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RESEARCH

Validation of the State Self-Compassion Scale in a German Sample and its Relations to Psychological Well-being and Mental Health

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Abstract

Objectives This study aimed to translate and validate the State Self-Compassion Scale in its long (SSCS-L, 18 items) and short form (SSCS-S, 6 items) for German-speaking samples and to investigate its associations with psychological well-being and mental health.
Method An online sample ($n = 1{,}436$) completed the translated SSCS-L and other psychological state and trait measures. Factor structures were examined using Exploratory Structural Equation Modeling (ESEM). Associations between subscales of SSCS-L and other constructs were investigated using partial correlational network models.
Results A 6-factor ESEM based on 16 items showed the best fit for the SSCS-L; a global self-compassion factor—and thus using a total score—was not supported. Subscales self-kindness and self-judgment showed acceptable to good internal consistency, all others only marginally acceptable or fair internal consistency. With the SSCS-S, a 2-factor ESEM fits best, representing positive compassionate and negative non-compassionate self-responding. The network model showed positive unique links between positive subscales of SSCS-L and predictors and indicators of well-being; and negative unique links between negative subscales and these indicators. Negative subscales of SSCS-L were positively related to mental distress, while positive subscales showed inverse associations.
Conclusions We present the 16-item SSCS-L and 6-item SSCS-S as useful tools for assessing state self-compassion as a multidimensional construct in research and interventions. We recommend using the SSCS-L with its six and the SSCS-S with its two subscales, and advise researchers to check factor structure and reliability in their samples due to potential variability across contexts.
Preregistration The study was preregistered in PsychArchives (https://doi.org/10.23668/psycharchives.6665), with deviations reported in the Online Resources.

Keywords Self-compassion · State measure · Validation · Network · Mental health

Treating yourself as you would treat a good friend when you are facing hardships is the essence of self-compassion (Neff, 2003). Six components define self-compassion according to Neff (2003): on the side of compassionate self-responding, it implies treating yourself with kindness (*self-kindness*), being mindful (*mindfulness*) and acknowledging that everyone suffers from time to time (*common humanity*); while at the same time, on the side of non-compassionate self-responding, not judging yourself (*self-judgment*), not isolating yourself from others (*isolation*), and not getting carried away by negative feelings (*overidentification*). Although the six components of self-compassion are distinct, they are supposed to interact within a balanced system (Dreisoerner et al., 2021; Phillips, 2021). A self-compassionate state of mind represents a dynamic balance between compassionate (i.e., characterized by self-kindness, mindfulness, and common humanity) and uncompassionate self-responding (i.e., characterized by self-judgment, isolation, and overidentification) in the face of personal challenges (Neff, 2016).

For measuring self-compassion based on the theoretical model proposed by Neff (2003), the 26-item Self-Compassion Scale (SCS; Neff, 2003) and its 12-item short form (Raes et al., 2011) are most frequently used. These scales assess self-compassion as a trait, i.e., as (relatively) stable and enduring over time. On the personal website of Kristin Neff (Neff, 2024), these scales are available for free use in 18 languages. Most of these translations of the original English

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SCS (Neff, 2003) have been validated, e.g., in German (Hupfeld & Ruffieux, 2011), Italian (Veneziani et al., 2017), and Japanese language (Arimitsu, 2014).

In recent years, the study of variable and fluctuating aspects of self-compassion, i.e., state self-compassion, has gained interest (Neff et al., 2021). Accordingly, recent research has begun to conceptualize self-compassion as a trainable skill (e.g., Mey et al., 2023) rather than a stable trait-like concept. Moreover, assessing short-term changes in self-compassion is essential for evaluating the effectiveness of short-term inductions of self-compassion in experimental or therapeutic settings, e.g., following a self-compassionate writing exercise (e.g., Breines & Chen, 2012; Leary et al., 2007). The need of a state measure has been further underscored by studies assessing state self-compassion without a validated measure but using self-adapted versions of Neff's (2003) SCS (e.g., Breines & Chen, 2012, 2013; Mey et al., 2023).

In response to this demand, Neff developed and validated an English 18-item long version of the State Self-Compassion Scale (SSCS-L) along with a 6-item short version (SSCS-S; Neff et al., 2021). These are based on Neff's theoretical model comprising a global self-compassionate mind state and six sub-components, i.e., self-kindness, mindfulness, common humanity, self-judgment, isolation, and overidentification. Consequently, the SSCS-L and -S show great similarities with the trait-SCS in both factorial structure and wording. The SSCS-L and SSCS-S were found to be suitable to assess pre- to post-changes after experimental manipulations of self-compassion (Neff et al., 2021). To our knowledge, so far the SSCS-L has only been translated and validated in a Spanish (Galiana et al., 2022) and a Japanese sample (Miyagawa et al., 2022). The translation and validation into German are the main objectives of this paper, aiming to make the SSCS-S and SSCS-L available for German-speaking researchers and practitioners.

The development of the state measure is embedded in the ongoing debate surrounding the dimensionality of self-compassion as conceptualized by Neff. Her model of self-compassion – as trait (Neff, 2003) and as state (Neff et al., 2021) – comprises six components. For the trait measure, most studies employed exploratory structural equation models (ESEM) and identified a 6-factor structure. ESEM is preferred over confirmatory factor analysis (CFA) as it permits cross-factor loadings of items (Marsh et al., 2014; Morin et al., 2016, 2020). For example, items assigned to self-kindness may also load onto mindfulness, more adequately reflecting the hypothesized dynamic balance of self-compassion. However, for the trait measure of self-compassion, findings on the appropriate factorial structure vary: (a) a 6-factor (ESEM) structure where each factor is evaluated as a separate scale (e.g., Hupfeld & Ruffieux, 2011; Neff, 2003, 2016; Neff et al., 2019; Petrocchi et al., 2014); (b) a bifactor structure encompassing the 6 separate factors (so-called S-Factors) alongside a common overall self-compassion factor (so-called G-factor; e.g., Neff, 2016; Neff et al., 2019); or (c) a 2-bifactor structure including the S-factors and two overarching G-factors for compassionate and uncompassionate self-responding (e.g., Brenner et al., 2017; Coroiu et al., 2018; Marsh et al., 2023).

To solve this debate, Neff et al. (2019) conducted a large-scale meta-study comprising 20 samples across 16 countries ($n = 11{,}685$), supporting the use of both 6-factor and bifactor ESEM models. They conclude that the SCS can either be evaluated as one overall self-compassion score or is adequately represented by the individual scores of the six subscales. Yet, the best-fitting model for self-compassion remains controversial (e.g., Marsh et al., 2023; Montero-Marín et al., 2016; Muris & Otgaar, 2020), with the discussion also including a debate on its general conceptualization.

A major point of criticism regarding Neff's conceptualization of self-compassion concerns the inclusion of positive and negative components/subscales, and, particularly, the practice of calculating a single overall score of general self-compassion based on these positive and negative components (Montero-Marín et al., 2016; Muris & Petrocchi, 2017). Critics argue that this approach may overestimate the amount of mental health variance explained by self-compassion, as half of it—namely, self-judgment, overidentification, and isolation – resemble general maladaptive processes commonly present in individuals with mental disorders, e.g., self-criticism (Zuroff et al., 1990). Accordingly, defining self-compassion as a single-factor construct, also including those aspects, may lead to an inflation of its explanatory power for mental health outcomes due to the inclusion of the reverse-coded subscales that conceptually overlap with psychopathology (e.g., Muris & Otgaar, 2020; Muris & Petrocchi, 2017). It has therefore been argued to discard the negative factors and concentrate solely on the positive factors (e.g., Muris & Petrocchi, 2017), or – if the negative factors are to be assessed – make sure to evaluate the six subscales individually (Muris et al., 2016b).

With respect to the factor structure of the state measure, the SSCS-L, Neff et al. (2021) for the original scale, and Miyagawa et al. (2022) for the Japanese version, demonstrated that both a 6-factor ESEM as well as a bifactor ESEM model showed good model fit, offering two analysis options for the questionnaire, that is, either as six subscales of self-compassion or as one composite score. In the Spanish sample, only the 6-factor structure was investigated and had an excellent fit to the data (Galiana et al., 2022). For the short version of the state measure, the SSCS-S, a 1-factor CFA showed a good model fit, allowing to evaluate state self-compassion as one composite score (Neff et al., 2021).

Even if research on state self-compassion is still relatively scarce, several studies conceptualizing self-compassion as dynamic over time have investigated its temporary associations with well-being. Reported associations with favorable

mental health outcomes include more positive affect, less negative affect, and lower stress reactivity (Mey et al., 2023), less perceived stress (Li et al., 2020), healthier eating behaviors (Breines et al., 2014; Kelly & Stephen, 2016), and less social anxiety and body dissatisfaction in women (Thøgersen-Ntoumani et al., 2017).

In contrast to the emerging research on state self-compassion, the associations of trait self-compassion with psychological constructs have been studied extensively. Trait self-compassion is considered a health-promoting construct as meta-analyses link it positively to adaptive coping (Ewert et al., 2021), well-being (Chio et al., 2021; Zessin et al., 2015), and self-efficacy (Liao et al., 2021). By contrast, it shows negative correlations with maladaptive coping (Ewert et al., 2021), negative affect (Sirois et al., 2015), suicidal ideation, self-harm (Cleare et al., 2019), as well as stress, depressive, and anxiety symptoms (MacBeth & Gumley, 2012; Muris & Petrocchi, 2017). Self-compassion is therefore discussed as a potential protective factor against mental health problems (e.g., Cleare et al., 2019; Finlay-Jones, 2017). In line with this notion, many primary studies underlined the potential health-promoting character of self-compassion by showing positive links with hope (Umphrey et al., 2021; Yang et al., 2016), optimism (Grevenstein et al., 2016; Neff et al., 2007), positive affect (Neff et al., 2007), sense of coherence (Grevenstein et al., 2016; Mowlaie et al., 2017), positive appraisal style and self-efficacy (Schäfer et al., 2023b). Trait and state self-compassion are interrelated, for example, Mey et al. (2023) found correlations of $r = 0.50$ to 0.55 between participants' average state self-compassion over several weeks and their baseline trait SCS score.

Most of the aforementioned *state* self-compassion studies were conducted with unvalidated measures, while evaluation studies of the SSCS(-L) have only included bivariate correlations between state self-compassion, state positive and negative affect (Galiana et al., 2022; Miyagawa et al., 2022; Neff et al., 2021) as well as negative beliefs about self-compassion and fear of compassion (Miyagawa et al., 2022). Therefore, a more thorough investigation of the SSCS-L and SSCS-S, and their relations to other psychological constructs is needed. Psychological network analysis (Epskamp & Fried, 2018; Epskamp et al., 2018; Fried et al., 2017) offers a useful tool to map the interrelations between individual components (i.e., subscales) of self-compassion and other psychological constructs.

