



Translation and Factorial Validation of the Self-Compassion Scale for Adolescents in a German Community Sample

Elena Gruber¹ · Ines Baumann¹ · Eva Vonderlin¹ · Hinrich Bents¹ · Thomas Heidenreich² · Johannes Mander¹ · Julia Kalmar¹

Received: 16 November 2021 / Accepted: 16 March 2023 / Published online: 7 April 2023
© The Author(s) 2023

Abstract

Self-compassion, which refers to being kind and understanding toward oneself when suffering or experiencing personal inadequacies, is widely seen as a protective factor against mental health problems in adolescents and adults. To date, most research is conducted on adults using the Self-Compassion Scale (SCS), although adolescence is seen as a challenging period in life. Self-compassion research has only recently started to focus on childhood and adolescence. We aimed to translate the English version of the SCS for adolescents into German, test its psychometric properties, and examine potential gender differences more closely. We used confirmatory factor analysis (CFA) to find the best-fitting model out of a two, three, and six-factorial solution. The sample consisted of 255 adolescents, 10 to 19 years old, from a community sample. The study was designed as an online survey. We found the six-factorial solution to best fit our data. Males were significantly more self-compassionate than females. The Self-Compassion Scale – Children and Adolescents (SCS-CA) and its subscales showed good internal consistency as well as good content, criterion, and construct validity with measures of mindfulness, quality of life, and psychopathology. We discuss implications of these findings for a better understanding of adolescent well-being and mental health, as well as potential benefits of a future application of this measure. Overall, our findings suggest that the developed questionnaire is an economical, valid, and reliable measure to assess self-compassion in German adolescents. Trial registration: From ClinicalTrials.gov, Identifier: NCT04034576 (registered 07/17/19).

Keywords Self-compassion · Validation · Self-compassion scale · Mental health · Adolescence

Highlights

- Translation and validation of the SCS for adolescents from English to German with 10- to 19-year-olds from a community sample.
- CFA indicates that a six-factorial solution for SCS-CA in adolescents best fits the data.
- Good psychometric properties and replication of the link of self-compassion, mindfulness, and psychopathology.
- Male adolescents were significantly more self-compassionate than females.
- One step in better understanding adolescent well-being, mental health, and potential resilience factors.

Supplementary information The online version contains supplementary material available at <https://doi.org/10.1007/s10826-023-02569-1>.

✉ Elena Gruber
elena.gruber@zpp.uni-hd.de

¹ Psychological Institute, Center for Psychological Psychotherapy, University of Heidelberg, Bergheimer Straße 58a, 69115 Heidelberg, Germany

² Department of Social Work, Education and Nursing, University of Applied Sciences Esslingen, Flandernstraße 101, 73732 Esslingen, Germany

Today, many children, adolescents, and adults are confronted with increasing expectations at home, school, and work and often feel overwhelmed and stressed. Thus, research has started to shift from being focused on risk and vulnerability to potentially protective factors. One of these protective variables is self-compassion. This construct originates from Buddhist philosophy and was defined by Kristin Neff (2003) as an open and understanding attitude toward oneself when confronted with one's own weaknesses, inadequacies, and suffering. Self-compassion consists of three components: self-kindness,

common humanity, and mindfulness. Neff contrasted those main components with an antagonist, each receiving three bipolar components: 1) self-kindness versus self-judgment, 2) common humanity vs. isolation, and 3) mindfulness vs. overidentification. Self-kindness means with kindness and respect when confronted with personal failure instead of being harsh on oneself. Common humanity refers to being able to see failures as part of human nature and thus feeling a connection to other people rather than feeling alone and isolated. The third component, mindfulness, is a mental state of openness and acceptance when confronted with negative events and suffering instead of suppressing or overthinking (Gruber et al., 2020). In 2016, Neff updated her definition of self-compassion and added emotional, cognitive, and attentional processes. According to her, people respond emotionally to failure or suffering (with self-kindness or self-judgment), cognitively understand their dilemma (feeling connected or isolated), and focus their attention on this condition (being mindful or overidentifying), thus always balancing between being compassionate and uncompassionate (Neff, 2016).

Self-compassion and Its Effects in Adults

Since the implementation of self-compassion in 2003, many studies have investigated potential positive effects on mental health and overall protective functions of self-compassion in adults. Barnard and Curry (2011) found positive correlations with well-being. A meta-analysis by MacBeth and Gumley (2012) examined healthy adults and reported a robust, significant negative association between self-compassion and overall psychopathology. More positive associations have been reported for quality of life (Van Dam et al., 2011), interpersonal conflict resolution (Yarnell & Neff, 2013), body appreciation (Pullmer et al., 2021), happiness (Neff et al., 2007), overall psychological well-being (Krieger et al., 2015; Yarnell & Neff, 2013; Zessin et al., 2015), emotional intelligence (Heffernan et al., 2010), positive affect (Krieger et al., 2015; Neff et al., 2007), self-improvement motivation (Breines & Chen, 2012), and wisdom (Neff et al., 2007) in clinical and non-clinical samples. Negative associations for adults have been found with psychological distress (MacBeth & Gumley, 2012), eating pathology (Pullmer et al., 2021), depression (Castilho et al., 2015; Gilbert & Procter, 2006; Krieger et al., 2016a; Körner et al., 2015; MacBeth & Gumley, 2012; Raes, 2010, 2011), anxiety (Gilbert & Procter, 2006; MacBeth & Gumley, 2012; Raes, 2010), discrimination (Pullmer et al., 2021), negative affect (Krieger et al., 2015; Neff et al., 2007), rumination (Raes, 2010), shame (Gilbert & Procter, 2006), and academic failure (Neff et al., 2005).

