding entailed by a self-compassionate mindset (Neff et al., 2018).

Research indicates that self-compassion is a skill that can be trained. A recent meta-analysis of 27 randomized-controlled trials of self-compassion interventions or mood inductions (Ferrari et al., 2019) found that all six subscales of the SCS changed significantly as a result of training, with the largest effect size shown for reduction in over-identification. Self-compassion training alters the balance between compassionate and uncompassionate self-responding by helping individuals to be kinder, more connected and mindful in response to suffering, and reducing their tendency toward self-judgment, isolation, and over-identification. The meta-analysis also found moderate to strong effect sizes in terms of reductions in psychopathology.

Most of the research on self-compassion has been conducted with adults, although there is also evidence that self-compassion has benefits for adolescents. The first study on

self-compassion in adolescents was published almost ten years ago (Neff & McGehee, 2010), and since then, the number of empirical studies has increased exponentially. Findings mirror that of adult studies, indicating that self-compassion is linked to wellbeing (Marsh, Chan, & MacBeth, 2018). For example, a meta-analysis found a strong negative association with depression, anxiety and stress (Marsh et al., 2018) among adolescents. There is a strong inverse correlation with negative psychological states such as social anxiety (Gill, Watson, Williams, & Chan, 2018) and body self-consciousness (Mosewich, Kowalski, Sabiston, Sedgwick, & Tracy, 2011). Research indicates that self-compassion acts as a buffer for teens with trauma (Zeller, Yuval, Nitzan-Assayag, & Bernstein, 2015), non-suicidal self-injury (Jiang et al., 2016), and maladaptive perfectionism (Ferrari, Yap, Scott, Einstein, & Ciarrochi, 2018). Self-compassion is also related to positive mental health in adolescents in the domains of interpersonal relationships, self-efficacy, executive functioning (Bluth, Park & Lathren, in press), life satisfaction (Bluth & Blanton, 2014), resilience, curiosity and exploration (Bluth, Mullarkey, & Lathren, 2018), psychological wellbeing (Sun, Chan, & Chan, 2016), and social connectedness (Neff & McGehee, 2010).

The vast majority of research on self-compassion in adolescence has been conducted with older adolescents. However, self-compassion is also likely to play an important role in the well-being of younger adolescents given the importance of identity formation and self-concept development during this period (Erikson, 1968; Harter, 1999). One reason for the relative lack of research with younger adolescents may be the lack of a well-validated self-compassion scale for youths. Although a Portuguese translation of the SCS was validated among a broad age range of adolescents (12-19, M_{age} = 15.49; Cunha, Xavier & Castilho, 2016), younger participants were not examined separately from older participants, and findings cannot generalize to English-speakers. Given that some of the original SCS items are complex, moreover, a simplified version would be helpful for research on youths. A

simplified version of the brief 12-item short-form of the SCS was created for children (SCS-C) aged 8-12 (Sutton, Schonert-Reichl, Wu & Lawlor, 2018), but the short-form cannot reliably measure the six components of self-compassion (Raes, Pommier, Neff, & Van Gucht, 2011), limiting its usefulness. Moreover, the SCS-C has not been cross-validated, test-retest reliability has not been established, and the scale is not designed for use with early adolescents. Most of the research conducted with adolescents to date has used the adult version of the 26-item SCS (Neff, 2003a) or the 12-item brief SCS. Notably, younger adolescents (and some older individuals with less education) might find it challenging to understand the adult SCS. For example, phrases which refer to concepts such as “the human condition”, “flaws and inadequacies” and “balanced view of the situation” may be too abstract for this developmental period (Keating, 2012). For this reason, there is a clear need to develop a comprehensive, age-appropriate, well-validated self-compassion scale for youths that can measure self-compassion and its six constituent components.

Study 1

The goal of Study 1 was to develop a youth version of the SCS (SCS-Y) that is appropriate for early adolescents in middle school. A large pool of 36 potential items was created with six items per subscale, with the goal of halving this number by selecting the three best fitting items per subscale. We felt that this would allow us to assess each subscale reliably, while keeping the total number of items low enough so as not to tax the attention span of younger participants. Potential items were developed based on the authors' expertise in cognitive development and in consultation with a small number of early adolescents and middle school teachers. The basic meaning of items from the adult SCS were rewritten in a way that was more developmentally appropriate. For example, self-kindness items such as "I’m tolerant of my own flaws and inadequacies" were re-written as "I am understanding and patient with myself even when I mess up." Common Humanity items such as "I try to see my

failings as part of the human condition" were rewritten as "When I feel I'm not 'good enough' in some way, I try to remind myself that other people sometimes feel this way too." Self-judgment items such as "I'm intolerant and impatient towards those aspects of my personality I don't like" were re-written as "I get mad at myself for not being better at some things." We also used scale anchors for each point in the five-point response scale in order to make responding easier for participants (Tourangeau, Rips & Rasinski, 2000). The adult version just uses end-points of 1 (almost never) to 5 (almost always) without anchors in-between.

Past research has indicated that self-compassion declines in older adolescence, particularly among females (Bluth & Blanton, 2015) and a meta-analysis of adult populations found a small but consistent gender difference in self-compassion favoring males (Yarnell et al., 2015.) For this reason, we also examined age and gender differences in SCS-Y scores.

Method

Participants and Procedure. Snowball sampling was used to recruit middle school classroom teachers in the San Francisco Bay Area, who invited students and their parents to participate in the study. Participants were given a chance to win two free movie tickets for participating, with a one in five chance of winning. Appropriate IRB approval was obtained. A total of 279 youth participated in this study. The mean age was 12.17 (*SD* = .93, range 11-15). Of the total sample, 42.2% were in the 6th grade, 32.0% in 7th grade, and 25.7% in 8th grade. In terms of self-reported gender, 56.7% identified as female. In terms of self-reported ethnicity: 7.6% were African-American, 7.6% Asian, 30.5% Hispanic, 35.3% White, 7.6% Native American, and 11.2% other. Most (88.3%) reported English as their first language. Information about socio-economic status (SES) was not collected given that youths often have inaccurate knowledge of their family's SES. However, participants were drawn from socio-economically diverse schools in the Bay Area.

Measures

Self-Compassion Scale – Youth version (SCS-Y). We gave participants 36 potential SCS-Y items. They were given the following instructions: "For each of the statements below, please indicate how often you act this way towards yourself in difficult times. Please read each sentence carefully and answer honestly using the following scale: 1 (Almost Never), 2 (Not Very Often), 3 (Sometimes), 4 (Very Often), 5 (Almost Always)." Items representing self-judgment, isolation and over-identification were reverse-coded to indicate their absence. A grand mean of the six subscale means was then taken to calculate a total score.

Statistical Analyses

All analyses were conducted in Mplus 8 (Muthén & Muthén, 1998-2017) and the measurement models were estimated with the weighted least squares mean-and variance-adjusted estimator (WLSMV) as it is more suitable for ordered-categorical items with five or less response options (e.g., Finney & DiStefano, 2013). Traditionally, psychometric investigations have relied on CFA (see Figure 1a); however, CFA may lead to biased results when two sources of construct-relevant psychometric multidimensionality are not systematically taken into account (Morin, Arens, & Marsh, 2016). The first source concerns coexisting global and specific constructs (e.g., overall self-compassion and the six subscales). Although higher-order (or hierarchical) models are often used to investigate the presence of a global factor, this approach relies on the strict, and rarely supported, assumption that associations between items and the higher-order factor is only mediated by the first-order factors (Morin et al., 2016). In contrast, a bifactor approach (Rodriguez, Reise, & Haviland, 2016) provides a flexible way to simultaneously assess a general factor and several specific factors by disaggregating the total item covariance matrix into global and specific components (see Figure 1b for a bifactor model). Neff, Whittaker and Karl (2017) found that a bifactor model of the SCS outperformed a higher-order model in four different samples.