To our knowledge, neither for the SSCS-L nor the SSCS-S a valid German version is available. Therefore, the aim of this research was to close this gap for researchers and practitioners. Moving beyond previous translation and validation studies, we implemented network analysis to investigate how state self-compassion relates to a broad range of psychological state and trait constructs, i.e., optimism, anxiety, positive and negative affect, resilience, sense of coherence, satisfaction with life, and mental distress.

Method

Participants

For sample recruitment, we used two platforms: the non-commercial WiSoPanel (Göritz et al., 2021) and the commercial crowdsourcing platform Clickworker (https://www.clickworker.com). The WiSoPanel is not representative of the German general population but holds a socioeconomically diverse group of participants, with only small differences to the German general population (e.g., Schäfer et al., 2020, 2023a). For participating in this study, respondents were compensated with €2. The study was preregistered at PsychArchives (Tüscher et al., 2022; Online Resource C for deviations from preregistration). Eligibility criteria required being German-speaking, and at least 18 years old.

Procedure

The study was conducted in two waves with an in-between time interval of one month, allowing to investigate the factorial structure of the SSCS at two timepoints. In Wave 1, besides state self-compassion, other state measures of psychological constructs were assessed, while in Wave 2, trait measures were assessed besides state self-compassion (Online Resource A for a list of assessments). Wave 1 assessments took place between May 19th and May 25th, 2022; Wave 2 between June 23rd and July 4th, 2022. Due to a technical error on Clickworker, we extended the second assessment on both platforms for 4 additional days (instead of being open for only 7 days). Data was collected via SoSci Survey (Leiner, 2024). Wave 1 was completed by 1,728 respondents via WiSoPanel and 503 respondents via Clickworker. Of those, 1,517 respondents participated in Wave 2 (1,303 via WisoPanel and 214 via Clickworker). SoSciSurvey automatically assesses the so-called DEG Time Index, which is an indicator for low data quality due to unreasonably short answering times. A common cut-off for participant exclusion is a DEG Index ≥ 100. Based on this criterion, 80 participants were excluded from analyses. In addition, one participant had to be excluded because of skipping the SSCS as our primary outcome of interest. Thus, the final sample consisted of 1,436 respondents for both waves.

Measures

State Self-Compassion Scale – Long (SSCS-L) and Short (SSCS-S) Form

The SSCS-L (Neff et al., 2021) was translated into German and checked for accuracy with the help of an English-German bilingual person (Online Resources A for items and

instructions). The questionnaire consists of 18 items, each rated on a 5-point Likert scale ranging from 1 (*not at all true for me*) to 5 (*very true for me*). Before responding to the items, respondents are asked to think about a painful or difficult situation in their life and then rate the items while thinking about this situation.

The SSCS-L consists of six subscales, that is, self-kindness, common humanity, mindfulness, self-judgment, isolation, and overidentification. While the first three represent positive facets of self-compassion, the latter three represent uncompassionate self-responding. In the English original version (Neff et al., 2021), the latter three are recoded to calculate a total state self-compassion score comprising positive and negative facets of self-compassion, where higher scores represent more state self-compassion. Moreover, for the English version, also the six subscales can be calculated separately as sum scores. Six items of the SSCS-L are used for the short scale, SSCS-S (Online Resource B for items), which is so far evaluated as one composite score (Neff et al., 2021).

State Optimism Measure

The 7-item State Optimism Measure (SOM; Millstein et al., 2019) was used to measure state optimism. As no official German version of the SOM is available, we used the same procedure for translation as for the SSCS-L: The questionnaire was translated into German and then checked for accuracy with the help of a bilingual person. Items comprise statements on optimistic thoughts and beliefs within the current moment, for example the expectation that everything will turn out well. These are rated on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). A total score is calculated, with higher values indicating greater state optimism. In the present study, the SOM showed excellent internal consistencies, reflected in Cronbach's alpha (α) = 0.93, and McDonald's omega (ω) = 0.93.

Positive and Negative Affect Schedule

The 20-item Positive and Negative Affect Schedule (PANAS; Breyer & Bluemke, 2016) was used as state measure of positive and negative affect. Participants were asked to rate on a 5-point Likert scale from 1 (*not at all*) to 5 (*extremely*) how they felt in this moment with respect to different emotional states (e.g., anger, happiness). The PANAS is scored using separate sum scores for items indicating positive and negative affect, with higher scores indicating stronger affect. In the present study, the PANAS showed excellent internal consistencies, reflected in $\alpha = 0.91$ and $\omega = 0.91$ for both the positive and the negative affect subscale.

State Trait Anxiety Inventory – State Short Form German

The State Trait Anxiety Inventory—State Short Form German (STAI-SKD; Englert et al., 2011) was used to assess state anxiety. It consists of 5 items asking about typical symptoms of anxiety, e.g., nervousness, tension. Respondents rate to what extent they experience these symptoms in the present moment on a 4-point Likert scale ranging from 1 (*not at all*) to 4 (*very much*). The scale is scored by summing all items to a total score, with higher values representing more state anxiety. In the present study, the STAI-SKD showed excellent internal consistencies, reflected in $\alpha = 0.90$ and $\omega = 0.91$.

Brief Resilience Scale

The 6-item Brief Resilience Scale (BRS; Chmitorz et al., 2018) was used as a proxy measure of resilience as "bouncing back from adversity". Participants indicate to what extent they agree with statements related to recovering quickly after difficult situations. The items are rated on a 5-point Likert scale from 1 (*completely disagree*) to 5 (*completely agree*). Three items are reversed for calculating a total score, with higher values indicating stronger resilience. In the present study, the BRS showed good internal consistencies, $\alpha = 0.89$, $\omega = 0.89$.

Satisfaction with Life Scale

Satisfaction with Life was assessed using the 5-item Satisfaction with Life Scale (SWLS; Janke & Glöckner-Rist, 2012). Respondents rate statements about their Life, e.g., to what extent they feel that they have excellent Living conditions, on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). A sum score of all items is calculated, with higher values expressing greater satisfaction with life. In the present study, the SWLS showed excellent internal consistencies, $\alpha = 0.92$, $\omega = 0.92$.

Sense of Coherence Scale—Short Form

A 3-item short form of the Sense of Coherence scale (SOC-3; Schmalbach et al., 2020) was used to assess sense of coherence. Participants rate their agreement with statements considering different aspects of life (e.g., the extent of comprehensibility in new and unknown situations) on a 7-point Likert scale from 1 (*very seldom or never/feel how good it is to be alive*) to 7 (*very often/ask yourself why you exist at all*). A total score is calculated, with one item being recoded so that higher scores represent higher levels of sense of coherence. The SOC-3 showed good internal consistencies in our sample, $\alpha = 0.82$, $\omega = 0.82$.

Patient Health Questionnaire

The 4-item version of the Patient Health Questionnaire (PHQ-4; Löwe et al., 2010) was used to assess psychopathological symptoms related to anxiety and depression over the past two weeks. Symptoms are rated as having occurred in four frequencies ranging from 0 (*not at all*) to 3 (*almost every day*). A total score is calculated, with higher values representing higher burden related to internalizing symptoms. The PHQ-4 showed good internal consistencies in our sample, $\alpha = 0.89$, $\omega = 0.89$.

Data Analyses

Data Preparation

When single items were missing, the scores were replaced by mean scores per scale. In cases of more than one missing item per scale, the respective scale was removed. Analyses were conducted in Mplus 8.10 (Muthén & Muthén, 2017) and in R (R Core Team, 2023) using the packages *corrplot* (Wei & Simko, 2024), *lavaan* (Rosseel, 2012), *bootnet* (Epskamp et al., 2018), and *qgraph* (Epskamp et al., 2012).

Factorial Validation

Factorial validation analyses were conducted in Mplus 8.10 (Muthén & Muthén, 2017). Following Neff et al.'s (2019) recommendations, we applied the weighted least squares mean- and variance-adjusted (WLSMV) estimator, which is preferred for ordinal Likert ratings with five or fewer response options (e.g., Bandalos, 2014). In addition, it is robust to non-normally distributed data (Swami et al., 2023). Subscales measuring the negative factor, i.e., uncompassionate self-responding (self-judgment, overidentification, isolation) were reverse-coded prior to model estimation. Thereby, higher scores on each of the subscales indicated higher self-compassion.

Factorial Validation of the Long Form of the State Self-Compassion Scale (SSCS-L) As the SSCS-L is a newly developed measure, there are only few studies available evaluating its factor structure (Galiana et al., 2022; Miyagawa et al., 2022; Neff et al., 2021). In contrast, the (trait) SCS (which is based on the same theoretical model) and its factor structure have been investigated in many samples across different countries (Neff et al., 2019; Tóth-Király & Neff, 2021). In most of those studies, solutions using a 6-factor or bifactor ESEM showed the best model fits. Therefore, we based our approach on that of Neff et al. (2021) and tested the following factor models for the SSCS-L: (a) 1-factor, (b) 2-factor, (c) 6-factor, (d) bifactor, and (e) 2-bifactor ESEM. While the 1-factor model tests for one global self-compassion construct, the 2-factor model assumes a two-pole construct with a positive (compassionate self-responding) and a negative pole (uncompassionate self-responding, i.e., the absence of self-compassion). The 6-factor model tests for the presence of six factors, i.e., self-kindness, mindfulness, common humanity, self-judgment, isolation, and overidentification. The bifactor models assume that the construct is best represented by one general factor (G-Factor: global self-compassion in the case of the bifactor model, one positive and one negative factor in the case of the 2-bifactor model) plus six specific factors (S-Factors) in the sense of subscales (Online Resource E for graphical illustrations of all tested models).

Factorial Validation of Short Form of the State Self-Compassion Scale (SSCS-S) For the 6-item short form of the State Self-Compassion Scale (SSCS-S), Neff et al. (2021) found a 1-factor CFA to best represent the structure. We therefore compared the fit of a 1-factor CFA/ESEM, a 2-factor CFA, and a 2-factor ESEM model to determine which best represents the underlying structure.