In general, mindfulness-based compassion practices (MBCPs) are of high scientific interest, and many studies investigate their implementation in routine therapy (Blanck et al., 2018; Kuyken et al., 2016; Mander et al., 2019). There are different approaches to improving MBCP, namely “Acceptance and Commitment Therapy” (ACT; Hayes et al., 2012), “Compassion-Focused Therapy” (CFT; Gilbert, 2009), “Mindfulness Self-Compassion” (MSC; Neff & Germer, 2013), and “Making Friends With Yourself” (MFY; Bluth et al., 2016). ACT mentions self-compassion as one of its main targets, while others invented special treatment forms to foster self-compassion in adults (CFT, MSC) and in children and adolescents (MFY).

Self-compassion and Its Effects in Children and Adolescents

Adolescence is often a difficult and vulnerable phase in life, as young people undergo massive changes. Adolescents are confronted with biological and cognitive changes, e.g., body growth or changes in brain structures and functioning (Blakemore et al., 2009; Susman & Dorn, 2009). Moreover, as they try to develop self-efficacy and their own identity, they often feel stress, which is associated with depression and anxiety (Bryne et al., 2007; Grant, 2013). Furthermore, gender differences seem to play an important role during this time. Male adolescents seem to be more resilient to stress (Parker & Brotchie, 2010). Female adolescents were reported to be twice as likely to experience depression and two to three times more likely to experience anxiety than males (Beesdo et al., 2009; Thapar et al., 2012). Given these aspects, many researchers argue that self-compassion may play an important role as a protective factor, especially during adolescence (Cunha et al., 2016; Neff & McGehee, 2010).

Although this field of research seems to be promising, the number of published studies is lagging behind research in adults (Muris et al., 2016b). A first study found strong negative correlations between self-compassion, trait anxiety ($r = -0.73$), and depressive symptoms ($r = -0.60$) (Neff & McGehee, 2010). Subsequent studies found negative correlations between self-compassion, perceived stress, negative affect, anxiety, depression, anger, vulnerable narcissism, panic complaints, suicidality, and post-traumatic stress symptoms, and positive correlations with mental health; effect sizes were medium to large (r between .151 and .170) (Barry et al., 2015; Bluth & Blanton, 2014; Marshall et al., 2015; Zeller et al., 2015). A meta-analysis confirmed a strong negative link between self-compassion and psychological distress, with large effect sizes, while a literature review found strong evidence for self-compassion playing an important role in the prevention of depression

(Marsh et al., 2018; Pullmer et al., 2019) and confirmed gender and age-associated differences (Bluth & Blanton, 2015; Castilho et al., 2017; Sun et al., 2016). These findings emphasize the importance of self-compassion as a resilience factor in adolescents.

Relevant Factors in Developing Self-compassion

For a better understanding of the relevance of self-compassion in mental health, it is important to closely examine factors that help or hinder its development. There are first indicators that self-compassion interventions help improve mental health across societies (Finlay-Jones et al., 2018; Lou et al., 2022). One important etiological model goes back to the compassion research of Gilbert and colleagues (Gilbert, 2009; Gilbert et al., 2014; Gilbert et al., 2011; Gilbert & Procter, 2006). They found that fear of positive emotions and fear of self-compassion can be relevant risk factors that come along with various mental health problems. People high in shame and self-criticism were most fearful of positive emotions due to a hyperactive threat system, insecure adult attachment, and, most often, experiential avoidance. These characteristics mostly stem from abusive, invalidating, or neglectful backgrounds, certain parenting practices, and classical conditioning (Gilbert et al., 2014). Thus, it can be assumed that the development of self-compassion is closely related to a wider social context of adolescents: socio-economic factors, marginalization, and social exclusion increase the probability to experience abuse, invalidation, and neglect.

With regard to parental practices, cultural differences were found between Western and Eastern cultures. In collectivistic cultures that use shame, “loss of face,” or self-criticism as a method to control/regulate one’s behavior (e.g., Taiwan or Japan), people tend to be less compassionate and self-compassionate than in cultures where parents are more forgiving and warm (e.g., Thailand, USA) (Finlay-Jones et al., 2018; Lou et al., 2022; Montero-Marín et al., 2018; Neff et al., 2008). Gilbert and Procter (2006) point out that warmth and reassurance are important concepts in developing any form of compassion. Furthermore, Neff and colleagues (2008) found a gender gap in self-compassion. American men are far more self-compassionate than women, a fact that could not be replicated for Eastern cultures.

The Assessment of Self-compassion

The Self-Compassion Scale (SCS) by Neff (2003) is the most common assessment tool for self-compassion. It

consists of 26 items on six subscales representing the three bipolar components of self-compassion. Neff (2003) originally reported a six-factor and a higher-order factor solution. The results of subsequent studies were inconclusive. Some replicated Neff’s results (Benda & Reichová, 2016; Castilho et al., 2015; Cunha et al., 2016; Dundas et al., 2016); others did not (Costa et al., 2016; Hupfeld & Ruffieux, 2011; Lopéz et al., 2015; Petrocchi et al., 2013; Williams et al., 2014). By now, there are numerous suggestions for the ideal factorial structure: a single-factor model (Deniz et al., 2008), a two-factor model representing self-compassion (SCS-POS) and self-coldness (SCS-NEG) (Costa et al., 2016; Lopéz et al., 2015; Stolow et al., 2016), a three-factor model representing the basic components of self-compassion (Hupfeld & Ruffieux, 2011), a four-factor model (Zeng et al., 2016), and a six-factor model (Benda & Reichová, 2016; Castilho et al., 2015; Costa et al., 2016; Cunha et al., 2016; Dundas et al., 2016; Hupfeld & Ruffieux, 2011; Petrocchi et al., 2013). In 2019, Neff and colleagues reexamined the factorial structure in various samples and found a six-factor model and a single-bifactor model to best fit the data. A bifactor model allows covariances between factors that rise from a general factor (here: self-compassion) and also tolerates the individual factors to contribute to variance in their own item subset (Reise et al., 2010). These findings were supported by further research (Neff et al., 2017; Tóth-Király et al., 2016).