The second source relates to the assessment of conceptually-related constructs.

Multidimensional scales tend to be comprised of constructs that are conceptually similar and operate as a system. Given that scale items are rarely perfect indicators of their corresponding factors, a certain degree of association could be present between items and non-target, yet conceptually related factors. In CFA items are only allowed to load on their target factors, and non-target loadings are explicitly forced to zero. This restrictiveness often leads to distorted results and erroneous conclusions. Indeed, a recent review of simulation studies (Asparouhov, Muthén, & Morin, 2015) showed that parameter estimates become biased even if small cross-loadings are forced to zero. Although exploratory factor analysis (EFA) is suitable for multidimensional measures because it relaxes the strict assumption of CFA, it lacks the features of CFA that allow for model confirmation. Recently, EFA and CFA have been combined into the exploratory structural equation modeling (ESEM) framework (Morin, Marsh, & Nagengast, 2013), and target rotation (Asparouhov & Muthén, 2009; Browne, 2001) makes it possible to use this as a completely "confirmatory" approach (see Figure 2a).

The bifactor-ESEM framework has been developed in an effort to combine these two sources of construct-relevant multidimensionality for a more precise psychometric examination of multidimensional measures (Morin et al., 2016; see Figure 2b). Recent studies (e.g., Neff et al., 2019; Tóth-Király, Bőthe, & Orosz, 2017) have shown that the system-level interaction of self-compassion components is best analyzed using a bifactor-ESEM framework. Note that a correlated two-bifactor model with two global factors can also be estimated both for CFA (Figure 1c) and ESEM (Figure 2c).

Following these theoretical guidelines and the sequence proposed by Morin et al. (2016) as well as Tóth-Király, Morin, Bőthe, Orosz, and Rigó (2018), we modeled participants' responses via six-factor correlated CFA and ESEM, bifactor CFA and ESEM, and correlated two-bifactor CFA and ESEM models. In the first-order CFA model, items loaded on their target factor, no cross-loadings were allowed, but the factors were allowed to

correlate. In first-order ESEM, the same specifications were used as in CFA, and cross-loadings were freely estimated but targeted to be as close to zero as possible (Browne, 2001). In bifactor CFA, items simultaneously loaded on a self-compassion global (G-) factor and on their corresponding specific (S-) factor. No cross-loadings were allowed and factors were orthogonal to one another as per typical bifactor specifications (Reise, 2012). The same specifications were used in the bifactor-ESEM model, except cross-loadings were freely estimated between the S-factors but were targeted to be zero. For the two-bifactor CFA and ESEM models, their specification was the same as their bifactor counterparts, except the two global factors (compassionate and uncompassionate self-responding) were allowed to correlate with one another, but not with the specific factors.

Model fit (Hu & Bentler, 1999; Marsh, Hau, & Grayson, 2005) was assessed using the Comparative Fit Index (CFI; ≥ .95 for good, ≥ .90 for acceptable), the Tucker–Lewis index (TLI; ≥.95 for good, ≥ .90 for acceptable), the Root-Mean-Square Error of Approximation (RMSEA; ≤ .06 for good, ≤ .08 for acceptable) with its 90% confidence interval and the standardized root mean square residual (SRMR; ≤ .05 for good, ≤ .10 for acceptable). As more structural parameters were estimated in ESEM, during model interpretation we put more emphasis on TLI and RMSEA as these two indices are parsimony-corrected (Marsh et al., 2009; Morin et al., 2013) and are thus not biased by the number of estimated parameters, making it possible to directly compare the fit of CFA and ESEM models. When comparing fit between models, we considered the changes (Δ) in goodness-of-fit indices and applied the well-established guidelines of Chen (2007) as well as Cheung and Rensvold (2002): improvements in CFI and TLI of at least .010 or decreases in RMSEA of at least .015 indicate a better model. In addition, bifactor-ESEM guidelines (Morin et al., 2016) suggest that parameter estimates (e.g., standardized factor loadings, cross-loadings and correlations) should be inspected apart from model fit.

We assessed reliability with a variety of indices. First, we calculated Cronbach's alpha based on observed scores, and used the commonly-reported cut-off values of .70 as adequate and .80 as good (Nunnally, 1978). The second was McDonald's (1970) model-based composite reliability (CR) which was calculated from the standardized factor loadings and their measurement errors to more precisely estimate the reliability of the G- and S-factors (see Morin, Myers, & Lee, 2018). Based on Bagozzi and Yi (1988), values above .60 are considered acceptable, whereas values above .70 are good.

For the bifactor models, omega (ω; the proportion of item variance attributable to both the global and specific factors) and omega hierarchical (ω_H; the proportion of variance attributable to only the global factor) were calculated (Rodriguez et al., 2016). Dividing ω_H by ω reveals the amount of reliable variance (i.e., not due to error) in scores attributed to the G-factor, with a value of .75 or above supporting use of a total score (Reise, Bonifay, & Haviland, 2013). Subtracting ω_H from ω reveals the remaining reliable variance attributed to the S-factors.

Finally, age, gender and grade-related differences were tested with bivariate correlations, independent-samples T-tests and ANOVA (with Bonferroni post-hoc tests), respectively. The gender × age interactions were tested with Hayes' (2017) PROCESS macro, while the gender × grade interactions were tested with ANOVA.

Results and Discussion

In order to select final items for the SCS-Y, we analyzed all 36 potential items using a six-factor correlated ESEM model (the results of this model can be seen in Table S1 of the online supplements), and retained three items per factor that had (1) the strongest target loadings (ideally higher than .500, but not lower than .300; see Morin et al., 2018), (2) relatively low cross-loadings (ideally lower than .300; see Morin et al., 2018), (3) adequate content validity, and (4) performed well in subsequently re-estimated measurement models.

We were able to identity three good items for most of the subscales, but could not identify three over-identification items that met our specified criteria. We therefore selected the two over-identification items that seemed to perform best in the final six-factor correlated ESEM model. This decision is in alignment with common structural equation modeling guidelines which suggest that having two items represent a factor is sufficient to have an identified model (Kline, 2011). The final items are presented in Table 1.

Fit indices for the final 17-item version are reported in Table 2. Although the fit of the CFA 6-factor correlated model was acceptable, the ESEM solution was superior (ΔCFI = +.060, ΔTLI = +.068, ΔRMSEA = -.036, ΔSRMR = -.034). Both CFA and ESEM models had well-defined factors (CFA: λ = .604 to .839, *M* = .727; ESEM: λ = .406 to .984, *M* = .685). However, the ESEM factor correlations (*r* = .006 to .502, *M* = .272) were lower than the CFA (*r* = .005 to .707, *M* = .372) correlations (see Table 3) supporting its superiority.

In terms of the bifactor models, fit was substantially better for the ESEM than the CFA model (ΔCFI = +.154, ΔTLI = +.197, ΔRMSEA = -.084; ΔSRMR = -.066), suggesting that ESEM is better able to capture the system level interaction of self-compassion items than CFA. We examined whether inclusion of a second G-factor provided an improved representation of the data over the model having a single G-factor. First, the two-bifactor CFA[1] solution had substantially worse fit than the bifactor-ESEM solution (ΔCFI = -.073, ΔTLI = -.090, ΔRMSEA = +.051; ΔSRMR = +.043). The large differences in TLI and RMSEA are particularly important given that these are corrected for parsimony. Fit was similar for the one and two-bifactor ESEM models, but when examining factor loadings for each model a stark difference was apparent. Factor loadings for the single bifactor-ESEM model were good (see Table 4): most loadings were significant and there was a well-defined

[1] Because the overidentification factor was estimated from two indicators, thus creating a locally underidentified factor in bifactor-CFA, this factor was locally identified by using essentially tau-equivalent constraints (Little, Lindenberger, & Nesselroade, 1999) by putting equality constraints on the factor loadings of these two items to help locate the construct at the true intersection of the items.