Model Evaluations

We used well-established goodness-of-fit indices to examine model fit (Moosbrugger & Kelava, 2020), i.e., Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). We applied the following cut-off values for well-fitting models (Moosbrugger & Kelava, 2020): CFI and TLI ≥ 0.95, RMSEA ≤ 0.05, and SRMR ≤ 0.05; and for an acceptable fit: CFI and TLI ≥ 0.90, RMSEA ≤ 0.08, and SRMR ≤ 0.10. However, besides the goodness-of-fit indices we also evaluated the models regarding parameter estimates (i.e., factor loadings and cross-loadings) and content validity, i.e., to what extent the theoretical construct of self-compassion and its subscales were represented through the items.

To address high cross-loadings ($\lambda > 0.30$) and given that economic measures are desirable for most studies, we tested the effects of removing items from the SSCS-L on fit indices. Considering content validity, if the goodness-of-fit-indices and factor loadings remained the same or improved after removal, the reduced version of the SSCS-L was retained. The same approach—removing the critical items and re-running the model—was adopted for models in which an error message was issued by Mplus ("*the residual covariance matrix (theta) is not positive definite.*") Problems with the residual covariance matrix can indicate a misspecification of the model. All models were tested with the data of Wave 1, the favored model was then re-tested with the data from Wave 2 to increase the robustness of the results.

For all scales, reliability indices were calculated, i.e., Cronbach's α and McDonald's ω with $\alpha/\omega \geq 0.70$ considered

acceptable, $\alpha/\omega \geq 0.80$ good and $\alpha/\omega \geq 0.90$ excellent (Moosbrugger and Kelava, 2020). For two-item scales, Spearman-Brown coefficients are considered the most appropriate indicator of internal consistency (Eisinga et al., 2013), with values of 0.50 and 0.70 being considered as fair (e.g., Nutley et al., 2023). As state measure, the SSCS-L and SSCS-S are supposed to assess variable or fluctuating aspects of self-compassion rather than stable self-compassion values. Therefore, we examined the 4-week test–retest stability of the SSCS-L and SSCS-S scores using Spearman correlations.

Correlational Analyses

Zero-order Correlations To shed light on the interrelations between variables and to check the external validity of the questionnaire, we examined zero-order correlations between study variables using Pearson correlations.

Discriminant Validity To ensure conceptual discriminatory power, we followed the procedure proposed by Rönkko and Cho (2022), inspecting the latent correlations (φ) between variables with large zero-order correlations ($r_0 \geq 0.50$; Cohen, 1988). To this end, we estimated a 2-factor CFA for each relevant pair of scales—namely, the respective SSCS-L subscale and the highly correlated external scale capturing such as resilience or negative affect. In each model, all factor loadings were freely estimated, while the variances of the latent factors were fixed to 1. This way, the estimated latent covariance corresponds directly to the measurement error-adjusted correlation (φ). Discriminant validity was considered sufficient if the 95% confidence interval for φ remained entirely below |0.80| (Rönkkö & Cho, 2022).

Psychological Network Analyses Besides zero-order correlations, we performed network analyses. In psychological network models, the variables included in the networks are called nodes, their associations represent edges. Cross-sectional partial correlation network models between state self-compassion and health-related constructs (i.e., optimism, anxiety, positive and negative affect, resilience, sense of coherence, satisfaction with life, and mental distress) were calculated. Since partial correlations control for the association of all variables other than the one under consideration, we examined the unique relationships between the study variables. As estimation technique, we used the graphical Least Absolute Shrinkage and Selection Operator (gLASSO) method which reduces the weight of insignificant edges to zero for a parsimonious model. We used the extended Bayesian information criterion (EBIC) to select the final network model and performed 2,500-draw bootstrapping to assess the robustness of edge weights based on 95% confidence intervals (CI). Different hyperparameters (i.e., $\gamma = 0, 0.25, 0.5$) regulating sparsity of the network were tested to find the model which best represents the associations between nodes (Epskamp & Fried, 2018; Foygel & Drton, 2010), preferring more restrictive networks for denser networks, i.e., $\gamma = 0.5$. The role of each node within the network was assessed using strength indices. To evaluate centrality stability, case-dropping subset bootstrap samples ($n = 2{,}500$) were used, and correlation stability coefficients were calculated for strength (setting correlation to 0.7, with CS ≥ 0.5 indicating a stable network, Epskamp et al., 2018).

We measured psychological concepts as states upon availability of validated state measures and the remaining concepts as traits. We examined the interrelations in two network models, one for state (assessed in Wave 1) and one for trait measures. Thereby, we obtained a momentary assessment of the state concepts and related them to state self-compassion in Wave 1.

Results

Our final sample consisted of $n = 1{,}436$ participants in age from 19 to 88 years ($M = 54.54$; $SD = 14.55$), with 52.8% women ($n = 758$), 47.0% men ($n = 675$), 0.1% non-binary ($n = 2$) and one person not reporting gender. Regarding education level, participants holding a university degree (34.1%) were the biggest group, followed by participants with ten years in school (30.3%). Further details on the sample are in Table 1. Of the 144 zero-order correlations between the 18 items of the SSCS-L, 120 were significant ($p < 0.05$), ranging from $r = -0.06$ to 0.68 (Online Resource D for inter-item correlations).

Factorial Validation of SSCS-L

For the original 18-item scale, the 1- and 2-factor models showed inadequate fit (Table 2). The bifactor ESEM and 2-bifactor ESEM encountered problems in terms of misspecification as non-positive residual covariance matrices were produced. Removing critical variables from the model did not solve the problem. The best-fitting model was the 6-factor ESEM (Online Resource F for factor loadings).

A closer examination of factor loadings revealed that the subscales isolation and mindfulness were not well-defined, i.e., in each of them one or two items had factor loadings of $\lambda < 0.1$ and some of the cross-loadings on other factors were higher than the loadings on the actual factor. These items were removed for reasons of content validity and the models were recalculated. Thereby, we finally concluded with a 16-item version in which items 6 (subscale isolation) and 11 (subscale mindfulness) were removed, with goodness-of-fit indices being equally excellent as those of the 18-item version (Table 3). We retested this 16-items version with the bifactor ESEM model, as this showed an excellent fit in

Table 1 Sample characteristics

	M (SD)	*range*
Age	54.54 (14.55)	19–88 yrs
Gender	***n***	*%*
Women	758	52.8%
Men	675	47.0%
Non-binary	2	0.1%
Not reported	1	0.1%
Educational level	***n***	*%*
No school degree	5	0.3%
Nine years of school	149	10.4%
Ten years of school	435	30.3%
A-level exam	312	21.7%
University degree	490	34.1%
Doctoral degree	45	3.1%
Country	***n***	*%*
Germany	1,370	95.4%
Austria	41	2.9%
Switzerland	17	1.2%
Other	8	0.6%
Recruitment platform	***n***	*%*
WiSoPanel	1,237	86.1%
Clickworker	199	13.9%

Total $n = 1{,}436$. *M* = mean, *SD* = standard deviation

Neff et al. (2019), but we again encountered misspecification problems (Online Resource F for factor loadings for the 6-factor and bifactor ESEM).

Reliability Indices of the SSCS-L

Regarding reliability, the internal consistency values of the four 3-item scales of the SSCS-L (self-kindness, self-judgment, overidentification, common humanity) ranged from 0.64 to 0.81 (ω-values; α-values ranging from 0.62 to 0.81). The two 2-item subscales (isolation, mindfulness) reached Spearman-Brown coefficients between 0.60 and 0.69 (Table 4). Regarding retest stability over 4 weeks, subscales correlated moderately to high ($r_{tt} = 0.57$ to 0.71) between the two assessments (Online Resource G).

Factorial Validation of SSCS-S

For the SSCS-S, the 2-factor ESEM model showed an excellent fit and was superior to other models (1-factor CFA/ESEM and 2-factor CFA; Table 5 for fit indices). There were two well-defined subscales with 3 items each, indicating compassionate and uncompassionate self-responding (Online Resource F for factor loadings).

Reliability Indices for the SSCS-S

The positive compassionate subscale of the SSCS-S showed α values of 0.47/0.50; and ω values of 0.49/0.53 for Wave 1 and Wave 2, respectively, which is below the common cut-off of 0.70. For the negative uncompassionate subscale, reliability was acceptable, $\alpha = 0.68/0.71$; $\omega = 0.68/0.71$ at t1 and t2, respectively (Table 4). Retest stability showed moderate

Table 2 Goodness-of-fit indices for the original 18-item model for SSCS-L in Wave 1 and 2

Original 18-item model	RMSEA	90% CI	CFI	TLI	χ^2 Test	*p*	*df*	SRMR	Comments
Wave 1									
1-factor-ESEM	0.171	0.167; 0.174	0.700	0.660	5780.083	0	135	0.114	
2-factor ESEM	0.115	0.111; 0.119	0.881	0.845	2362.287	0	118	0.050	
6-factor-ESEM	0.040	0,034; 0,046	0.993	0.981	198.193	0	60	0.012	
bifactor ESEM	0.030	0.022; 0.037	0.997	0.990	108.913	0	48	0.009	Residual variance not positive definite for variable 6 (subscale isolation)
2-bifactor ESEM	0.024	0.015; 0.032	0.998	0.994	73.531	0.0014	41	0.007	Residual variance not positive definite for variable 6 (subscale isolation)
Wave 2									
6-factor-ESEM	0.046	0.040; 0.052	0.992	0.979	243.307	0	60	0.012	

ESEM exploratory structural equation model, *RMSEA* Root Mean Square Error of Approximation; 90% CI = 90% Confidence Interval; *CFI* Comparative Fit Index, *TLI* Tucker-Lewis Index; χ^2 Test = Chi^2 Test of model fit, *p* = *p*-value, *df* = degrees of freedom, *SRMR* standardized root mean square residual. The following cut-offs applied (Moosbrugger and Kelava, 2020): For a good fit, CFI and TLI ≥ 0.95, RMSEA ≤ 0.05, and SRMR ≤ 0.05; for an acceptable fit CFI and TLI ≥ 0.90, RMSEA ≤ 0.08, and SRMR ≤ 0.10

Table 3 Goodness-of-fit indices for the reduced 16-item model for SSCS-L in Wave 1 and 2

Reduced 16-item model	RMSEA	90% CI	CFI	TLI	χ^2 Test	*p*	*df*	SRMR	Comments
Wave 1									
6-factor-ESEM	0.030	0.022; 0,038	0.997	0.990	88.921	0	39	0.009	
bifactor ESEM	0.016	0.000; 0.028	0.999	0.997	40.067	0.828	29	0.005	Residual variance not positive definite for variable 8 (subscale overidentification)
Wave 2									
6-factor-ESEM	0.046	0.039; 0.054	0.993	0.980	157.954	0	39	0.010	

RMSEA Root Mean Square Error of Approximation, 90% CI = 90% Confidence Interval, *CFI* Comparative Fit Index, *TLI* Tucker-Lewis Index, χ^2 Test = Chi^2 Test of model fit, *p* = *p*-value, *df* = degrees of freedom, *SRMR* standardized root mean square residual. The following cut-offs applied (Moosbrugger & Kelava, 2020): For a good fit, CFI and TLI ≥ 0.95, RMSEA ≤ 0.05, and SRMR ≤ 0.05; for an acceptable fit CFI and TLI ≥ 0.90, RMSEA ≤ 0.08, and SRMR ≤ 0.10

to high correlations over 4 weeks ($r_{tt\,pos} = 0.61$; $r_{tt\,neg} = 0.70$; details in Online Resource G).