In recent years, there has been debate about the use of the total score. Muris and Petrocchi (2017) uttered concerns because of the total score containing negative components. They argued that this might lead to an overestimation of the negative relationship between self-compassion and psychopathology. In 2019, Neff emphasized the validity of working with a total score, underlining that the SCS is used to examine self-compassion with its positive and negative aspects, as she defined it in 2003 (Neff, 2016; Neff et al., 2019).

Translation and Cultural Adaptation of the SCS-CA

So far, the SCS for adults has been translated into many different languages, e.g., Czech (Benda & Reichová, 2016), Dutch (Lopéz et al., 2015), German (Hupfeld & Ruffieux, 2011), Greek (Mantzios et al., 2013), Italian (Petrocchi et al., 2013), Iranian (Azizi et al., 2013), Portuguese (Castilho et al., 2015), Spanish (García-Campayo et al., 2014), and Turkish (Deniz et al., 2008). Some of the problems in replicating the factor structure may stem from translating the original English version to other languages, as the items have to suit the culture and therefore are sometimes adapted, which is a common problem in translating

questionnaires (Auer et al., 2000; Behling & Law, 2000). The German version SCS-D (Hupfeld & Ruffieux, 2011) replicates Neff's six-factorial solution and was merely translated and not culturally adapted (see also: Heim et al., 2021). Stolow and colleagues (2016) adapted the English version of the SCS into a version for adolescents, so that they could better understand what the items mean (e.g., Item 2: "When I'm feeling down, I tend to obsess and fixate on everything that's wrong" was adapted to Item 2: "When I feel sad or down, it seems like I'm the only one who feels that way"). The SCS for adolescents has not been as well distributed as the original SCS. There is only a 17-item English version SCS Youth for children from 10 to 14 years old (Neff, 2021) and a Portuguese version (Cunha et al., 2016). In order to further spread the SCS for adolescents, we translated Stolow et al.'s (2016) questionnaire for adolescents into German, creating the SCS-CA.

Purpose of the Study

Given the reasonable assumption that self-compassion might be an important resilience factor, especially in the difficult time of growing into an adult, and as it is proven to buffer against mental health problems and foster well-being, this study aims to 1) translate the SCS for adolescents (Stolow et al., 2016) into German in order to make it applicable for German-speaking countries; 2) examine the factorial structure of this translation, comparing a two, three, and six-factor solution using CFA in a community sample; 3) test reliability and validity by investigating internal consistency and various correlations between SCS-CA, measures of mindfulness, quality of life, and externalizing and internalizing symptoms; and 4) examine potential gender differences.

Method

Sample

Inclusion criteria were sufficient German language skills, internet access, and between 10 and 19 years old. General exclusion criteria were age under 10 or over 19 years and no data available for SCS-CA. These criteria led to a final sample of 255 participants between 10 and 19 years old ($M = 14.9$, $SD = 2.6$), of which 59.2% were female. Most of the participants were either students attending Gymnasium (secondary school) ($n = 172$, 67.5%), which means they attend this school form for eight years after four years of elementary school and terminate with a general qualification for university, or university students ($n = 19$, 7.5%). Females with a higher level of education were most interested in the study. A country-wide evaluation of

demographic aspects revealed that 51.2% of the general German population is female, while 48.27% of 10 – 19-year-olds are female, implying that females are over-represented in our study (Zensus, 2011). Since we collected our data in an university town, we expected different demographic aspects for this population. In this city, 52% of the general population is female, and 52.8% of the 10 – 19 year-olds are female; most students attend Gymnasium (secondary school) (18.9%) (Zensus, 2011). This implies that females are only marginally overrepresented in our study compared to the general population of this town.

Different authors recommend different sample sizes to ensure reliability and validity in measure development. The rule of thumb is a ratio of 10:1 for respondents to items (Boateng et al., 2018; Nunnally, 1978). Since the SCS-CA consists of 26 items, this would entail a sample size of about 260 respondents. Some authors argue that for factorial validations, a sample size of 200 to 300 participants is sufficient (Boateng et al. 2018; Comrey, 1988), while others aim at bigger sample sizes for optimal results (Clark & Watson, 1995; DeVellis, 2003). Considering these recommendations and possible drop-outs, we invited 2000 individuals between 10 and 19 years old from a university city in Germany to take part in the study. The local registration office provided the addresses. In total, 255 German children and adolescents provided data for this study, making the response rate 14.7%. Given that we conduct factorial analyses, and the general rule of thumb is met, we classified this sample size as sufficient.

Measures

Self-compassion scale—children and adolescents (SCS-CA)

Neff (2003) developed the SCS as a self-report questionnaire to assess self-compassion in adolescents and adults. The SCS consists of 26 items on six subscales (self-judgment, overidentification, isolation, self-kindness, common humanity, and mindfulness). It is rated on a 5-point Likert scale (1 = *almost never* to 5 = *almost always*). We based our survey on a version of the SCS specifically revised for children and adolescents by Stolow and colleagues (2016) and translated it into German. The reliability of the English version exceeds Cronbach's $\alpha = 0.70$, except for the mindfulness subscale (Cronbach's $\alpha = 0.54$) (Stolow et al., 2016). Furthermore, Stolow et al. (2016) calculated two self-compassion scores for each participant, summing up the positive and negative subscales of the original SCS (SCS-POS and SCS-NEG). These scores showed high internal consistencies (SCS-POS: Cronbach's $\alpha = 0.87$, SCS-NEG: Cronbach's $\alpha = 0.92$). Self-criticism showed significantly higher associations with SCS-NEG than with SCS-POS, and both SCS-NEG and SCS-POS correlated significantly with measures of self-esteem

(Stolow et al. 2016). Therefore, both convergent and discriminant validity were demonstrated.