G-factor (λ = .030 to .651, *M* = .423) reflecting a global level of self-compassion. The S-factors also retained a moderate-to-large amount of specificity not explained by the G-factor as apparent by the average factor loadings, ranging from .492 (overidentification) to .744 (common humanity). In contrast, factor loadings for the correlated two-bifactor ESEM model (see Table 5) were poor: the majority of loadings were insignificant and the compassionate G-factor was not well defined (*M* = .229 for compassionate and *M* = .405 for uncompassionate self-responding). Results for the SCS-Y mirrored those of the SCS (Neff et al., 2019), supporting use of six specific factors and one general factor.

Table 6 shows results for the different reliability indicators. Cronbach's alpha and composite reliability were good for the total scale score and most of the subscale scores[2], which supports the adequacy of the bifactor-ESEM solution. CR results are particularly relevant as they show that the S-factors remain generally acceptable in terms of reliability even though S-factors tend to be weaker in bifactor solutions. As for the G-factor, 76.2% of the reliable variance could be attributed to this factor, which is over the 75% threshold suggested by Reise et al. (2013) for use of a total score, while 21.7% could be attributed to the S-factors over and above the G-factor.

We also examined differences related to gender, age and grade in total self-compassion levels. Descriptive statistics are displayed in Table 7. Age was not related to self-compassion (*r* = -.138, *p* = .089). Grade-related differences were not significant, *F*(2, 159) = 2.696, *p* = .071, though there was a trend for self-compassion to decrease in higher grades. There were no differences between males (*M* = 3.155, *SD* = 0.553) and females (*M* = 3.032, *SD* = 0.589), *t*(215) = 1.561, *p* = .120. Moreover, gender did not interact with either age, *F*(1, 149) = .003, *p* = .955, or grade, *F*(5, 155) = 1.495, *p* = .194, to predict self-compassion.

[2] The Spearman correlation between the two overidentification items was *r* = .491, *p* < .001. We also calculated the Spearman-Brown prophecy (see Marsh, Nagengast, & Morin, 2013) formula to verify whether reliability would improve if the number of items increased. According to these calculations, having three items on this factor would result in a Cronbach alpha coefficient that is higher than the recommended threshold (α = .742).

Study 2

Study 2 was designed to cross-validate the factor structure of the SCS-Y in a second adolescent sample. We expected to obtain the same findings in terms of the correlated six factor and single bifactor-ESEM model being superior to other models.

Method

Participants and Procedure. Participants were recruited from a middle school in the Orange County area in North Carolina. Appropriate IRB approval was obtained. A total of 402 youth participated in this study. No participation incentives were provided. The mean age was 12.43 (*SD* = 0.97, range 11-15). Of the total sample, 34.8% were in the 6th grade, 30.6% in 7th grade, and 28.9% in 8th grade. In terms of self-reported gender, 48.8% identified as female. In terms of self-reported ethnicity: 10.2% were African-American, 7% Asian, 16.9% Hispanic, 47.3% White, 0.2% Native American, and 17.2% other. Most (74.4%) reported English as their first language. Information about SES was not collected from participants, but the middle school has 45% minority enrollment and 29% are from low income families.

Measures

Self-Compassion Scale – Youth version. Participants were given the 17 items selected in Study 1 with the same instructions, administered in the order indicated in Table 1. Once again, negative items were reverse-coded and a total score was calculated by taking a grand mean of the six subscale means.

Results and Discussion

Model fit is presented in Table 2. As found in Study 1, the correlated six-factor ESEM solution showed improved fit (ΔCFI = +.062, ΔTLI = +.069, ΔRMSEA = -.039, ΔSRMR = -.033) over its CFA alternative. This superiority of the ESEM model was supported by well-defined ESEM factors (λ = .407 to .992, *M* = .681) and decreased inter-factor correlations (see Table 3; ESEM: *r* = .024 to .569, *M* = .322; CFA: *r* = .090 to .719, *M* = .434), which are

comparable to Study 1. The bifactor-ESEM model had a slightly improved fit compared to the six-factor ESEM model. Once again, fit was substantially better for the bifactor-ESEM than the bifactor-CFA model (ΔCFI = +.177, ΔTLI = +.223, ΔRMSEA = -.092; ΔSRMR = -.080), suggesting that ESEM is better able to model the system level interaction of SCS-Y items. The fit of the correlated two-bifactor CFA model was substantially worse relative to the bifactor-ESEM solution (ΔCFI = -.070, ΔTLI = -.082, ΔRMSEA = +.047, ΔSRMR = +.042), suggesting that this solution is not optimal. The fit of the correlated two-bifactor ESEM model was similar to that of the single bifactor-ESEM model, but once again, parameter estimates differed (see Table S2). The bifactor ESEM model had a well-defined G-factor (λ = .307 to .691, *M* = .493) and all loadings were significant. The S-factors retained a moderate amount of specificity even after the extraction of the G-factor, with .418 (self-kindness) and .599 (overidentification) being the lowest and highest values, respectively. However, factor loadings for the correlated two-bifactor ESEM model were poor (see Table S3): none of the loadings were significant and average loadings were small (*M* = .156 for compassionate and *M* = .223 for uncompassionate self-responding).

Table 6 displays reliabilities. Cronbach's alpha and CR levels are similar to Study 1, with good reliability for a total SCS-Y score and most of the subscale scores[3]. Note that the CR value for self-kindness was low, although Cronbach's alpha was adequate. Omega and omegaH indicators suggested that 83.6% of the reliable variance in item responding can be attributed to the self-compassion G-factor, again justifying use of a total score, whereas 15.2% was attributable to the S-factors.

In terms of demographic differences (see Table 7), age was not related to self-compassion (*r* = -.083, *p* = .118). The ANOVA was statistically significant for grade-related

[3] The Spearman correlation between the two overidentification items was *r* = .584, *p* < .001, and Cronbach alpha would be α = .803, according to the Spearman-Brown prophecy formula, with three items instead of two.

differences, $F(2, 340) = 3.378$, $p = .035$, although post-hoc tests did not identify significant group differences. In terms of gender, males ($M = 3.198$, $SD = 0.475$) had higher levels of self-compassion than females ($M = 3.094$, $SD = 0.528$), $t(330) = 1.880$, $p = .061$, though this difference was not significant. Gender did not significantly interact with age, $F(1, 325) = .066$, $p = .798$ or grade, $F(5, 309) = 1.973$, $p = .082$) to predict self-compassion. Note that there was a trend for males to score slightly higher than females, however, and for females to slightly decrease in self-compassion with age. These results are in line with meta-analytic findings that males have small but significantly higher levels of self-compassion than females (Yarnell et al., 2015), and that self-compassion decreases with age, especially for females (Bluth & Blanton, 2015).

Study 3

The purpose of Study 3 was to examine the test-retest reliability of the SCS-Y over a period of three weeks.

Method

Participants and Procedure. A subset of participants from Study 2 were asked to complete the SCS-Y again after a period of three weeks, and a total of 102 youth participated. No participation incentives were provided. The mean age was 12.52 ($SD = 1.05$, range 11-14). In terms of grade: 48% were in 6th grade and 43.1% in 8th grade. In terms of gender, 51% self-identified as female. In terms of self-reported ethnicity: 8.8% were African-American, 9.8% Asian, 14.7% Hispanic, 54.9% White, 1% Native American, and 9% other. Most (82.4%) reported English as their first language.