Bivariate Correlations Between the SSCS-L & SSCS-S Subscales and other Psychological Constructs

The zero-order correlations between state self-compassion and other psychological constructs are in Fig. 1. The subscales of the SSCS-L were all significantly correlated with each other ($p < 0.05$), only the subscale common humanity was not correlated with the negative subscales self-judgment and overidentification of the SSCS-L and the SSCS-S negative subscale.

Discriminant Validity

The inspected confidence intervals of the latent correlations of the SSCS-L subscales with other psychological constructs, i.e., sense of coherence, resilience, negative affect, optimism, and psychopathological symptoms, were all below ± 0.80 ($-0.71 \leq \varphi \leq 0.64$), so there was no indication of discriminant validity problems (Online Resource L for details).

Psychological Network

Network 1 in Fig. 2 focuses on state self-compassion in connection with other psychological state measures, while Network 2 shows state self-compassion in relation to trait measures.

First, we focus on the interrelations of the SSCS-L subscales. In both networks, the subscales of state self-compassion showed unique interrelations. The negative factors (self-judgment, isolation, overidentification) all shared positive edges with weights ranging between 0.21 and 0.27. Among the positive factors, self-kindness and mindfulness were strongly related to each other and to common humanity (0.23 to 0.37), while between common humanity and mindfulness only a weak edge (0.07) was identified. There are also clear negative associations between self-kindness and its negative counterpart self-judgment, and between mindfulness and its negative counterpart overidentification (–0.16 to –0.32), while there was no association between common humanity and isolation. This is in line with common humanity being the least central in both networks as indicated by the smallest node strength. Interestingly, a positive edge (0.13 to 0.14) links self-judgment to common humanity.

In Network 1, 29 of 45 possible edges (64.4%) survived LASSO regularization with a mean weight of 0.07. In terms of the edges with other psychological constructs, self-kindness showed the strongest associations with state optimism and positive affect (both 0.16), common humanity with state optimism (0.12), isolation with state anxiety (0.12) and negative affect (0.14), mindfulness with positive affect (0.17) and

Table 4 Internal consistencies of subscales of State Self-Compassion Scale at Wave 1 and 2

Timepoint	SK	SJ	CH	OI		IS	MI
Wave 1 Cronbach's (α)	0.79	0.76	0.68	0.62	*Spearman-Brown coefficient*	0.60	0.67
Wave 1 McDonald's (ω)	0.79	0.76	0.69	0.64			
Wave 2 Cronbach's (α)	0.81	0.79	0.72	0.67	*Spearman-Brown coefficient*	0.64	0.69
Wave 2 McDonald's (ω)	0.81	0.8	0.73	0.68			

SK Self-Kindness, *SJ* Self-Judgment, *CH* Common Humanity, *OI* Overidentification, *IS* Isolation, *MI* Mindfulness. For 3-item scales, Cronbach's *α* and McDonald's *ω* were used, for 2-item scales, Spearman-Brown coefficient was calculated

Table 5 Goodness-of-fit indices for the SSCS-S in wave 1 and 2

6-item SSCS-S	RMSEA	90% CI	CFI	TLI	x^2Test	*p*	*df*	SRMR
Wave 1								
1-factor CFA/ESEM	0.144	0.129, 0.158	0.888	0.813	275.372	0	9	0.049
2-factor CFA	0.097	0.081, 0.113	0.955	0.915	115.192	0	8	0.032
2-factor ESEM	0.025	0.00, 0.052	0.998	0.994	7.61	0.107	4	0.006
Wave 2								
2-factor ESEM	0.047	0.025; 0.071	0.996	0.983	16.481	0	4	0.01

RMSEA Root Mean Square Error of Approximation, 90% CI = 90% Confidence Interval, *CFI* Comparative Fit Index, *TLI* Tucker-Lewis Index, x^2 Test = Chi^2 Test of model fit, *p* = *p*-value, *df* = degrees of freedom, *SRMR* standardized root mean square residual. The following cut-offs applied (Moosbrugger & Kelava, 2020): For a good fit, CFI and TLI ≥ 0.95, RMSEA ≤ 0.05, and SRMR ≤ 0.05; for an acceptable fit CFI and TLI ≥ 0.90, RMSEA ≤ 0.08, and SRMR ≤ 0.10

overidentification with negative affect (0.14). Self-judgment shared no strong unique relations with other factors (all < 0.10).

In Network 2, Linking state self-compassion to trait variables, 29 of 45 edges (64.4%) were retained after LASSO regularization with a mean weight of 0.03. Here, self-kindness shared the strongest edge with satisfaction with life (0.17), mindfulness with resilience (0.22) and overidentification with sense of coherence (–0.13) and satisfaction with life (0.15). Isolation shared a positive edge with psychopathological symptoms (0.19) and negative edges with SOC (–0.14) and satisfaction with life (–0.16). Common humanity and self-judgment shared only weak relations with other factors (all < 0.10). The CS-coefficients were above the threshold of 0.5 for both networks ($CS_{t1} = 0.60$, $CS_{t2} = 0.67$). Plots of strength as centrality indices and bootstrapped CIs of edge weights can be found in Online Resource H. In both networks, the strongest edges emerged between variables that were not subfactors of self-compassion, i.e., between state anxiety and state negative affect (0.62) and state optimism and state positive affect (0.40); in the trait network between psychopathological symptoms and SOC (–0.40). Focusing on edges shared by state self-compassion and either trait or state measures, slightly higher weights were observed for edges with trait constructs, e.g., between mindfulness and resilience (0.22), isolation and mental health problems (0.19), as well as self-kindness and satisfaction with life (0.17).

Discussion

The purpose of this study was to develop a German long and short version of the State Self-Compassion Scale (Neff et al., 2021) and to validate the new scale in a large German-speaking sample. Moreover, we aimed at examining the associations of state self-compassion with other psychological state measures as well as trait-like psychological variables known to be health-promoting.

For the German version of the SSCS-L we removed two items from the original scale (one item each from the mindfulness and isolation subscale) to obtain well-defined factors while retaining excellent model fit. Thereby, our proposed German version results in a 16-item SSCS-L. In our sample, a 6-factor ESEM structure with the factors self-kindness, mindfulness, common humanity, self-judgment, isolation, and overidentification demonstrated the best fit for the SSCS-L. When using the German version of the SSCS-L, six subscale scores should be calculated and used for interpretation, while calculating a total score is inappropriate based on our findings. The convergent validity of the SSCS was supported by zero-order correlations with positive and negative affect as seen in previous validation studies (Galiana et al., 2022; Neff et al., 2021). Latent correlations with conceptually related constructs (e.g., state optimism) were below conventional cut-offs, supporting discriminant validity beyond other health-related constructs. The subscales self-kindness and self-judgment of the SSCS-L showed acceptable or good internal consistencies. In contrast, common humanity (at Wave 1) and overidentification (at both waves) fell slightly below the 0.70 threshold (Moosbrugger and Kelava, 2020) with $\alpha/\omega = 0.62$–0.69. Notably, these were also the subscales that showed internal consistency estimates below 0.70 in some (but not all) of the assessments reported by Neff et al. (2021), Galiana et al. (2022), and Miyagawa et al. (2022). These low reliabilities may reflect the heterogeneity of the respective constructs; however, they should not be overinterpreted, especially given that short scales often yield lower reliability estimates (Ziegler et al., 2014). Finally, the 2-item subscales mindfulness and isolation show internal reliabilities considered fair (e.g., Nutley et al., 2023) given their brevity.

Regarding the 6-item short form SSCS-S, a 2-factor ESEM demonstrated the best fit. In line with this, two scores should be used for interpretation, that is, a positive (compassionate self-responding) and a negative score (uncompassionate self-responding). The internal consistency of the