Child and adolescent mindfulness measure (CAMM)

Greco et al. (2011) developed this measure to assess mindfulness skills. It consists of 10 items, rated on a 5-point Likert scale (0 = *false* to 4 = *always true*). Cronbach's Alpha was reported as 0.81. The CAMM scores show small to moderate negative correlations with child-reported somatic complaints, internalizing symptoms, and externalization of behavior problems and positive correlations with overall quality of life (Greco et al., 2011). We used the German version of this measure, which was translated and culturally adapted (Baumann et al., 2022).

Youth self report—short form (YSR-SF)

The Youth Self Report 11–18 (Achenbach, 1991) is a widely used measure to assess problem behaviors and psychological symptoms of adolescents along the scales of internalization and externalization. It consists of 112 items that use a 3-point Likert scale (0 = *not true*, 1 = *sometimes true*, 2 = *frequently true*). Internal consistency is specified as Cronbach's $\alpha = 0.83$. Test-retest reliability is $r = 0.79$. This measure is perceived as objective in execution, evaluation, and interpretation due to its standardized instructions and standardization in general. We used the Portuguese short form of the YSR, which contains only 33 items (Cruz et al., 2014), and paralleled it to the German 112-item version to develop a German short form of the YSR. This short form focuses on the dimensions of internalization-anxiety, internalization-depression, externalization-destructiveness, and externalization-exhibitionism. The findings of Cruz et al. (2014) confirm that the YSR-SF shows a good fit to their data and predicts criteria as effectively as the long form of the YSR.

Inventory for measuring quality of life in children (ILK)

The ILK (Mattejat & Remschmidt, 2006) is a German scale to assess quality of life in children and adolescents from 6 to 18 years old. It consists of seven items rated on a 5-point Likert scale (1 = *sehr gut [very good]*) to 5 = *sehr schlecht [very bad]*). The range of Cronbach's Alpha for the overall score is specified between $\alpha = 0.55$ and $\alpha = 0.76$, retest-reliabilities (2 to 6 weeks) are between $r_{tt} = 0.60$ and $r_{tt} = 0.80$. Several studies confirm the validity of this measure (Mattejat & Remschmidt, 2006).

Procedure

This study was approved by the local ethics committee and carried out following the declaration of Helsinki

(Date: 2020/07/16; AZ Kal 2018 2/2-A2). We contacted the local registration office and received the mailing addresses of 2000 adolescents, 10 to 19 years old. We sent a letter of invitation to these possible participants, informing them about the aims of the study and asking them to participate via the online platform SoSci Survey (Leiner, 2019). Participation was anonymous and voluntary. We provided our study information and a declaration of consent. All participants (and their legal guardians, if participants were under 18 years old) gave informed consent directly in SoSci Survey. All participants answered questions about demographics (age, school type, etc.) and filled in the SCS-CA, CAMM, ILK, and YSR-SF. Lastly, they could fill in their e-mail address to take part in a raffle for one of three vouchers for a local drug and toy store. Each voucher had a value of 10€. To fulfill the European privacy policy, the e-mail addresses were saved separately from the prior given answers to the questionnaires.

Translation of the SCS-CA

In a first step, two research assistants translated the English version into German, and a native English speaker translated both German versions back into English. In a second step, the authors and translators discussed all discrepancies. In a third step, a team of mindfulness and self-compassion experts carefully checked to determine if the used language was clear, if all items represented the facets of self-compassion defined by Neff (2003), and if any cultural adaptations were needed. We concluded that cultural differences between Canada, the USA, and Germany (e.g., school system) are not present in the items of the SCS. In the development of psychometric instruments there is a trade-off between comparability of results in different languages and cultures, and a focus on cultural differences. Given that the SCS was developed in the US and Stolow's work was conducted in Canada we chose to stay with a translation (not an adaptation) of the questionnaire, as Germany, US, and Canada are western developed industrial countries. Furthermore, we checked the items of SCS and SCS-D and found that the SCS-D worked very well as a mere translation of the original English SCS, showing good psychometric properties (Hupfeld & Ruffieux, 2011; Neff, 2003).

Statistical Analyses

Descriptive statistics and factorial structure of the SCS-CA

We computed descriptive statistics (mean, standard deviation, percentage, and frequency) of demographic characteristics. Given inconsistent reports concerning the

Table 1 Chi-square and fit indices of the confirmatory factor analysis for 2, 3 and 6 factor solutions

Factor Solution	χ^2	CFI	TLI	RMSEA	SRMR
2 factors	702.13***	0.804	0.787	0.073	0.077
3 factors	885.64***	0.715	0.687	0.089	0.091
6 factors	531.83***	0.880	0.863	0.059	0.066

CFI comparative fit index, RMSEA root mean square error of approximation, SRMR standardized root mean residual

*** $p \leq 0.001$

factor structure with the best model fit to the SCS, we conducted different CFAs for the SCS-CA. Due to intercorrelations of the subscales, we used oblimin rotation and the robust maximum likelihood method for parameter estimation (Field et al. 2012) of: (1) a two-factor model representing SCS-POS (self-kindness, common humanity, and mindfulness) and SCS-NEG (self-judgment, isolation, and overidentification) (Hupfeld and Ruffieux 2011; Stolow et al. 2016); (2) a three-factor model representing the three main components of self-compassion (self-judgment vs. self-kindness; isolation vs. common humanity; overidentification vs. mindfulness) (Hupfeld and Ruffieux 2011); and (3) a six-factor model representing Neff's (2003) original self-compassion subscales. All these models were tested assuming perfect simple structure. Furthermore, we reverse-coded all negatively phrased items. To assess model fit, we combined different fit indices (Bentler 2007; Hu and Bentler 1999; Tucker and Lewis 1973): comparative fit index (CFI) ≈ 0.95 , Tucker-Lewis index (TLI) ≥ 0.95 , root mean square error of approximation (RMSEA) ≤ 0.06 , and standardized mean square residual (SRMR) ≤ 0.08 . To identify the model with the best fit, we conducted analyses of variance (ANOVAs) of the different models comparing χ^2 -differences (Table 1).