Results and Discussion

The instrument had good test-retest reliability between Time 1 and Time 2 for the total score ($r = .83$, $p < .01$). The subscale correlations were as follows: self-kindness ($r = .70$, $p < .01$), self-judgment ($r = .71$, $p < .01$), common humanity ($r = .65$, $p < .01$), isolation ($r =$

.64, $p < .01$), mindfulness ($r = .63$, $p < .01$), and overidentification ($r = .51$, $p < .01$). Although reliability for the overidentification subscale was sub-optimal, overall, these findings suggest that the SCS-Y is a stable measure of self-compassion over time.

Study 4

In order to provide evidence for the construct validity of the SCS-Y, we examined its association with constructs demonstrated to be significantly associated with self-compassion among adults. Firstly, we examined the association of the SCS-Y with a measure of mindfulness created for youth (Greco, Baer, & Smith, 2010). Mindfulness should be significantly correlated with self-compassion since they are overlapping constructs and have been linked in numerous studies (e.g., Baer, Lykins, & Peters, 2012). We also examined the association between the SCS-Y and age appropriate measures of depression, happiness, life satisfaction and resilience in order to provide predictive validity, given that self-compassion has been linked with well-being among older adolescents (Bluth & Blanton, 2014; Bluth, Mullarkey, & Lathren, 2018; Sun et al., 2016).

Finally, we included a measure of goal orientation (Midgley et al., 1998). Based on achievement goal theory, this measure has three different subscales that assess: 1) mastery goals, reflecting an intrinsic motivation to learn, 2) performance-approach goals, reflecting the motivation to stand out among peers in ability, and 3) performance-avoidant goals, reflecting the desire to learn so that one is not embarrassed in front of others due to lack of ability. Based on past research with undergraduates (Neff et al., 2005), we expected self-compassion to have a positive relationship with mastery goals and a negative relationship with both types of performance goals.

Method

Participants and Procedure. Participants were recruited through snowball sampling; researchers contacted middle school teachers who had participated in a self-compassion

training program who then let others know about the study. Appropriate IRB approval was obtained. A total of 212 youth participated in this study. The mean age was 12.18 (*SD* = 0.84, range 11-14). Of the total sample, 27.4% of participants were in the 6th grade, 42.9% in 7th grade, and 28.3% in 8th grade. Less than half (42.5%) of participants were female. In terms of grade: 27.4% were in the 6th grade, 42.9% in 7th grade, and 28.3% in 8th grade. In terms of self-reported ethnicity: 1.9% were African-American, 7.1% Asian, 3.8% Hispanic, 80.2% White, 3.8% Native American. Most (91.5%) reported English as their first language. Information about SES was not collected.

Measures

Self-Compassion – Youth version. See prior studies.

Mindfulness. The Child and Adolescent Mindfulness Measure (Greco et al., 2010) has 10 items (e.g. "At school, I walk from class to class without noticing what I'm doing") and had acceptable reliability in this study (α = .79).

Depression. The Center for Epidemiological Studies Depression Scale for Children (Faulstich et al., 1986) has 20 items (e.g., "I felt sad") and had good reliability (α = .93).

Happiness. The Subjective Happiness Scale (Lyubomirsky & Lepper, 1999) has four items (e.g., "In general, I consider myself (1) not a very happy person) to (7) a very happy person"). This scale is commonly used with children and adolescents and has been found to have good psychometric properties in this population (e.g., de Bruin, Zijlstra, & Bögels, 2014; Navarro, Ruiz-Oliva, Larrañaga & Yubero, 2015; Tomlinson, Keyfitz, Rawana, & Lumley, 2017). It demonstrated acceptable reliability in the current study (α = .76).

Life satisfaction. The Satisfaction with Life Scale – Children (Gadermann, 2009) has five items (e.g., "The things in my life are excellent") and had good reliability (α = .89).

Resilience. The Brief Resilience Scale (Smith et al., 2008) has six items (e.g., ""I tend to bounce back quickly after hard times"). It has been used with children and adolescents and

has been found to be reliable in this population (Bluth & Eisenlohr-Moul, 2017; Lehrer, Janus, Gloria & Steinhardt, 2017; Sharma & Nagle, 2018). It also demonstrated acceptable reliability in the current study (α = .70)

Learning goals. The Achievement Goal Orientation Scale (Midgley et al., 1998) was created for use with elementary and middle school children and contains three subscales (six items each) that assess mastery goals (e.g., " I like school work that I'll learn from, even if I make a lot of mistakes"); performance-approach goals (e.g., "I want to do better than other students in my classes"); and performance-avoidance goals (e.g., "It's very important to me that I don't look stupid in my classes"). Internal consistency was good for all subscales: mastery (α = .91); performance approach (α = .86); and performance avoidance (α = .88).

Statistical Analyses

Prior to the main analyses, two multivariate outliers were removed. The degree of association between the SCS-Y and other outcomes were examined using zero-order correlations. Effect sizes were evaluated according to Cohen's (1988) benchmarks: correlations of r = .10 - .30 were considered small, .30 - .50 were considered medium, and over .50 were considered large.

Results and Discussion

As for demographic differences (see Table 7), age was not related to self-compassion (r = -.076, p = .289), and there were no grade-related differences, $F(2, 192) = 0.531$, p = .589. However, there were gender differences, with males (M = 3.180, SD = 0.544) scoring higher than females (M = 2.985, SD = 0.675), $t(185) = 2.189$, p = .030. Gender did not interact with either age, $F(1, 183) = .133$, p = .716 (p = .640) or grade, $F(5, 181) = 1.274$, p = .277, to predict self-compassion.

In order to establish construct validity, we examined the link between the SCS-Y total score and subscale scores with relevant outcomes. Results are reported in Table 8. Overall,

associations were as hypothesized. Global self-compassion had medium to large associations with happiness, life satisfaction, mindfulness, resilience, and depression; medium associations with mastery and performance-approach goals; and small associations with performance-avoidance goals. These findings support the construct validity of the SCS-Y.

The six SCS-Y subscales had varying degrees of association with outcomes. For instance, self-kindness was significantly linked to most outcomes except performance approach goals, while self-judgment was linked to all outcomes. This makes sense given that kind encouragement is more likely to impact learning from mistakes than avoiding making mistakes. Common humanity and mindfulness predicted outcomes in a similar way: small-to-medium correlations with happiness, life satisfaction, resilience, and mastery goals, and a very small or non-significant association with mindfulness, depression, and both types of performance goals. The fact that the mindfulness subscale did not significantly predict mindfulness as measured by the Child and Adolescent Mindfulness Measure (Greco et al., 2010) was somewhat surprising, but highlights the fact that in the SCS-Y mindfulness is conceptualized as a type of balanced equanimity toward suffering, not necessarily paying attention to present moment experience in general. The non-significant link with depression could be due to the fact that in early adolescence, the ability to think in terms of common humanity or to be mindful has not yet developed sufficiently to reduce psychopathology. Still, it should be remembered that self-compassion is best thought of as a system and that the large majority of variance in reliable item responding was explained by a global self-compassion factor, which had a clear association with depression. Taken as a whole, results supported the construct validity of the SCS-Y.

General Discussion

The four studies presented here suggest that the SCS-Y is a psychometrically valid and reliable measure of self-compassion for youths. The present findings supported the

superiority of the six-factor correlated and bifactor-ESEM representation of self-compassion compared to the alternative solutions. The final model revealed a well-defined factor representing adolescents' global levels of self-compassion which coexist with the similarly well-defined specific factors proposed by Neff (2003a, 2003b), indicating that the SCS-Y can be used to assess a total self-compassion score and six subscale scores. Importantly, our results contribute to the accumulating empirical evidence (e.g., Neff, Tóth-Király, & Colosimo, 2018; Neff et al., 2019; Tóth-Király et al., 2017) showing 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.