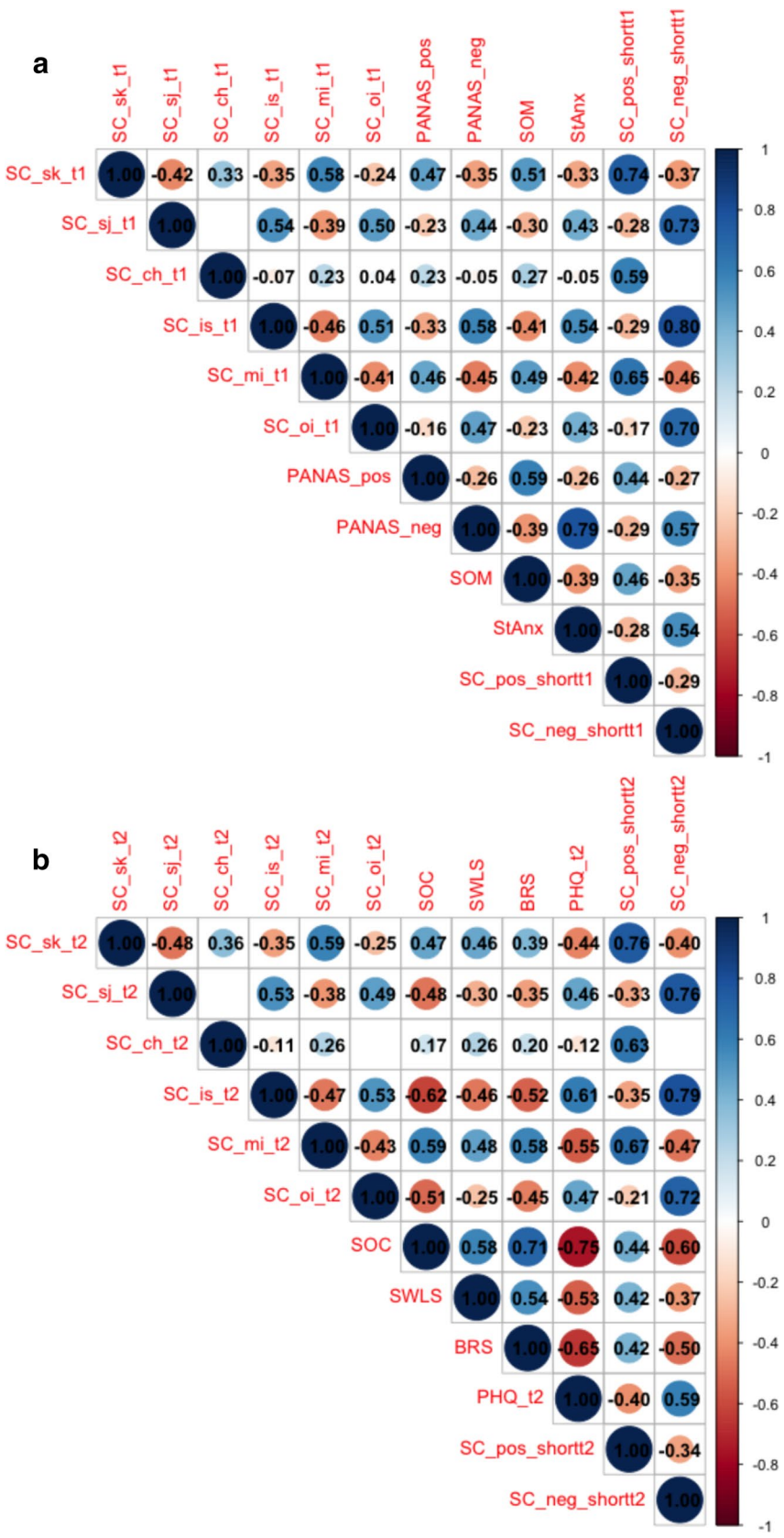

Fig. 1 (a) and (b) Spearman's rank correlations at Wave 1 and 2. Bivariate correlations between variables at Wave 1 (**a**) and Wave 2 (**b**). Values represent correlation coefficients of Spearman's rank correlations. All displayed correlations: $p < 0.05$; non-significant correlations are left blank. *Abbreviations*: SC_sk = self-kindness, SC_sj = self-judgment, SC_ch = common humanity, SC_is = isolation, SC_mi = mindfulness, SC_oi = overidentification, PANAS_pos = positive affect, PANAS_neg = negative affect, SOM = state optimism, StAnx = state anxiety, SOC = sense of coherence, SWLS = satisfaction with life, BRS = resilience, PHQ = mental health problems, SC_pos_short = SSCS-S positive subscale, SC_neg_short = SSCS-S negative subscale. Note. For scales that were examined in both waves, t1 / t2 indicates which assessment it refers to. For scales used for assessment, consult *Measures* in the *Methods* section

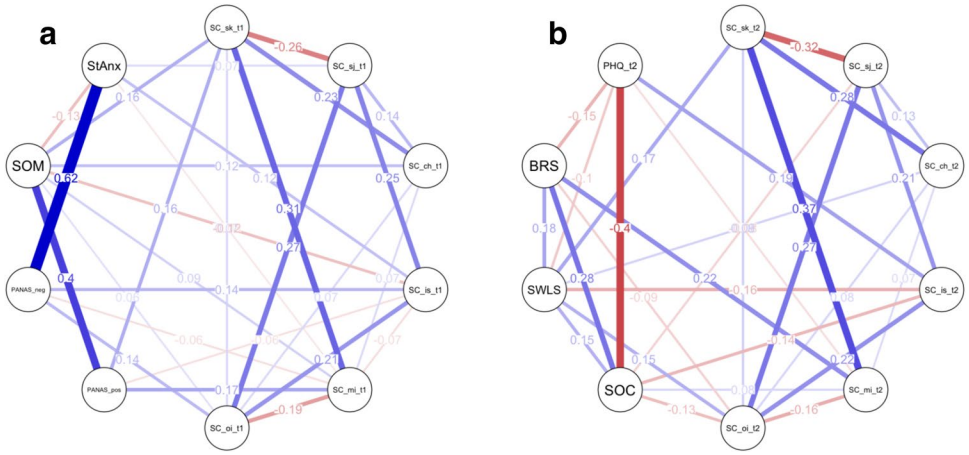

Fig. 2 (a) and (b) Network models on state self-compassion and (a) state measures and (b) trait measures of psychological variables. The lines (i.e. edges) illustrate partial correlations between concepts (i.e., nodes). Blue lines indicate positive relationships, red lines negative relationships. The wider the line, the stronger the association. *Abbreviations*: SC_sk = self-kindness, SC_sj = self-judgment, SC_ch = common humanity, SC_is = isolation, SC_mi = mindfulness, SC_oi = overidentification, PANAS_pos = positive affect, PANAS_neg = negative affect, SOM = state optimism, StAnx = state anxiety, SOC = sense of coherence, SWLS = satisfaction with life, BRS = resilience, PHQ = mental health problems. Note. For scales that were examined in both waves, t1 / t2 indicates which assessment it refers to. For scales used for assessment, consult *Measures* in the *Methods* section

negative subscale was acceptable ($\alpha/\omega = 0.68–0.71$), but notably low for the positive subscale ($\alpha/\omega = 0.47–0.53$).

Based on our data, the calculation of a total score for state self-compassion is not recommended – neither for the long nor the short version of the scale. Moving beyond previous translations and validations, the interrelations between the subscales of state self-compassion and other psychological constructs, i.e., positive and negative affect, state optimism, state anxiety, sense of coherence, satisfaction with life, resilience, and psychopathological symptoms (depression and anxiety), were investigated with bivariate correlations and by means of partial correlational network models.

Regarding the factor structure, while the original English version of the SSCS-L can be evaluated by means of a total score (Neff et al., 2021), our study revealed indications that a total score does not adequately represent the data as the 1-factor ESEM showed insufficient fit and the bifactor ESEM model showed signs of misspecification. Since the SSCS-L has only been developed and published recently, comprehensive evidence on its structure is missing. In the light of the ongoing debate of the factorial structure of the trait measure, relying on the same theoretical model, our results point to similar issues for state self-compassion (e.g., Marsh et al., 2023; Muris & Otgaar, 2020; Neff et al., 2019). It appears that the construct of self-compassion, and probably also state self-compassion, is at least somewhat flexible in its structure, leading to heterogeneous best-fitting models that probably depend on not yet fully understood boundary conditions (e.g., Muris & Otgaar, 2020). Based on our findings, we recommend evaluating the German version of the SSCS-L with 16 items using the six subscales and not to use a total score or higher-order positive and negative factors. According to our data, the 16-item scale was superior to the original 18-item version as the 16-item version demonstrated more clearly defined factors. However, for cross-cultural analyses where measurement comparability is crucial, the full 18 item-scale may be considered, which demonstrated excellent fit for our data. Yet, due to the better-defined factors, we recommend the use of the 16-item version in studies not focusing on cross-cultural comparisons. For both versions, we provide the corresponding Mplus syntax for the 6-factor ESEM and the bifactor ESEM in Online Resource K. We encourage researchers to carefully examine the factor structure in their samples due to potential variability across contexts.

Our analyses did not support a single global self-compassion factor, as the factor loadings were insufficient and the model specification proved problematic. This indicates that the SSCS captures a multidimensional construct, which cannot be adequately captured by the use of a simple sum score. The six subscales showed robust psychometric properties and discriminant validity, each capturing unique aspects of self-compassion. This multidimensional interpretation is in line with current models of state self-compassion (e.g., Galiana et al., 2022; Neff et al., 2021) as they provide clear support for its multidimensional nature. Yet, in contrast to previous work (Neff et al., 2021), we found no evidence for a higher-order unidimensional state self-compassion factor. Instead, in our German sample, item variance was more effectively accounted for by six correlated subscales than by a single overarching factor. This suggests that state self-compassion is better conceptualized as six interrelated but distinct components, rather than as a unified construct. The validated

German version of the SSCS-L, with its six distinct subscales, will allow for more detailed analyses on the relations of state self-compassion with mental health, deepening the understanding of the construct (e.g., Muris & Petrocchi, 2017).

As research questions grow more complex, the need for brief yet psychometrically sound scales for the economic assessment of constructs increased in psychology and health sciences (Ziegler et al., 2014). Whenever economic measures of self-compassion are required or whenever an evaluation using total scores in the sense of a positive and a negative factor (representing compassionate and uncompassionate self-responding) is needed, the use of the SSCS-S is a useful option. However, due to the low internal consistency of the positive factor ($\alpha/\omega = 0.47$–0.53), the scores of this subscale should be used with some caution. The lower internal consistency might result from the overall short scale (Ziegler et al., 2014) and might be due to varying factor loadings across the three items on the positive factor ($\lambda = 0.42$–0.77) and weak inter-item correlations ($r_0 = 0.13/0.19/0.36$; Online Resource D), which may reflect either measurement-related issues or point to the items capturing heterogeneous aspects of compassionate self-responding.

With respect to zero-order correlations, by using the six SSCS-L subscales individually in our correlational analyses, we obtained novel insights into their interrelations. In line with previous studies that investigated trait self-compassion (e.g., Hupfeld & Ruffieux, 2011; MacBeth & Gumley, 2012; Zessin et al., 2015), we found zero-order correlations between the subscales and other psychological constructs in expected directions, i.e., positive correlations with indicators of positive mental health and negative correlations to indicators of negative mental health for the positive subscales of self-compassion, and the opposite pattern for the negative subscales of self-compassion.

However, comparing correlations between the trait SCS subscales vs. our SSCS-L subscales and the psychological constructs, we observed that directions were similar, while effect sizes differed. For example, for negative affect, we found weaker correlations with our SSCS-L subscales compared to associations reported with trait self-compassion (Hupfeld & Ruffieux, 2011). By contrast, for other subscales – e.g., self-kindness/mindfulness and positive affect (Hupfeld & Ruffieux, 2011); or isolation/self-judgment/overidentification and sense of coherence (Mowlaie et al., 2017) –, correlations were stronger in our sample. This suggests that the strength of the interrelations likely varies between state and trait self-compassion. For example, when asked about a specific challenging situation, the extent of state isolation (SSCS-L isolation subscale) is strongly correlated ($r = -0.62$) with sense of coherence. On the other hand, when rating one's general extent of self-compassion, trait isolation (trait SCS subscale) and sense of coherence are only weakly related ($r = -0.12$; Mowlaie et al., 2017).