Reliability and validity of the SCS-CA

To assess reliability, we estimated the internal consistency of the SCS-CA total and SCS-CA subscales via Cronbach's Alpha. Furthermore, we focused on different forms of validity: 1) *content validity* and its subtype *face validity* were assessed in an ongoing process and as a part of theoretical analyses of the construct via expert ratings. All other validity forms were assessed as a part of scale evaluation: 1) *criterion validity* with the subtype *concurrent validity* with ILK and YSR-SF and 2) *construct validity* with the subtypes *convergent validity* with CAMM, and *by known groups* with gender. All analyses were performed using RStudio version 1.3.1093 (RStudioTeam, 2020) and the packages lavaan (Rosseel, 2012) and psych (Revelle, 2021).

Results

Theoretical Analyses of the SCS-CA

We considered content validity an ongoing process, as recommended by Boateng and colleagues (2018). With regard to potential cultural differences, we integrated considerations about cultural adaptation or mere translation from the start of the project. In order to make a statement about face validity, we carefully checked whether the items of the SCS and SCS for adolescents (Neff, 2003; Stolow et al., 2016) were based on indicators found in literature and represented self-compassion as a construct or not (Bronstein, 2002; Morgado et al., 2017). Furthermore, we considered the present state of research about the assessment of self-compassion and incorporated a team of mindfulness and self-compassion experts. Following the recommendations of different authors, we consider the content validity of the SCS-CA to be proven (Boateng et al., 2018; Bronstein, 2002; El Mallah, 2020; Farnik & Pierzchala, 2012; Morgado et al., 2017).

Scale Evaluation and Psychometric Analyses of the SCS-CA

Descriptive statistics

Data were not normally distributed, and Kolmogorov-Smirnov and Shapiro-Wilk tests were significant ($p \leq 0.001$). Reported results refer to the original data since the exclusion of outliers did not change the results significantly. The total score replicated previous findings (Bluth & Blanton, 2014; Cunha et al., 2016; Krieger et al., 2016b). The subscale self-judgment showed the highest mean score, and the subscale overidentification showed the lowest (see Table 2).

Confirmatory factor analysis

All analyses of structural properties were conducted using the total sample ($N = 255$). We used CFA as a confirmatory method to explore the underlying factor structure of the SCS-CA (see Table 1). As mentioned above, we tested the fit of a two-factor model (Model 2 F), a three-factor model (Model 3 F), and a six-factor model (Model 6 F). All models showed significant χ^2 values for the overall model fit, as can be expected in bigger samples (Hu & Bentler, 1999), Model 2 F: $\chi^2 [298] = 702.13$, $p < 0.001$; Model 3 F: $\chi^2 [296] = 885.64$, $p < 0.001$; Model 6 F: $\chi^2 [284] = 531.83$, $p < 0.001$.

Model 2 F showed a mixed fit: two indices showed adequate fits (RMSEA = 0.073, SRMR = 0.077), and two indices showed suboptimal fits (CFI = 0.804, TLI = 0.787).

Table 2 Means (M), standard deviations (SD), Cronbach’s Alpha and intercorrelations for the 6 factorial solution of the self-compassion scale—children and adolescents (SCS-CA) (N = 255)

	M (±SD)	SJ	OI	I	SK	CH	MI	α
SJ	4.0 (± 1.1)	–	0.69***	0.66***	0.55***	0.13*	0.24***	0.78
OI	3.0 (± 0.9)	–	–	0.62***	0.43***	0.22***	0.35***	0.71
I	3.3 (± 0.9)	–	–	–	0.47***	0.25***	0.25***	0.78
SK	3.6 (± 1.1)	–	–	–	–	0.43***	0.50***	0.74
CH	3.0 (± 0.9)	–	–	–	–	–	0.43***	0.72
MI	3.1 (± 0.7)	–	–	–	–	–	–	0.48

SCS-CA total: M = 3.1 (± 0.6), α = 0.89

SJ self-judgement, OI overidentification, I isolation, SK self-kindness, CH common humanity, MI mindfulness