Apart from model fit, Cronbach's alpha and model-based composite reliability values were acceptable throughout the studies, with the latter being particularly relevant for bifactor models. 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 a large proportion of reliable variance in item responding, sufficient amounts remained in the specific factors to corroborate the importance of including them in the measurement model. Finally, the SCS-Y appears to be stable over time.

The development of a self-compassion scale for younger adolescents creates the opportunity to conduct more robust research on youth. Evidence indicates that self-compassion declines in high school, particularly among females (Bluth & Blanton, 2015) and psychopathology increases during this period (Costello, Copeland, & Angold, 2011). The SCS-Y will facilitate examination of these trends starting in early adolescence. Further, negative emotional and behavioral experiences in younger adolescence predicts the crystallization and solidification of personality characteristics in later adolescence and

adulthood; therefore, early adolescence presents a critical window of opportunity to intervene to deter a maladaptive emotional and behavioral life course trajectory (Ge & Conger, 1999).

Self-compassion interventions have been shown to yield positive psychosocial outcomes in adolescents as well as adults (Ferrari et al., 2019). For instance, an intervention that was designed to cultivate self-compassion in teens called Making Friends with Yourself (Bluth, Gaylord, Campo, Mullarkey & Hobbs, 2015) has been shown to create positive changes in depression, perceived stress, curiosity and exploration, and resilience (Bluth & Eisenlohr-Moul, 2017). Mindfulness interventions for youth have also been shown to increase self-compassion, which partly explain wellbeing outcomes such as decreased depression and perceived stress and increased positive affect and gratitude (Galla, 2017). The creation of a self-compassion scale designed specifically for youth will advance the ability of researchers to reliably assess and refine these interventions, which may in turn help adolescents to adopt more adaptive ways of coping with suffering. It will also enable the study of self-compassion more generally, advancing our understanding of mental health in youths and also adults with less education.

For researchers wanting to examine self-compassion as a holistic construct, use of a total SCS-Y score is recommended as it represents the system level balance of the six components which comprise a self-compassionate mindset (Phillips, 2019). Also, most of the reliable variance in item responding is explained by a global score. Still, the link between self-compassion and psychopathology appears to be largely driven by the reduction in self-judgment, isolation, and over-identification entailed in a self-compassionate mindset (Neff et al., 2018). Therefore, when researchers want to examine the mechanisms of action entailed by self-compassion, use of all six subscale scores in addition to a global score is recommended. Some scholars (e.g., Muris & Petrocchi, 2017) argue that use of a total SCS score inflates the link between self-compassion and psychopathology, and suggest only using

the three positive SCS subscales when researching self-compassion. We do not recommend this approach because we feel it greatly *underestimates* the power of self-compassion to lessen psychopathology. Effect sizes for the link with psychopathology are typically small for the positive SCS subscales and medium to large for the total score (Neff et al., 2018). Experimental examination of the link between self-compassion and psychopathology using mood inductions or interventions also yields medium to large effect sizes (Campos et al., 2017; Ferrari et al., 2019), suggesting that use of a SCS total score is most accurate. However, if researchers want to create a composite score of the three positive and three negative subscales as a heuristic to understand the mechanisms of action entailed by self-compassion (Neff et al., 2018), they are free to do so.

Of course, there are limitations to the present study which need to be mentioned. Any self-report measure is potentially biased, and future research should determine if self-reported self-compassion using the SCS-Y is consistent with other assessment methods such as parent or clinical interviews. One limitation of these studies was that information was not collected on the SES of participants, and further research is needed to examine how SES may influence responses. Also, the SCS-Y was developed primarily with white students, and its validity should be assessed in more diverse populations. Since the design of Study 4 was cross-sectional, moreover, causality cannot be inferred from the results linking self-compassion to well-being. The fact that we were only able to identify a two-item over-identification subscale is also a limitation, and future research may want to test additional over-identification items to create a version of the SCS-Y with three items for every subscale. Finally, some of the subscales had lower levels of Cronbach alpha reliabilities than the commonly reported .70 (Nunnally, 1978). Thus, researchers should carefully examine the reliability of the subscales when using the SCS-Y. To address this issue, we suggest that researchers may want to rely on latent variable models that are corrected for unreliability.

Another consideration is that the SCS-Y is specifically designed to measure Neff's (2003b) conceptualization of self-compassion, yet other models 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. Garnefski and Kraaij (2018) have created a measure of self-compassionate coping that focuses mainly on self-kindness. Although these measures were created for adults, youth versions of these scales could be created for researchers who prefer these operationalizations of self-compassion.

In summary, the present set of studies suggest that the SCS-Y is a valid and reliable measure of self-compassion. It is our hope that the SCS-Y will be a helpful tool for researchers wishing to examine trait levels of self-compassion in youths.

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Table 1

Final items included in the Self-Compassion Scale – Youth version (SCS-Y)

SS	I#	Item
SK1	1	I am kind and supportive to myself when I'm having a hard time.
SK2	9	I'm kind to myself when things go wrong and I'm feeling bad.
SK3	15	I am understanding and patient with myself even when I mess up.
SJ1	3	When I notice things about myself that I don't like, I get really frustrated.
SJ2	7	I get mad at myself for not being better at some things.
SJ3	12	I'm really hard on myself when I do something wrong.
CH1	4	When I feel I'm not "good enough" in some way, I remind myself that other people sometimes feel this way too.
CH2	8	When I'm sad or unhappy, I remember that other people also feel this way at times.
CH3	13	When things aren't going well, I keep in mind that life is sometimes hard for everyone.
IS1	2	When I feel sad or down, it seems like I'm the only one who feels that way.
IS2	10	When I feel bad or upset, I feel most other people are probably happier than I am.
IS3	16	When I'm really struggling, I feel like other people are probably having an easier time of it.
M1	6	When something upsetting happens I see things as they are without blowing them out of proportion.
M2	17	When something upsets me, I notice my feelings without getting carried away by them.
M3	11	When something difficult happens, I see things clearly without exaggeration.
OI1	5	When I feel frustrated or disappointed, I think about it over and over again.
OI2	14	When I'm feeling bad or upset, I can't think of anything else at the time.

Note. SS: Subscale; I#: Item number in final SCS-Y; SK: Self-Kindness; SJ: Self-Judgement (reverse-coded); CH: Common Humanity; IS: Isolation (reverse-coded); MI: Mindfulness; OI: Overidentification (reverse-coded).

Table 2

Goodness-of-fit indices for the final solution of the Self-Compassion Scale – Youth version

Sample	Models	χ^2	df	CFI	TLI	RMSEA	90% CI RMSEA	SRMR
Study 1 (N = 279)	6-factor corr. CFA	250.815*	104	.932	.911	.071	.060-.082	.050
	6-factor corr. ESEM	65.277	49	.992	.979	.035	.000-.055	.016
	Bifactor CFA	441.880*	103	.843	.792	.109	.098-.119	.079
	Bifactor ESEM	44.496	38	.997	.989	.025	.000-.051	.013
	Two-bifactor corr. CFA	264.548*	102	.924	.899	.076	.064-.087	.056
	Two-bifactor corr. ESEM	31.087	31	1.000	1.000	.003	.000-.045	.011
Study 2 (N = 402)	6-factor corr. CFA	358.117*	104	.929	.907	.078	.069-.087	.048
	6-factor corr. ESEM	79.541*	49	.991	.976	.039	.023-.055	.015
	Bifactor CFA	755.845*	103	.818	.760	.126	.117-.134	.092
	Bifactor ESEM	55.208*	38	.995	.983	.034	.009-.052	.012
	Two-bifactor corr. CFA	369.414*	102	.925	.901	.081	.072-.090	.054
	Two-bifactor corr. ESEM	45.389*	34	.996	.982	.034	.005-.054	.011