Common humanity stood out as the subscale with weakest and partly non-significant correlations with other SSCS-L subscales as well as other psychological constructs. These findings contrast with the SCSS-L validation by Neff et al. (2021), where correlations with common humanity were comparable to the other state self-compassion components. For example, the correlations between negative affect and common humanity (Neff et al., 2021: $r = -0.34$ to -0.19 vs. our data: $r = -0.05$) and self-judgment and common humanity ($r = 0.45$ vs. non-significant) were higher in Neff's sample. Yet, our study is in line with the validation in the Spanish sample (Galiana et al., 2022), where no significant relationships emerged between common humanity, negative affect and self-judgment (both $p > 0.05$). These differences may result from cultural or linguistic nuances, which require further study. Alternatively, the lack of significant associations may also be influenced by the relatively low internal consistency of the common humanity subscale in our study, suggesting that measurement limitations could partially account for these findings.

Concerning the network analyses, we deepened the understanding of state self-compassion and its relation to other variables by means of network analyses including the six SSCS-L subscales. The strong edges between the state self-compassion nodes support the systemic view on self-compassion (e.g., Neff, 2003; Neff et al., 2021; Phillips, 2021). Overall, the networks showed that common humanity was the weakest node in the network in terms of strength at both assessment waves, further supporting the small observed zero-order correlations. As centrality represents the importance of a node within a given network (Fried et al., 2017), this goes along with research that shows that common humanity has the smallest unique contribution to positive effects of self-compassion on mental health (Chio et al., 2021; Körner et al., 2015; Muris & Petrocchi, 2017). Since our study was limited to self-reports, one may argue that the weak role of common humanity is due to the fact that it is the component that "mostly clearly distinguishes self-compassion from other self-related constructs such as self-pity or self-centeredness, shifting the focus from the self to how the self is connected to others" (Dreisoerner et al., 2021, p. 25). By contrast, self-kindness was the strongest node of the self-compassion facets showing strong connections with state optimism, positive affect, and satisfaction with life; the second-strongest node was overidentification sharing edges with negative affect and sense of coherence. These findings are in line with the theoretical concept of self-compassion being linked positively to indicators and predictors of positive mental health and negatively to indicators of negative mental health (e.g., MacBeth & Gumley, 2012; Zessin et al., 2015).

Negative edges linked the scales of the positive and negative factor with each other, but we were surprised by positive edges emerging between common humanity and self-judgment (0.13 to 0.14) as well as between common humanity

and overidentification (0.07 to 0.08). This may suggest that the negative (Neff et al., 2021) or non-significant (Galiana et al., 2022) zero-order correlations found in previous studies and in ours (see above) could be driven by non-observed confounding variables, masking an overall positive relationship between those variables. Especially regarding self-judgment, this positive association does not fit with the theoretical model of self-compassion where having a sense of common humanity includes not being too harsh to oneself as people see difficulties as inherent part of life (Neff, 2012). However, one may speculate that people who, in the spirit of common humanity, recognize that all people encounter difficulties could at the same time judge themselves for feeling inadequate in certain situations, in the sense of "others get it right too". However, this kind of negative self-evaluation is exactly what self-compassion should *not* be about and what conceptually distinguishes self-compassion from self-esteem (Neff, 2012). Our findings may suggest that the beneficial effects of common humanity only unfold when other positive aspects of self-compassion, i.e., self-kindness and mindfulness, are also present. Future studies using a combination of quantitative and qualitative methods may help shedding light on the likely complex and multifaceted links between the subscales of uncompassionate self-responding and common humanity.

While mindfulness and self-kindness each showed a strong negative edge with their respective negative counterparts (i.e., isolation and self-judgment), neither a zero-order correlation nor an edge was found between common humanity and isolation. At first sight, this is surprising as common humanity is expected to promote feelings of connectedness by seeing one's own experiences in the frame of common human experience (Neff, 2003, 2012; Neff & Germer, 2013). Based on this finding, we hypothesize that common humanity and isolation are more independent from each when evaluating them in relation to a current challenging situation as this is done in the state self-compassion assessment. People might have the attitude that others also suffer, and suffering is part of the human condition (common humanity), while they may still feel alone with their pain in a current challenging situation (i.e., isolation in the sense of a lack of perceived or received social support or loneliness). Future studies may shed light on this interplay of self-compassion with social support and loneliness. In summary, the surprising and/or non-existent associations we observed between common humanity and the negative subscales of self-compassion may prompt a more critical examination of its role within the self-compassion construct.

Moreover, another edge in our networks stood out: a positive edge between overidentification and satisfaction with life ($r = 0.16$). To our knowledge, only one study on profiles of self-compassion and their relation with other variables identified such a link (Phillips, 2021). Here, a positive partial correlation ($r = 0.10$–0.24) was found between life satisfaction and overidentification, but only for the "moderately self-compassionate" and "highly self-compassionate" profiles (and not for the "uncompassionate" profile, $r = 0.01$). SSCS's means in our sample (Online Resource J for details) lie close to the SCS's means of the "highly" and "moderately self-compassionate" profiles in the Phillips et al. (2021) sample. Also, average SWLS scores were similar in both samples. Therefore, (a) our sample might be mainly characterized by people corresponding to these profiles which (b) therefore shows a unique positive relationship between overidentification and satisfaction with life, and (c) the negative zero-order correlation described above must be merely carried by other effects. However, it is important to note that this finding deviates from an otherwise coherent pattern of previous studies on the relationship between overidentification and life satisfaction (e.g., Neff et al., 2008; Yang, 2016), which have consistently reported negative associations. Further research should explore the relationship between state overidentification and satisfaction with life in detail.

Finally, the strong edges between isolation and state anxiety, negative affect, mental health problems, and (negatively) satisfaction with life support the view of isolation being a strong correlate of psychopathology (López et al., 2018; Muris & Petrocchi, 2017; Muris et al., 2016a).

Limitations and Future Research

The results of our study should be interpreted in light of some limitations. First, even if our study is based on a large and heterogeneous sample ($n = 1{,}436$), we did not cross-validate our findings in an independent sample. Towards the purpose of cross-validation, we used the second wave for some replications, yet the replications were performed on the same sample. Even if our sample was diverse and resembled the general population in terms of socioeconomic status, education, and age, we cannot rule out possible bias resulting from possible non-representativeness of the convenience sample. Self-selection in convenience sampling can limit the generalizability of results (Golzar et al., 2022). Second, we cannot make any statements about the change sensitivity of the scale, for example when used in an experimental paradigm. Third, due to the two assessments of state self-compassion, we were able to draw conclusions about the time stability of its measurement. While Neff et al. (2021), Miyagawa et al. (2022) and Galiana et al. (2022) did not inspect retest reliability (as this is not a typical quality criterion for a state measure), we compared with retest reliabilities that were found for the individual scales of the trait SCS. With $r_{tt} = 0.72$ to 0.92 (Hupfeld & Ruffieux, 2011) retest reliabilities for the trait measure were higher than ours ($r_{tt} = 0.59$ to 0.72) but still, the scores of the state measures seem to be somewhat stable over time. We therefore suggest caution in interpreting the results of the

SSCS as pure state measure since it cannot be ruled out that trait-aspects of self-compassion confound the assessment of state self-compassion or complexly interact with state components. More elaborated studies focusing on the variability and stability of state and trait self-compassion, e.g., using repeated measures and self-compassion inductions, are needed.

Lastly, our study focused on the translation and validation the state self-compassion scale, as part of this aim we explored the associations of state self-compassion with related psychological constructs. Accordingly, our findings should be seen as a contribution to research into the assessment of (state) self-compassion, rather than as merely conceptual work. In line, we did not aim at contrasting different conceptualizations of self-compassion.

To sum up, we aimed to advance research into state self-compassion by providing a first reliable and valid measure of the construct to German-speaking researchers and practitioners. We have established that neither for the long nor the short German version of the SSCS, total scores should be used. For the long version (SSCS-L), our findings suggest the use of six subscales, while we found a 2-factor solution for the short version (SSCS-S) comprising a positive and a negative factor representing (un)compassionate self-responding. Thereby, our findings also contribute to the ongoing discussion on how to conceptualize and measure self-compassion. Moreover, we explored the relationships between the subscales of state self-compassion and other psychological factors, finding evidence for unique links. Thereby, we outline pathways for future research into state and trait self-compassion and their likely complex interrelation.

Supplementary Information The online version contains supplementary material available at https://doi.org/10.1007/s12671-025-02669-7.

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Author Contributions L.v.B.: investigation, conceptualization, methodology, data curation, formal analysis, writing – original draft, project administration. A.M.: methodology, writing – review and editing. A.G.: investigation, resources, writing – review and editing. K.L., M.W. and O.T.: supervision, resources, funding acquisition, writing – review and editing. S.K.S.: investigation, conceptualization, methodology, formal analysis, supervision, writing – review and editing.

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Data Availability Data and code are available under https://osf.io/ut8a9/files/osfstorage.

Declarations

Ethical Approval The study was approved by the Ethics Committee of the State Medical Association of Rhineland-Palatinate, Germany (no. 2022–16402).

Informed Consent All respondents gave written informed consent in accordance with the Declaration of Helsinki.

Competing interests The authors declare no competing interests.

Use of Artificial Intelligence The artificial intelligence tool ChatGPT was used for language refinement and for troubleshooting and adapting R code. It was not employed for generating scientific content, performing statistical analyses, or interpreting results.