* = p ≤ 0.05, *** = p ≤ 0.001

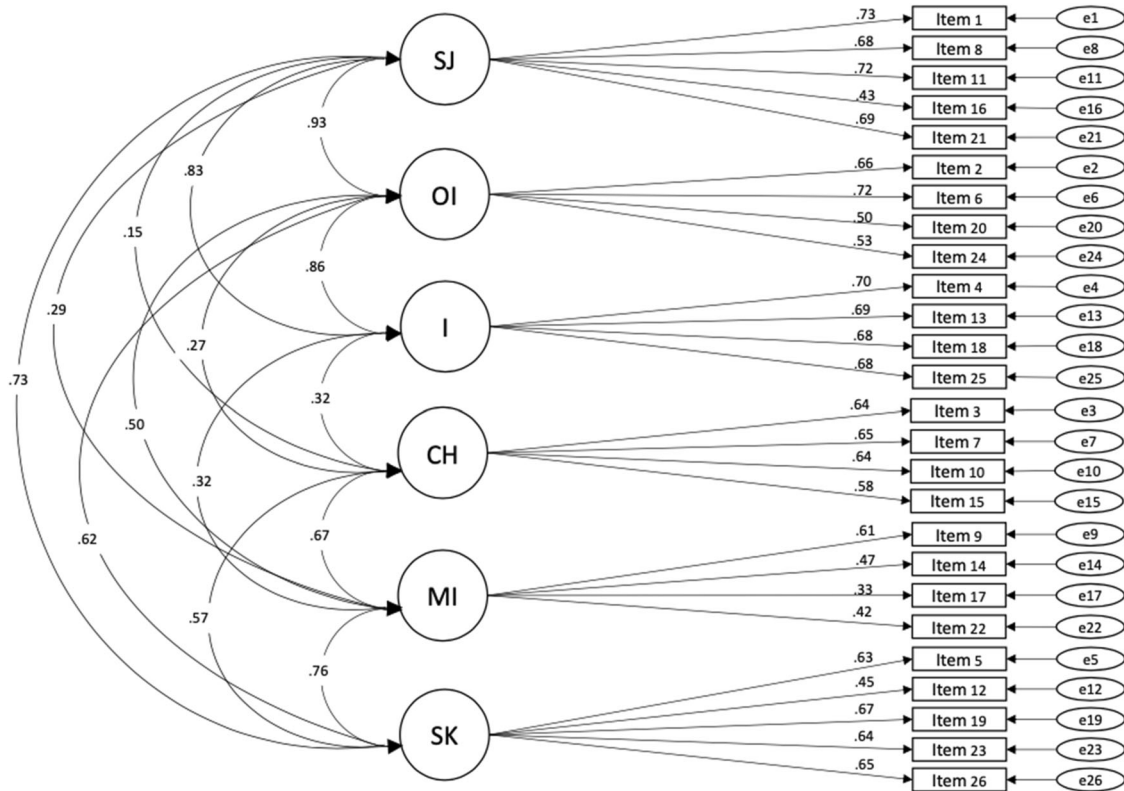


Fig. 1 Confirmatory Factor Analysis of the six-factor model of the Self-Compassion Scale-Children and Adolescents (SCS-CA) (N = 255) with standardized coefficients and measurement errors; all

paths are statistically significant ($p < 0.001$). SJ self-judgement, OI overidentification, I isolation, SK self-kindness, CH common humanity, MI mindfulness

However, the standardized factor loadings indicated a good representation of the latent factors by the indicators. All items showed highly significant correlations on the corresponding latent factor ($0.35 \leq \lambda \leq 0.71$), and all factors were significantly correlated. Model 3 F showed poor fit to the data: $CFI = 0.715$, $TLI = 0.867$, $RMSEA = 0.089$, $SRMR = 0.091$). The standardized factor loadings indicated a poor to moderate representation of the latent factors by the indicators ($0.18 \leq \lambda \leq 0.73$). All factors were significantly correlated. Model 6 F had the best descriptive fit. Two of the four fit indices showed good fits

($RMSEA = 0.059$, $SRMR = 0.066$). For two indices, fit was not optimal ($CFI = 0.880$, $TLI = 0.863$). All items showed highly significant correlations on the corresponding latent factor ($0.33 \leq \lambda \leq 0.73$), indicating a good representation of the latent factors by the items of the SCS-CA (Fig. 1). All factors were significantly correlated. Item selectivity reached from $r = 0.16$ to $r = 0.64$, and item complexity exceeded $r = 0.50$. The analyses showed the six-factor model to best fit to our data (see Table 2). Due to the better model fit, the following results are only reported for the six-factor solution.

Table 3 Correlations of the Self-Compassion Scale—Children and Adolescents (SCS-CA) subscales and total with global outcomes

	CAMM	YSR Total	YSR_IA	YSR_ID	YSR_ED	YSR_EE	ILK Total
SJ	0.65***	−0.67***	−0.58***	−0.63***	−0.26***	−0.38***	0.57***
OI	0.55***	−0.54***	−0.44***	−0.53***	−0.19**	−0.32***	0.49***
I	0.64***	−0.62***	−0.52***	−0.67***	−0.20**	−0.24***	0.65***
SK	0.45***	−0.50***	−0.39***	−0.50***	−0.22**	−0.29***	0.53***
CH	0.12	−0.26***	−0.17**	−0.25***	−0.14*	−0.19**	0.26***
MI	0.24***	−0.26***	−0.19**	−0.21**	−0.20**	−0.19**	0.31***
SCS-CA total	0.64***	−0.68***	−0.55***	0.66***	−0.28***	−0.38***	0.67***

SCS-CA = SCS-CA total: $M = 3.1 (\pm 0.6)$, $\alpha = 0.89$

SJ self-judgement (reverse scored), OI overidentification (reverse scored), I isolation (reverse scored), SK self-kindness, CH common humanity, MI mindfulness, SCS-CA total Self-Compassion Scale-CA total, CAMM Child and Adolescent Mindfulness Measure, YSR Total Youth Self Report Short Form, YSR_IA YSR subscale internalization-anxiety, YSR_ID YSR subscale internalization-depression, YSR_ED YSR subscale externalization-destructiveness, YSR_EE YSR subscale externalization-exhibitionism, ILK Inventory of Evaluation of Quality of Life in Children and Adolescents

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Table 4 Means (M), standard deviations (SD), t-test differences by sex and effect size for SCS-CA

	Males ($n = 104$)		Females ($n = 151$)		<i>t</i>	df	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
SCS-CA total	3.2	0.5	3.0	0.7	2.34	250.42	0.020*	0.28
SJ	4.2	1.0	3.9	1.2	1.87	243.66	0.063	0.23
OI	3.2	0.9	2.6	0.9	3.23	253.00	0.001***	0.41
I	3.6	0.9	3.2	1.0	3.77	244.58	<0.001***	0.46
SK	3.7	0.9	3.6	1.1	0.93	245.40	0.354	–
CH	3.0	0.8	3.0	0.9	−0.44	253.00	0.660	–
MI	3.1	0.7	3.0	0.07	0.28	253.00	0.779	–

SCS-CA Self-Compassion Scale-Children and Adolescents, SJ self-judgement (reverse scored), OI overidentification (reverse scored), I isolation (reverse scored), SK self-kindness, CH common humanity, MI mindfulness, SCS CA total Self-Compassion Scale-CA total

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Tests of reliability and validity

Reliability Overall, SCS-CA showed high internal consistency (Cronbach's $\alpha = 0.89$), and five of six subscales exceeded $\alpha = 0.70$ (see Table 3)., Internal consistency was poor ($\alpha = 0.48$) only for the mindfulness subscale. In accordance with the original SCS, all subscales were significantly correlated. Means, standard deviations, Cronbach's Alphas, and intercorrelations are shown in Table 3.