Note. corr.: correlated; CFA: Confirmatory factor analysis; ESEM: Exploratory structural equation modeling; χ^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 latent factor correlations for the six-factor CFA (below the diagonal) and ESEM (above the diagonal) solutions of the Self-Compassion Scale – Youth version

	1	2	3	4	5	6
Study 1 (N = 279)						
1. Self-kindness	—	.378**	.245**	.367**	.502**	.287**
2. Self-judgement	.522**	—	-.038	.455**	.152*	.485**
3. Common humanity	.369**	.005	—	.006	.371**	-.020
4. Isolation	.438**	.613**	.012	—	.107	.493**
5. Mindfulness	.696**	.217**	.445**	.196**	—	.179**
6. Overidentification	.453**	.583**	.036	.707**	.283**	—
Study 2 (N = 402)						
1. Self-kindness	—	.454**	.536**	.417**	.439**	.213**
2. Self-judgement	.504**	—	.091	.567**	.175**	.504**
3. Common humanity	.673**	.175**	—	.148**	.496**	.078
4. Isolation	.479**	.651**	.268**	—	.120*	.569**
5. Mindfulness	.703**	.209**	.709**	.253**	—	.024
6. Overidentification	.393**	.886**	.136*	.765**	.172**	—

Note. CFA: confirmatory factor analysis; ESEM: exploratory structural equation modeling; items from the self-judgment, isolation, and over-identification subscales are reverse-coded; *$p < .05$; **$p < .01$.

Table 4

Standardized factor loadings for the correlated six-factor and bifactor models of the Self-Compassion Scale – Youth version (SCS-Y) in Study 1 (N = 279)

	CFA	ESEM						Bifactor CFA		Bifactor ESEM						
	SF	SK	SJ	CH	IS	MI	OI	SC	SF	SC	SK	SJ	CH	IS	MI	OI
SK1	.631**	**.801****	-.114*	.040	.065	-.105*	.031	.478**	.544**	**.493****	**.531****	-.148**	.091*	.025	.020	-.078
SK2	.789**	**.614****	.241**	.001	-.019	.110*	-.039	.642**	.407**	**.523****	**.555****	.192**	.058	-.010	.176**	-.005
SK3	.715**	**.514****	.010	.096*	-.048	.235**	.084	.568**	.384**	**.468****	**.407****	-.037	.176**	-.061	.281**	.023
SJ1	.786**	.063	**.576****	-.006	.099*	-.034	.141*	.573**	.461**	**.605****	-.015	**.386****	-.068	.056	-.097*	.075
SJ2	.641**	-.076	**.741****	.013	.062	-.006	-.068	.394**	.629**	**.388****	.002	**.642****	-.044	.090*	-.050	.036
SJ3	.838**	.109*	**.830****	.004	-.010	-.012	-.020	.598**	.564**	**.651****	.032	**.537****	-.055	-.039	-.078	-.069
CH1	.711**	.101*	-.095	**.753****	.030	-.072	-.077	.077	.764**	**.030**	.136**	-.099*	**.743****	.016	.081	-.084
CH2	.740**	.047	.028	**.826****	-.018	-.109*	.023	.156**	.772**	**.123**	.069	-.023	**.784****	-.026	.039	-.016
CH3	.742**	-.080	.102	**.597****	-.020	.229**	.054	.303**	.594**	**.228****	-.005	.012	**.605****	-.066	.253**	.033
IS1	.654**	-.108	.166*	.088	**.465****	-.033	.191**	.470**	.390**	**.495****	-.131*	.098	.022	**.327****	-.118*	.146*
IS2	.807**	-.058	-.039	.067*	**.984****	.068	-.039	.553**	.722**	**.537****	-.007	.021	.042	**.807****	-.001	.057
IS3	.754**	.205**	.075	-.189**	**.585****	-.060	.037	.514**	.480**	**.572****	.077	.024	-.215**	**.414****	-.132	-.004
MI1	.633**	-.014	-.023	.007	-.068	**.724****	.041	.292**	.685**	**.194**	.155*	.005	.147**	-.069	**.619****	.098
MI2	.604**	.080	-.117*	.065	.120**	**.609****	-.119	.290**	.550**	**.131**	.256**	-.027	.198**	.105	**.602****	.034
MI3	.839**	.131*	.086	-.021	-.004	**.657****	.091	.554**	.546**	**.646****	-.042	-.147**	.050	-.174**	**.661****	-.172**
OI1	.668**	.010	-.010	-.005	-.065	-.035	**.917****	.489**	.514**	**.561****	-.107*	.008	-.077	-.011	-.082	**.517****
OI2	.807**	.064	.007	-.006	.271**	.084	**.460****	.614**	.465**	**.542****	.043	.024	-.032	.209**	.021	**.467****

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 5

Standardized factor loadings for the correlated two-bifactor CFA and correlated two-bifactor ESEM solutions of the Self-Compassion Scale – Youth version (SCS-Y) in Study 1 (N = 279)

	Correlated Two-bifactor CFA			Correlated Two-bifactor ESEM							
	CS	RUS	SF	CS	RUS	SK	SJ	CH	IS	MI	OI
SK1	.625**		.357	.392		.608	.034	.092	.291	.106	.178
SK2	.860**		.014	.184		.616	.341**	-.021	.170	.188	.040
SK3	.803**		-.476	.073		.599*	.104	.202*	.097	.352	.095
SJ1		.640**	.606**		.129	.172**	.602**	-.026	.206**	.063	.171*
SJ2		.450**	.376**		.258*	.088	.722**	-.033	.115	.004	-.067
SJ3		.655**	.488**		.086	.202**	.764**	-.006	.240**	.076	.194**
CH1	.168*		.743**	.600		-.010	-.109	.722	.034	-.018	-.018
CH2	.220**		.761**	.131		.134	.017	.736*	-.031	.066	-.025
CH3	.359**		.561**	.070		.121	.103	.623*	-.029	.302	.003
IS1		.548**	.281**		.486**	.068	.281**	.057	.295	.026	.062
IS2		.623**	.712**		.634**	.183	.155*	.079	.610*	.098	-.198*
IS3		.593**	.367**		.413**	.239	.214**	-.166*	.526**	.012	.086
MI1	.379**		.656**	.260		.197	.044	.083	-.117	.594	-.100
MI2	.393**		.477**	.175		.282	-.051	.159	.007	.545*	-.260*
MI3	.604**		.469**	.175		.150	.117	.086	.214	.854	.337**
OI1		.548**	.443**		.672**	.223	.257	-.052	-.190	.096	.386
OI2		.664**	.396**		.559**	.313	.229*	-.004	.073	.152	.089

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 6

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

	α	CR	ω	ωH	GF	SF
Study 1 (N = 279)						
Self-compassion	.820	.885	.910	.693	.762	.217
Self-kindness	.721	.628	—	—	—	—
Self-judgement	.771	.702	—	—	—	—
Common humanity	.735	.774	—	—	—	—
Isolation	.732	.704	—	—	—	—
Mindfulness	.700	.709	—	—	—	—
Overidentification	.657	.634	—	—	—	—
Study 2 (N = 402)						
Self-compassion	.851	.916	.928	.776	.836	.152
Self-kindness	.706	.540	—	—	—	—
Self-judgement	.797	.742	—	—	—	—
Common humanity	.719	.711	—	—	—	—
Isolation	.777	.707	—	—	—	—
Mindfulness	.667	.666	—	—	—	—
Overidentification	.732	.681	—	—	—	—

Note. ESEM: exploratory structural equation modeling; α: Cronbach's alpha; CR: McDonald's model-based composite reliability; ω: omega; ωH: omega hierarchical; GF: reliable variance explained by the general factor; SF: reliable variance explained by the specific factors *$p < .05$; **$p < .01$.