References

Arimitsu, K. (2014). Development and validation of the Japanese version of the Self-Compassion Scale. *The Japanese Journal of Psychology, 85*(1), 50–59. https://doi.org/10.4992/jjpsy.85.50

Bandalos, D. L. (2014). Relative performance of categorical diagonally weighted least squares and robust maximum likelihood estimation. *Structural Equation Modeling: A Multidisciplinary Journal, 21*(1), 102–116. https://doi.org/10.1080/10705511.2014.859510

Breines, J. G., & Chen, S. (2012). Self-compassion increases self-improvement motivation. *Personality and Social Psychology Bulletin, 38*(9), 1133–1143. https://doi.org/10.1177/0146167212445599

Breines, J. G., & Chen, S. (2013). Activating the inner caregiver: The role of support-giving schemas in increasing state self-compassion. *Journal of Experimental Social Psychology, 49*(1), 58–64. https://doi.org/10.1016/j.jesp.2012.07.015

Breines, J. G., Toole, A., Tu, C., & Chen, S. (2014). Self-compassion, body image, and self-reported disordered eating. *Self and Identity, 13*(4), 432–448. https://doi.org/10.1080/15298868.2013.838992

Brenner, R. E., Heath, P. J., Vogel, D. L., & Credé, M. (2017). Two is more valid than one: Examining the factor structure of the Self-Compassion Scale (SCS). *Journal of Counseling Psychology, 64*(6), 696–707. https://doi.org/10.1037/cou0000211

Breyer, B., & Bluemke, M. (2016). Deutsche Version der Positive and Negative Affect Schedule PANAS (GESIS Panel). *Zusammenstellung Sozialwissenschaftlicher Items und Skalen (ZIS)*. https://doi.org/10.6102/ZIS242

Chio, F. H. N., Mak, W. W. S., & Yu, B. C. L. (2021). Meta-analytic review on the differential effects of self-compassion components on well-being and psychological distress: The moderating role of dialecticism on self-compassion. *Clinical Psychology Review, 85*, 101986. https://doi.org/10.1016/j.cpr.2021.101986

Chmitorz, A., Wenzel, M., Stieglitz, R.-D., Kunzler, A., Bagusat, C., Helmreich, I., Gerlicher, A., Kampa, M., Kubiak, T., Kalisch, R., Lieb, K., & Tüscher, O. (2018). Population-based validation of a German version of the Brief Resilience Scale. *PLoS ONE, 13*(2), e0192761. https://doi.org/10.1371/journal.pone.0192761

Cleare, S., Gumley, A., & O'Connor, R. C. (2019). Self-compassion, self-forgiveness, suicidal ideation, and self-harm: A systematic review. *Clinical Psychology & Psychotherapy, 26*(5), 511–530. https://doi.org/10.1002/cpp.2372

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Routledge.

Coroiu, A., Kwakkenbos, L., Moran, C., Thombs, B., Albani, C., Bourkas, S., Zenger, M., Brahler, E., & Körner, A. (2018). Structural validation of the self-compassion scale with a German general population sample. *PLoS ONE, 13*(2), e0190771. https://doi.org/10.1371/journal.pone.0190771

Dreisoerner, A., Junker, N. M., & Van Dick, R. (2021). The relationship among the components of self-compassion: A pilot study using a compassionate writing intervention to enhance self-kindness, common humanity, and mindfulness. *Journal of Happiness Studies, 22*(1), 21–47. https://doi.org/10.1007/s10902-019-00217-4

Eisinga, R., Grotenhuis, M. T., & Pelzer, B. (2013). The reliability of a two-item scale: Pearson, Cronbach, or Spearman-Brown? *International Journal of Public Health, 58*(4), 637–642. https://doi.org/10.1007/s00038-012-0416-3

Englert, C., Bertrams, A., & Dickhäuser, O. (2011). Entwicklung der Fünf-Item-Kurzskala STAI-SKD zur Messung von Zustandsangst. *Zeitschrift für Gesundheitspsychologie, 19*(4), 173–180. https://doi.org/10.1026/0943-8149/a000049

Epskamp, S., & Fried, E. I. (2018). A tutorial on regularized partial correlation networks. *Psychological Methods, 23*(4), 617–634. https://doi.org/10.1037/met0000167

Epskamp, S., Cramer, A. O. J., Waldorp, L. J., Schmittmann, V. D., & Borsboom, D. (2012). qgraph: Network visualizations of relationships in psychometric data. *Journal of Statistical Software, 48*(4), 1–18. https://doi.org/10.18637/jss.v048.i04

Epskamp, S., Borsboom, D., & Fried, E. I. (2018). Estimating psychological networks and their accuracy: A tutorial paper. *Behavior Research Methods, 50*(1), 195–212. https://doi.org/10.3758/s13428-017-0862-1

Ewert, C., Vater, A., & Schröder-Abé, M. (2021). Self-compassion and coping: A meta-analysis. *Mindfulness, 12*(5), 1063–1077. https://doi.org/10.1007/s12671-020-01563-8

Finlay-Jones, A. L. (2017). Compassion in clinical practice: Current applications and new directions. *Clinical Psychologist, 21*(2), 59–61. https://doi.org/10.1111/cp.12133

Foygel, R., & Drton, M. (2010). Extended Bayesian information criteria for Gaussian graphical models. *Advances in Neural Information Processing Systems, 23*, 2020–2028. https://doi.org/10.48550/ARXIV.1011.6640

Fried, E. I., Van Borkulo, C. D., Cramer, A. O. J., Boschloo, L., Schoevers, R. A., & Borsboom, D. (2017). Mental disorders as networks of problems: A review of recent insights. *Social Psychiatry and Psychiatric Epidemiology, 52*(1), 1–10. https://doi.org/10.1007/s00127-016-1319-z

Galiana, L., Guillén, M., Pades, A., Flowers, S. L., Vidal-Blanco, G., & Sansó, N. (2022). The Spanish version of the State Self-Compassion Scale-Long Form (SSCS–L): A study of its validity and reliability in a sample of nursing students. *International Journal of Environmental Research and Public Health, 19*(16), 10174. https://doi.org/10.3390/ijerph191610174

Golzar, J., Noor, S., & Tajik, O. (2022). Convenience sampling. *International Journal of Education Language Studies, 1*(2), 72–77. https://doi.org/10.22034/ijels.2022.162981

Göritz, A. S., Borchert, K., & Hirth, M. (2021). Using attention testing to select crowdsourced workers and research participants. *Social Science Computer Review, 39*(1), 84–104. https://doi.org/10.1177/0894439319848726

Grevenstein, D., Aguilar-Raab, C., Schweitzer, J., & Bluemke, M. (2016). Through the tunnel, to the light: Why sense of coherence covers and exceeds resilience, optimism, and self-compassion. *Personality and Individual Differences, 98*, 208–217. https://doi.org/10.1016/j.paid.2016.04.001

Hupfeld, J., & Ruffieux, N. (2011). Validierung einer deutschen Version der Self-Compassion Scale (SCS-D). *Zeitschrift für Klinische Psychologie und Psychotherapie, 40*(2), 115–123. https://doi.org/10.1026/1616-3443/a000088

Janke, S., & Glöckner-Rist, A. (2012). Deutsche Version der Satisfaction with Life Scale (SWLS). *Zusammenstellung Sozialwissenschaftlicher Items und Skalen (ZIS)*. https://doi.org/10.6102/ZIS147

Kelly, A. C., & Stephen, E. (2016). A daily diary study of self-compassion, body image, and eating behavior in female college students. *Body Image, 17*, 152–160. https://doi.org/10.1016/j.bodyim.2016.03.006

Körner, A., Coroiu, A., Copeland, L., Gomez-Garibello, C., Albani, C., Zenger, M., & Brähler, E. (2015). The role of self-compassion in buffering symptoms of depression in the general population. *PLoS ONE, 10*(10), e0136598. https://doi.org/10.1371/journal.pone.0136598

Leary, M. R., Tate, E. B., Adams, C. E., Batts Allen, A., & Hancock, J. (2007). Self-compassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology, 92*(5), 887–904. https://doi.org/10.1037/0022-3514.92.5.887

Leiner, D. J. (2024). *Sosci Survey* (Version 3.5.02) [Computer software]. https://www.soscisurvey.de

Li, Y., Deng, J., Lou, X., Wang, H., & Wang, Y. (2020). A daily diary study of the relationships among daily self-compassion, perceived stress and health-promoting behaviours. *International Journal of Psychology, 55*(3), 364–372. https://doi.org/10.1002/ijop.12610

Liao, K.Y.-H., Stead, G. B., & Liao, C.-Y. (2021). A meta-analysis of the relation between self-compassion and self-efficacy. *Mindfulness, 12*(8), 1878–1891. https://doi.org/10.1007/s12671-021-01626-4

López, A., Sanderman, R., & Schroevers, M. J. (2018). A close examination of the relationship between self-compassion and depressive symptoms. *Mindfulness, 9*(5), 1470–1478. https://doi.org/10.1007/s12671-018-0891-6

Löwe, B., Wahl, I., Rose, M., Spitzer, C., Glaesmer, H., Wingenfeld, K., Schneider, A., & Brähler, E. (2010). A 4-item measure of depression and anxiety: Validation and standardization of the Patient Health Questionnaire-4 (PHQ-4) in the general population. *Journal of Affective Disorders, 122*(1–2), 86–95. https://doi.org/10.1016/j.jad.2009.06.019

MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review, 32*(6), 545–552. https://doi.org/10.1016/j.cpr.2012.06.003

Marsh, H. W., Morin, A. J. S., Parker, P. D., & Kaur, G. (2014). Exploratory structural equation modeling: An integration of the best features of exploratory and confirmatory factor analysis. *Annual Review of Clinical Psychology, 10*(1), 85–110. https://doi.org/10.1146/annurev-clinpsy-032813-153700

Marsh, H. W., Fraser, M. I., Rakhimov, A., Ciarrochi, J., & Guo, J. (2023). The bifactor structure of the Self-Compassion Scale: Bayesian approaches to overcome exploratory structural equation modeling (ESEM) limitations. *Psychological Assessment, 35*(8), 674–691. https://doi.org/10.1037/pas0001247

Mey, L. K., Wenzel, M., Morello, K., Rowland, Z., Kubiak, T., & Tüscher, O. (2023). Be kind to yourself: The implications of momentary self-compassion for affective dynamics and well-being in daily life. *Mindfulness, 14*(3), 622–636. https://doi.org/10.1007/s12671-022-02050-y

Millstein, R. A., Chung, W.-J., Hoeppner, B. B., Boehm, J. K., Legler, S. R., Mastromauro, C. A., & Huffman, J. C. (2019). Development

of the state optimism measure. *General Hospital Psychiatry, 58*, 83–93. https://doi.org/10.1016/j.genhosppsych.2019.04.002

Miyagawa, Y., Tóth-Király, I., Knox, M. C., Taniguchi, J., & Niiya, Y. (2022). Development of the Japanese version of the State Self-Compassion Scale (SSCS-J). *Frontiers in Psychology, 12*, 779318. https://doi.org/10.3389/fpsyg.2021.779318

Montero-Marín, J., Gaete, J., Demarzo, M., Rodero, B., Lopez, L. C. S., & García-Campayo, J. (2016). Self-criticism: A measure of uncompassionate behaviors toward the self, based on the negative components of the Self-Compassion Scale. *Frontiers in Psychology, 7*, 1281. https://doi.org/10.3389/fpsyg.2016.01281

Moosbrugger, H., & Kelava, A. (Eds.). (2020). *Testtheorie und Fragebogenkonstruktion*. Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-662-61532-4