Criterion validity Positive associations were found between SCS-CA and ILK. In terms of mental health issues, we found SCS-CA to be negatively correlated with the total scale of YSR-SF and its subscales (Table 3). Especially the subscales capturing negative aspects of self-compassion correlated quite highly with the YSR-SF total. Since all measures were collected at the same time, SCS-CA proved its concurrent validity.

Construct validity Convergent validity was shown by two-tailed Pearson correlations. These were calculated between SCS-CA total, SCS-CA subscales, and CAMM German version. We found highly positive associations with CAMM German version, except for the subscale common humanity. Furthermore, young males achieved significantly higher self-compassion values compared to young females. Females reported significantly higher levels for the subscales of overidentification and isolation than young men. Please note that the items were reversed; thus, e.g., a high value on isolation indicates that the person is not feeling isolated. The effect sizes were small to moderate (see Table 4). This can be classified as validity by known groups since, in Western countries, there is evidence for a gender gap in self-compassion in both adolescents and adults (Bluth and Blanton 2015; Castilho et al. 2017; Neff et al. 2008; Sun et al. 2016). Boateng and colleagues (2018) state that construct validity is proven if at least two subtypes of construct validity have been examined.

Discussion

Self-compassion is widely seen as an important buffer and resilience factor against stress, depression, and anxiety in adolescents (Marsh et al., 2018), though the vast majority of research has been conducted in adult samples. The aims of the present study were to (1) translate the English version of the SCS for adolescents (Stolow et al., 2016) into German and (2) examine its fit in a community sample of German children and adolescents aged 10 to 19 years old. In detail, we explored the factorial structure of the SCS-CA, comparing two, three, and six-factorial solutions using CFAs. Furthermore, we evaluated different forms of reliability and validity of the SCS-CA and examined potential gender differences in our sample.

The overall total score for SCS-CA was very similar to the results of other research groups, with a total of $M = 3.1$ (Bluth & Blanton, 2014; Cunha et al. 2016). However, the subscales with the highest and lowest mean scores differed from the findings of Cunha and colleagues (2016). In our sample, self-judgment showed the highest mean score ($M = 4.0$), and overidentification and common humanity (both $M = 3.0$) had the lowest mean scores. This might be an effect of the translation or cultural understanding and should be examined closely in future research (Auer et al. 2000; Behling and Law 2000). The CFA showed the six-factorial solution to best fit our data, with good fits for *RMSEA* (0.059) and *SRMR* (0.066) but suboptimal fits for *CFI* = 0.880 and *TLI* = 0.863. This replicates the findings of Hupfeld and Ruffieux (2011) for the SCS-D. They explained their findings by explaining that structural equation modelings show discrepancies from a perfect simple structure. Therefore, they recommended not overrating the indices with poor fit. Although the *TLI* is sensitive to weak correlations between different factors and thus often stays below the cut-off (Sharma et al. 2005), the present results should be interpreted with caution. Future studies should further investigate this in other samples. The two-factorial solution showed a less good fit to our data than the six-factorial solution, with two fit indices showing adequate fits (*RMSEA* = 0.073, *SRMR* = 0.077) and two fit indices showing poor fits (*CFI* = 0.804, *TLI* = 0.787). Perhaps, self-compassion is a more complex construct and cannot be covered by one general self-compassion factor or a two-factorial solution focusing on self-kindness and self-coldness. All six factors and their interactions might be necessary to properly represent peoples' experience of self-compassion, as defined by (Neff 2003; Neff et al. 2019). The three-factorial solution showed poor fit, replicating the findings of Hupfeld and Ruffieux (2011). Thus, the assumption that the SCS might represent the three basic components of self-compassion instead of six different subscales might not be appropriate.

In our sample, all six subscales correlated significantly, replicating the findings of Hupfeld and Ruffieux (2011) and Cleare et al. (2018) but opposing the findings of Stolow et al. (2016). Overall internal consistency of the SCS-CA was good, with Cronbach's $\alpha = 0.89$ for the total score, subscales ranging from $\alpha = 0.48$ to $\alpha = 0.71$. The reliability for the subscale mindfulness was very poor ($\alpha = 0.48$), replicating the findings of Hupfeld and Ruffieux (2011). More research is needed to explain the very poor reliability of the mindfulness subscale. We suspect it to either be affected by cultural or translation effects or because adolescents may not have developed a static understanding of mindfulness as a concept yet.

The SCS-CA had good content, criterion, and construct validity. We found high positive correlations between five of six SCS-CA subscales and the German version of the CAMM. The German version of the CAMM mainly contains items that map states of being not mindful and is, therefore, reverse coded. Being self-compassionate is closely related to mindfulness, as the latter is one of six subscales of self-compassion. Therefore, our results of high levels in SCS-CA and CAMM German versions fit the theoretical assumptions (Greco et al. 2011). Furthermore, the SCS-CA showed high correlations with ILK, a measure of life satisfaction for children and adolescents (Achenbach 1991). This replicates the results of other research teams supposing self-compassion to be a potential resilience factor in adults and youths (Bluth and Blanton 2015; Marsh et al. 2018; Neff and McGehee 2010). We found negative correlations between SCS-CA total and YSR-SF total ($r = -0.68$), indicating that higher levels of self-compassion come with lower levels of psychopathology. This is in line with the results of other research groups investigating adult samples and children and adolescents (Bluth and Blanton 2014; Krieger et al. 2016a; Muris and Petrocchi 2017; Petrocchi et al. 2013; Raes 2010; Terry et al. 2013; Van Dam et al. 2011). The inverse correlations of the negative subscales of the SCS-CA (self-judgment, isolation, and overidentification) with YSR-SF total were bigger than the inverse correlations of the positive subscales (self-kindness, common humanity, and mindfulness). They ranged from $r = -0.54$ to $r = -0.67$ (negative subscales) and from $r = -0.26$ to $r = -0.50$ (positive subscales). This is contrary to the findings of a meta-analysis conducted by Muris and Petrocchi (2017) that found positive correlations between the negative subscale of SCS and psychopathology, but similar to the findings of Muris (2016a). More research is needed to further clarify these associations.