Table 7

Means and standard deviations (SD) for total self-compassion scores by grade and gender

	Total sample	Male 6th grade	Male 7th grade	Male 8th grade	Female 6th grade	Female 7th grade	Female 8th grade
	Study 1 (N = 279)						
Mean	3.08	3.15	3.03	3.01	3.11	2.82	2.96
SD	0.58	0.48	0.46	0.73	0.46	0.58	0.69
	Study 2 (N = 402)						
Mean	3.14	3.32	3.14	3.16	3.19	3.08	3.05
SD	0.50	0.46	0.42	0.53	0.60	0.46	0.52
	Study 4 (N = 212)						
Mean	3.08	3.23	3.24	3.07	2.97	3.00	2.97
SD	0.62	0.44	0.54	0.62	0.68	0.67	0.71

Table 8

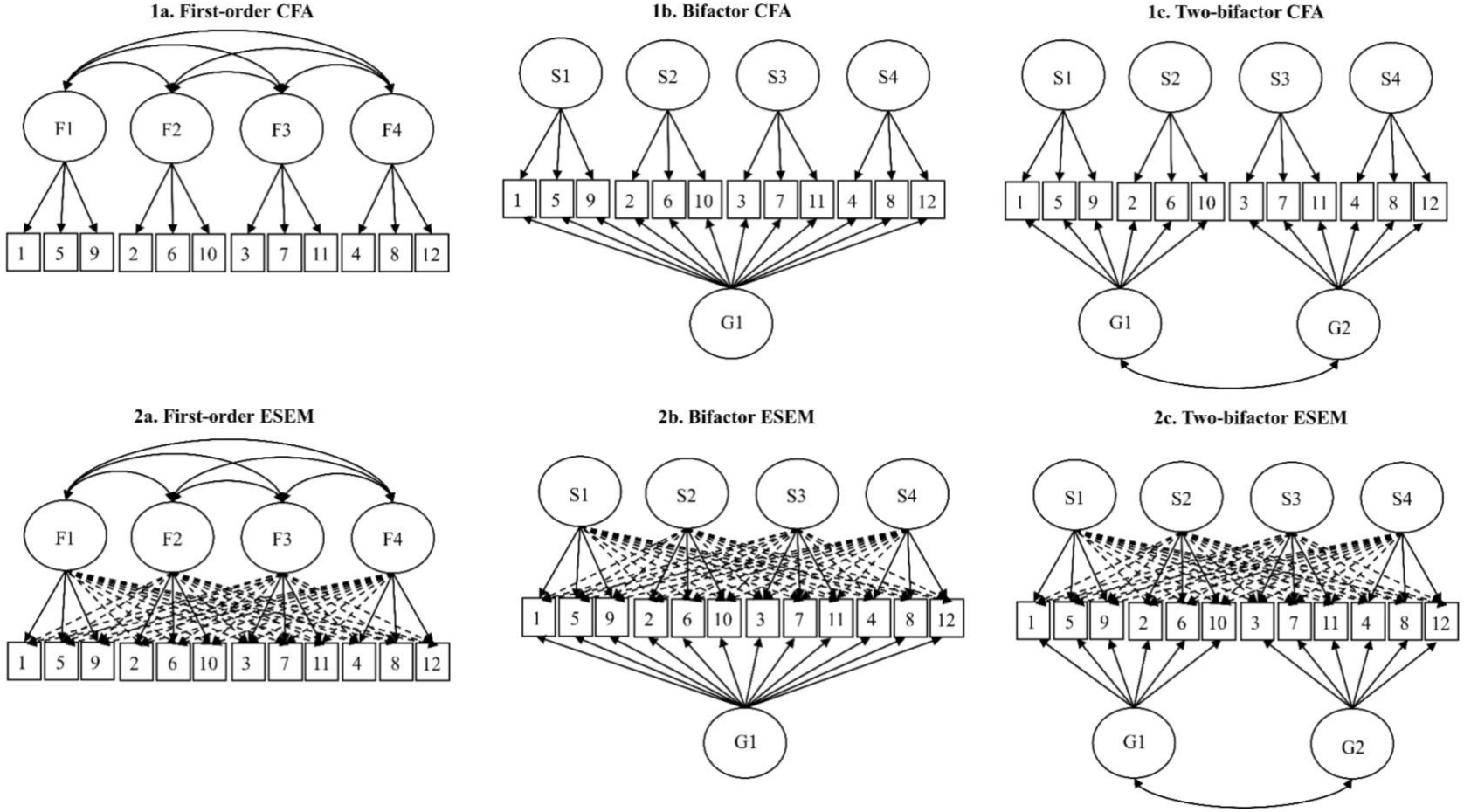
Zero-order correlations in Study 4 (N = 212)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. SC	—													
2. SK	.82**	—												
3. SJ	.80**	.58**	—											
4. CH	.59**	.53**	.20**	—										
5. IS	.66**	.41**	.58**	.17*	—									
6. MI	.50**	.49**	.12	.51**	.02	—								
7. OI	.63**	.31**	.66**	.02	.42**	.01	—							
8. MF	.47**	.34**	.53**	.11	.46**	.07	.36**	—						
9. DE	-.53**	-.40**	-.52**	-.09	-.50**	-.12	-.45**	-.56**	—					
10. HA	.60**	.60**	.46**	.30**	.50**	.35**	.27**	.39**	-.52**	—				
11. LS	.49**	.50**	.36**	.29**	.41**	.31**	.16*	.34**	-.47**	.70**	—			
12. RE	.65**	.52**	.60**	.25**	.50**	.26**	.47**	.49**	-.65**	.56**	.53**	—		
13. MAP	.37**	.44**	.19*	.35**	.26**	.35**	-.00	.20**	-.21**	.43**	.42**	.32**	—	
14. PAP	-.18*	-.03	-.34**	.06	-.20**	.13	-.30**	-.23**	.15	.02	.07	-.25**	.31**	—
15. PAV	-.38**	-.19**	-.40**	-.10	-.38**	-.12	-.33**	-.40**	.44**	-.25**	-.23**	-.41**	.02	.61**

Note. SC: total self-compassion score; SK: Self-Kindness; SJ: Self-Judgement (reverse-coded); CH: Common Humanity; IS: Isolation (reverse-coded); MI: Mindfulness; OI: Overidentification (reverse-coded); MF: mindfulness; DEP: depression; HA: happiness; LS: life satisfaction; RE: resilience; MAP: mastery-approach goals; PAP: performance-approach goals; PAV: performance-avoidance goals; *$p < .05$; **$p < .01$.

Figure 1

Graphical comparison of the alternative CFA and ESEM models



Note. CFA: confirmatory factor analysis; ESEM: exploratory structural equation modeling; F1-F4: first-order factors; S1-S4: specific factors as part of a bifactor model; G1-G4: global factors as part of a bifactor model. Circles represent latent factors, squares represent scale items (i.e., 1-12). One-headed full arrows represent factor loadings, one-headed dashed arrows represent cross-loadings, two-headed errors represent inter-factor correlations.