Morin, A. J. S., Arens, A. K., & Marsh, H. W. (2016). A bifactor exploratory structural equation modeling framework for the identification of distinct sources of construct-relevant psychometric multidimensionality. *Structural Equation Modeling, 23*(1), 116–139. https://doi.org/10.1080/10705511.2014.961800

Morin, A. J. S., Myers, N. D., & Lee, S. (2020). Modern factor analytic techniques: Bifactor models, exploratory structural equation modeling (ESEM), and bifactor-ESEM. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of sport psychology* (1st ed., pp. 1044–1073). Wiley. https://doi.org/10.1002/9781119568124.ch51

Mowlaie, M., Mikaeili, N., Aghababaei, N., Ghaffari, M., & Pouresmali, A. (2017). The relationships of sense of coherence and self-compassion to worry: The mediating role of personal intelligence. *Current Psychology, 36*(3), 630–636. https://doi.org/10.1007/s12144-016-9451-1

Muris, P., & Otgaar, H. (2020). The process of science: A critical evaluation of more than 15 years of research on self-compassion with the Self-Compassion Scale. *Mindfulness, 11*(6), 1469–1482. https://doi.org/10.1007/s12671-020-01363-0

Muris, P., & Petrocchi, N. (2017). Protection or vulnerability? A meta-analysis of the relations between the positive and negative components of self-compassion and psychopathology: Self-compassion: Protection or vulnerability? *Clinical Psychology & Psychotherapy, 24*(2), 373–383. https://doi.org/10.1002/cpp.2005

Muris, P., Meesters, C., Pierik, A., & De Kock, B. (2016a). Good for the self: Self-compassion and other self-related constructs in relation to symptoms of anxiety and depression in non-clinical youths. *Journal of Child and Family Studies, 25*(2), 607–617. https://doi.org/10.1007/s10826-015-0235-2

Muris, P., Otgaar, H., & Petrocchi, N. (2016b). Protection as the mirror image of psychopathology: Further critical notes on the Self-Compassion Scale. *Mindfulness, 7*(3), 787–790. https://doi.org/10.1007/s12671-016-0509-9

Muthén, L. K., & Muthén, B. O. (2017). *Mplus* (Version 8.10) [Computer software]. Muthén & Muthén.

Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity, 2*(3), 223–250. https://doi.org/10.1080/15298860309027

Neff, K. D. (2012). The science of self-compassion. In C. Germer & R. Siegel (Eds.), *Compassion and wisdom in psychotherapy* (pp. 77–92). Guilford Press.

Neff, K. D. (2016). The self-compassion scale is a valid and theoretically coherent measure of self-compassion. *Mindfulness, 7*(1), 264–274. https://doi.org/10.1007/s12671-015-0479-3

Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the mindful self-compassion program. *Journal of Clinical Psychology, 69*(1), 28–44. https://doi.org/10.1002/jclp.21923

Neff, K. D., Rude, S. S., & Kirkpatrick, K. L. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality, 41*(4), 908–916. https://doi.org/10.1016/j.jrp.2006.08.002

Neff, K. D., Pisitsungkagarn, K., & Hsieh, Y.-P. (2008). Self-compassion and self-construal in the United States, Thailand, and Taiwan. *Journal of Cross-Cultural Psychology, 39*(3), 267–285. https://doi.org/10.1177/0022022108314544

Neff, K. D., Tóth-Király, I., Yarnell, L. M., Arimitsu, K., Castilho, P., Ghorbani, N., Guo, H. X., Hirsch, J. K., Hupfeld, J., Hutz, C. S., Kotsou, I., Lee, W. K., Montero-Marin, J., Sirois, F. M., de Souza, L. K., Svendsen, J. L., Wilkinson, R. B., & Mantzios, M. (2019). Examining the factor structure of the Self-Compassion Scale in 20 diverse samples: Support for use of a total score and six subscale scores. *Psychological Assessment, 31*(1), 27–45. https://doi.org/10.1037/pas0000629

Neff, K. D., Tóth-Király, I., Knox, M. C., Kuchar, A., & Davidson, O. (2021). The development and validation of the State Self-Compassion Scale (long- and short form). *Mindfulness, 12*(1), 121–140. https://doi.org/10.1007/s12671-020-01505-4

Neff, K. D. (2024). *Self-compassion*. Self-compassion: Dr. Kristin Neff. https://self-compassion.org. Accessed 9 Dec 2024.

Nutley, S. B., Burén, J., & Thorell, L. B. (2023). COVID-19 restrictions resulted in both positive and negative effects on digital media use, mental health, and lifestyle habits. *International Journal of Environmental Research and Public Health, 20*(16), 6583. https://doi.org/10.3390/ijerph20166583

Petrocchi, N., Ottaviani, C., & Couyoumdjian, A. (2014). Dimensionality of self-compassion: Translation and construct validation of the self-compassion scale in an Italian sample. *Journal of Mental Health, 23*(2), 72–77. https://doi.org/10.3109/09638237.2013.841869

Phillips, W. J. (2021). Self-compassion mindsets: The components of the self-compassion scale operate as a balanced system within individuals. *Current Psychology, 40*(10), 5040–5053. https://doi.org/10.1007/s12144-019-00452-1

R Core Team. (2023). *R: A language and environment for statistical computing*. (Version 4.3.2) [Computer software]. R Foundation for Statistical Computing. https://www.R-project.org/

Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the Self-Compassion Scale. *Clinical Psychology & Psychotherapy, 18*(3), 250–255. https://doi.org/10.1002/cpp.702

Rönkkö, M., & Cho, E. (2022). An updated guideline for assessing discriminant validity. *Organizational Research Methods, 25*(1), 6–14. https://doi.org/10.1177/1094428120968614

Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software, 48*, 1–36. https://doi.org/10.18637/jss.v048.i02

Schäfer, S. K., Sopp, M. R., Schanz, C. G., Staginnus, M., Göritz, A. S., & Michael, T. (2020). Impact of COVID-19 on public mental health and the buffering effect of a sense of coherence. *Psychotherapy and Psychosomatics, 89*(6), 386–392. https://doi.org/10.1159/000510752

Schäfer, S. K., Fritz, J., Sopp, M. R., Kunzler, A. M., Von Boros, L., Tüscher, O., Göritz, A. S., Lieb, K., & Michael, T. (2023a). Interrelations of resilience factors and their incremental impact for mental health: Insights from network modeling using a prospective study across seven timepoints. *Translational Psychiatry, 13*(1), 328. https://doi.org/10.1038/s41398-023-02603-2

Schäfer, S. K., Von Boros, L., Göritz, A. S., Baumann, S., Wessa, M., Tüscher, O., Lieb, K., & Möhring, A. (2023b). The Perceived Stress Scale 2&2: A two-factorial German short version of the Perceived Stress Scale. *Frontiers in Psychiatry, 14*, 1195986. https://doi.org/10.3389/fpsyt.2023.1195986

Schmalbach, B., Tibubos, A. N., Zenger, M., Hinz, A., & Brähler, E. (2020). Psychometrische Evaluation und Normwerte einer Ultrakurzform der Sense of Coherence Scale "SOC-3." *PPmP - Psychotherapie · Psychosomatik · Medizinische Psychologie*, *70*(02), 86–93. https://doi.org/10.1055/a-0901-7054

Sirois, F. M., Kitner, R., & Hirsch, J. K. (2015). Self-compassion, affect, and health-promoting behaviors. *Health Psychology, 34*(6), 661–669. https://doi.org/10.1037/hea0000158

Swami, V., Maïano, C., & Morin, A. J. S. (2023). A guide to exploratory structural equation modeling (ESEM) and bifactor-ESEM in body image research. *Body Image, 47*, 101641. https://doi.org/10.1016/j.bodyim.2023.101641

Thøgersen-Ntoumani, C., Dodos, L., Chatzisarantis, N., & Ntoumanis, N. (2017). A diary study of self-compassion, upward social comparisons, and body image-related outcomes. *Applied Psychology: Health and Well-Being, 9*(2), 242–258. https://doi.org/10.1111/aphw.12089

Tóth-Király, I., & Neff, K. D. (2021). Is self-compassion universal? Support for the measurement invariance of the Self-Compassion Scale across populations. *Assessment, 28*(1), 169–185. https://doi.org/10.1177/1073191120926232

Tüscher, O., Wessa, M., Göritz, A. S., Möhring, A., Schäfer, S. K., & von Boros, L. (2022). *Improvement of assessment of resilience-related concepts using the Ant-Colony-Optimization Algorithm: Ultra-short German versions of the State and Trait Self-Compassion Scales and the Perceived Stress Scale. Preregistration*. https://doi.org/10.23668/psycharchives.6665

Umphrey, L. R., Sherblom, J. C., & Swiatkowski, P. (2021). Relationship of self-compassion, hope, and emotional control to perceived burdensomeness, thwarted belongingness, and suicidal ideation. *Crisis, 42*(2), 121–127. https://doi.org/10.1027/0227-5910/a000697

Veneziani, C. A., Fuochi, G., & Voci, A. (2017). Self-compassion as a healthy attitude toward the self: Factorial and construct validity in an Italian sample. *Personality and Individual Differences, 119*, 60–68. https://doi.org/10.1016/j.paid.2017.06.028

Wei, T., & Simko, V. (2024). *corrplot: Visualization of a correlation matrix* (Version 0.95) [Computer software]. https://github.com/taiyun/corrplot

Yang, X. (2016). Self-compassion, relationship harmony, versus self-enhancement: Different ways of relating to well-being in Hong Kong Chinese. *Personality and Individual Differences, 89*, 24–27. https://doi.org/10.1016/j.paid.2015.09.006

Yang, Y., Zhang, M., & Kou, Y. (2016). Self-compassion and life satisfaction: The mediating role of hope. *Personality and Individual Differences, 98*, 91–95. https://doi.org/10.1016/j.paid.2016.03.086

Zessin, U., Dickhäuser, O., & Garbade, S. (2015). The relationship between self-compassion and well-being: A meta-analysis. *Applied Psychology: Health and Well-Being, 7*(3), 340–364. https://doi.org/10.1111/aphw.12051

Ziegler, M., Kemper, C. J., & Kruyen, P. (2014). Short scales – five misunderstandings and ways to overcome them. *Journal of Individual Differences, 35*(4), 185–189. https://doi.org/10.1027/1614-0001/a000148

Zuroff, D. C., Igreja, I., & Mongrain, M. (1990). Dysfunctional attitudes, dependency, and self-criticism as predictors of depressive mood states: A 12-month longitudinal study. *Cognitive Therapy and Research, 14*(3), 315–326. https://doi.org/10.1007/BF01183999

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