Online supplementary materials for:

Development and validation of the Self-Compassion Scale for Youth

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Table S1

Standardized parameter estimates for the preliminary six-factor ESEM model of Study 1

	SK (λ)	SJ (λ)	CH (λ)	IS (λ)	MI (λ)	OI (λ)	CL
SK1	.533**	.035	.045	.224**	.126*	.124*	.111
SK6	.473**	.234**	.248**	.027	.041	.334**	.177
SK11	.351**	.166*	.006	.178*	.222**	.041	.123
SK15	.594**	.280**	.038	.076	.210**	.113*	.143
SK22	.394**	.200**	.227**	.012	.139**	.047	.125
SK36	.598**	.073	.134**	.030	.180**	.209**	.125
SJ2	.323**	.387**	.098	.153*	.026	.042	.128
SJ3	.110*	.559**	.052	.103*	.026	.176**	.093
SJ4	.021	.761**	.001	.044	.024	.043	.027
SJ8	.126**	.750**	.001	.060	.062	.191**	.088
SJ9	.074	.540**	.007	.220**	.005	.039	.069
SJ18	.230**	.503**	.051	.232**	.088*	.130*	.146
CH7	.048	.052	.785**	.104	.006	.348**	.112
CH10	.063	.058	.779**	.029	.013	.174**	.067
CH14	.125*	.135*	.570**	.027	.089	.167**	.109
CH20	.130**	.004	.738**	.122*	.129*	.204**	.118
CH26	.183**	.119	.573**	.179**	.009	.121*	.122
CH31	.372**	.004	.344**	.076	.106	.185**	.149
IS12	.214**	.068	.093	.514**	.092	.210**	.135
IS17	.098	.187**	.242**	.438**	.207**	.329**	.213
IS23	.180**	.042	.019	.612**	.141**	.144*	.105
IS24	.067	.020	.043	.878**	.174**	.134*	.088
IS27	.100	.015	.148**	.667**	.040	.089	.078
IS35	.220**	.031	.024	.599**	.120*	.221**	.123
MI21	.059	.134*	.097	.011	.375**	.092	.079
MI28	.120*	.135*	.045	.011	.599**	.038	.070
MI29	.166**	.202**	.090	.094*	.587**	.070	.124
MI30	.151**	.030	.027	.021	.607**	.217**	.089
MI32	.354**	.012	.200**	.114	.153*	.333**	.203
MI34	.127*	.055	.218**	.182	.414**	.064	.129
OI5	.155*	.517**	.043	.012	.413**	.099	.228
OI13	.129*	.153**	.060	.267**	.326**	.358**	.187
OI16	.052	.042	.013	.248**	.051	.471**	.081
OI19	.014	.040	.005	.405**	.129*	.328**	.119
OI25	.034	.363**	.148**	.326**	.081	.241**	.190
OI33	.039	.397**	.112*	.177**	.042	.396**	.153

Note. ESEM: exploratory structural equation modeling; SK: Self-Kindness; SJ: Self-Judgment; CH: Common Humanity; IS: Isolation; MI: Mindfulness; OI: Overidentification; CL: mean cross-loadings; λ: standardized factor loadings; Target loadings are in bold; Red indicates that the final items that have been selected along the criteria of having (1) strong target loadings, (2) relatively low cross-loadings, and (3) adequate content validity; *$p < .05$; **$p < .01$

Table S2

Standardized factor loadings for the correlated six-factor and bifactor models of the Self-Compassion Scale – Youth version (SCS-Y) in Study 2 (N = 402)

	CFA	ESEM						Bifactor CFA		Bifactor ESEM						
	SF	SK	SJ	CH	IS	MI	OI	SC	SF	SC	SK	SJ	CH	IS	MI	OI
SK1	.717**	**.687****	.008	.008	.093	-.020	.010	.573**	.523**	**.571****	**.433****	.017	.071	.052	.024	-.057
SK2	.699**	**.730****	.002	.102*	.015	-.066	-.047	.533**	.474**	**.501****	**.564****	.025	.186**	.008	.058	-.065
SK3	.707**	**.506****	.115*	.009	-.091	.281**	.022	.563**	.316**	**.607****	**.258****	-.005	.057	-.172**	.184**	-.143**
SJ1	.792**	-.112*	**.756****	.014	.032	.103**	.089	.570**	.534**	**.515****	-.060	**.580****	-.071	.095*	.050	.155**
SJ2	.750**	.034	**.957****	.040	-.070*	-.104**	-.121**	.495**	.702**	**.515****	.038	**.688****	-.085*	.005	-.114**	-.034
SJ3	.802**	.134*	**.557****	-.078	.094*	-.060	.146**	.591**	.444**	**.533****	.064	**.449****	-.150**	.138**	-.096*	.173**
CH1	.679**	-.061	.032	**.635****	.023	.166**	-.065	.324**	.632**	**.337****	.036	-.078	**.555****	-.061	.223**	-.097*
CH2	.700**	.053	-.053	**.932****	-.023	-.183**	.053	.340**	.731**	**.341****	.168**	-.116**	**.784****	-.038	.030	.027
CH3	.787**	.088	.080	**.463****	.064	.212**	.015	.520**	.457**	**.583****	-.003	-.088*	**.379****	-.088	.125*	-.141**
IS1	.802**	.054	.000	.030	**.486****	.105*	.309**	.671**	.323**	**.691****	-.124*	-.035	-.085*	**.315****	-.089**	.192**
IS2	.795**	-.044	.051	.029	**.992****	-.055	-.159**	.566**	.686**	**.542****	-.005	.121**	-.064*	**.678****	-.104**	.028
IS3	.742**	.045	-.008	-.022	**.678****	.023	.066	.532**	.517**	**.474****	.044	.088*	-.047	**.559****	-.002	.158**
MI1	.541**	-.099	-.032	.180**	-.056	**.624****	-.017	.197**	.630**	**.307****	-.108	-.159**	.218**	-.192**	**.426****	-.162**
MI2	.721**	.228**	-.024	.117*	.036	**.407****	.055	.484**	.398**	**.511****	.089	-.107*	.152**	-.093*	**.278****	-.088
MI3	.724**	.131**	.014	-.058	.070	**.734****	-.073	.426**	.658**	**.389****	.128**	.006	.068	.009	**.871****	-.066*
OI1	.783**	.031	.048	-.012	.038	-.101*	**.796****	.504**	.605**	**.445****	-.056	.122**	-.095**	.144**	-.171**	**.692****
OI2	.812**	-.046	.106*	.051	.100*	.058	**.645****	.567**	.577**	**.515****	-.117**	.119**	-.041	.135**	-.064*	**.506****

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 Self-Compassion Scale – Youth version (SCS-Y) in Study 2 (N = 402)

	Correlated Two-bifactor CFA			Correlated Two-bifactor ESEM							
	CS	RUS	SF	CS	RUS	SK	SJ	CH	IS	MI	OI
SK1	.705**		.251	.212		.600**	.174*	.183	.260**	.142**	.047
SK2	.694**		.257*	.108		.661**	.186	.243	.118	.159	-.010
SK3	.751**		-.221	-.214		.566*	.160	.262	.118	.280	.066
SJ1		.641**	.695**		-.293	.069	.670**	.039	.300*	.135**	.257**
SJ2		.555**	.433**		-.150	.204	.724**	.035	.261	-.030	.147
SJ3		.670**	.334**		-.057	.211**	.570**	-.033	.350**	.001	.272**
CH1	.448**		.538**	.069		.143	.008	.617**	.029	.285**	-.031
CH2	.460**		.679**	.297		.208	-.016	.791**	.019	.112	.032
CH3	.626**		.328**	-.129		.281	.076	.580**	.193	.233	.047
IS1		.762**	.133		-.054	.142	.007	.108	.870**	.077	.405
IS2		.669**	.683**		.317	.113	.377	.038	.685**	.001	.001
IS3		.627**	.346*		.396	.106	.339	.024	.569*	.084	.056
MI1	.332**		.559**	-.241		.095	-.074	.369	-.018	.466*	-.024
MI2	.584**		.273**	-.113		.327*	.032	.320*	.154	.373*	.070
MI3	.534**		.575**	-.023		.203*	.100	.115	.080	.944**	-.047
OI1		.593**	.519**		.366	.045	.316	-.009	.227	-.063	.793*
OI2		.635**	.498**		.153	.037	.302**	.084	.348**	.054	.514**

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.; *$p < .05$; **$p < .01$.