With a view to the subscales of SCS-CA and YSR-SF, we found interesting patterns, resembling the findings of Muris (2016a). All SCS-CA subscales showed significant negative correlations with all YSR-SF subscales. Interestingly, the internalization subscales showed higher

correlations with all SCS-CA subscales. Furthermore, negative subscales of the SCS-CA showed higher negative correlations with internalizing symptoms than with externalizing symptoms. This can be seen as additional evidence that differences exist between SCS subscales and their influence on internalizing and externalizing symptoms. More research is needed to further examine the relation of self-compassion and its subscales with psychopathology in children and adolescents. Being aware of the current discussion about the appropriateness of using the total score of the SCS and the reverse-coded negative items (Muris 2016a; Muris et al. 2021; Muris and Petrocchi 2017; Neff et al. 2017), we decided to report both, a total score and scores for all subscales.

With a view on potential gender effects on self-compassion, our findings are in line with those of other research groups for both adult and adolescent samples (Bluth and Blanton 2014, 2015; Cunha et al. 2016; Neff et al. 2019; Petrocchi et al. 2013; Yarnell et al. 2015). We found significant gender differences for the SCS-CA total, the over-identification and isolation subscales, and a trend for self-judgment. The effect sizes ranged from small to medium. Overall, males were significantly more self-compassionate than females. However, the gender differences were limited to the negative subscales of the SCS-CA, which is not in line with the findings of other research groups (Cunha et al. 2016; Petrocchi et al. 2013). The fact that the biggest difference was found for the subscale isolation, indicating that young females feel far more isolated (having lower scores on isolation) than young men, is of great importance. Given that the rate of depression in young women is about twice as high as in young men (Thapar et al. 2012), feeling isolated and alone with one's problems may be an important factor. There is growing evidence that the subscale isolation plays an important role in developing and maintaining depression (Van Dam et al. 2011). Following Bluth and Blanton (2015), we cautiously assume that girls are more self-deprecating when they are confronted with their failures. They might ruminate more, feel more isolated, and might, in succession, develop depressive symptoms.

Some limitations of this study should be acknowledged. First, the study design was cross-sectional and therefore can only provide information about the strength of correlations between self-compassion, mindfulness, quality of life, and psychopathology, but not about the direction of causality. The generalizability of the results is limited, as our sample was not representative of the general population and only consisted of healthy participants. Future research should focus on longitudinal and experimental research to closely examine the relationship between self-compassion, well-being, and psychopathology in adolescents. Some researchers have demonstrated that self-compassion can predict depression in later life (Krieger et al. 2016a; Raes

2011); these studies were conducted in adults. We recommend examining these associations with adolescents, too, in order to use self-compassion as early as possible and potentially hinder the development and maintenance of depression in early life. In a randomized controlled study (MARS-CA; (Kalmar et al. 2022)), we will assess the longitudinal and predictive validity of SCS-CA in a clinical sample. This study is currently being carried out at an outpatient center for cognitive therapy with children and adolescents in Germany. Second, our study design did not allow us to examine test-retest reliability, as the design was cross-sectional. Third, we conducted CFAs investigating two, three, and six-factorial solutions. Future research is advised to examine these results using developing statistical techniques, e.g., exploratory structural equation models (ESEM) and, ideally, including the test of a bifactorial model as proposed by Neff et al. (2019).

Fourth, information about construct validity is limited, as we did not include measures to assess self-esteem, extraversion, neuroticism, and emotional intelligence. We did not want our set of questionnaires to take more than 30 min to complete; thus, we focused on the assessment of self-compassion, mindfulness, quality of life, and psychopathology. Future research should take discriminant validity into account. Fifth, we investigated self-compassion in a community sample. Future research should examine adolescent clinical populations to better understand the link between self-compassion and psychopathology and to deduce potential interventions and implications for therapy. Sixth, the high age range of the current study is a limitation, as from the viewpoint of internal validity, it remains unclear whether the validity is specific to certain age groups. However, it is a strength at the same time, as our sample reflects a broad range of children and adolescents and hence represents the community under investigation in a broad range, reflecting high external validity. Seventh, as in most studies investigating self-compassion, the major part of the sample consists of white females/males and children (Bluth et al. 2016; Neff et al. 2019); it is of very high importance that future studies investigate samples of other cultural backgrounds and ethnic minorities. We could not address this important research question in our sample, but it has to be highlighted that future studies addressing this issue are of utmost importance.

Implications for practice

The present study showed that the SCS-CA is a reliable and valid instrument for assessing self-compassion in children and adolescents. Given the fact that adolescence is a critical period full of challenges and massive developmental steps such as forming an own identity, finding one's way in society, feeling alone and isolated with problems, and changes in body and

brain (Blakemore et al. 2009; Susman and Dorn 2009), self-compassion seems to be a potential beneficial construct for helping young people cope with life (Marshall et al. 2015; Neff and McGehee 2010). As the probability of suffering from a mental disorder rises over the course of puberty, it is important to further investigate potential resilience factors. One of those seems to be self-compassion, as it was proven to buffer psychological distress, e.g., depression, anxiety, and stress (Barry et al. 2015; Marsh et al. 2018; Pullmer et al. 2019; Zeller et al. 2015). Further fostering interventions to improve self-compassion in children and adolescents is of particular importance. Along with manualized group settings such as MFY (Bluth et al. 2016) or therapy approaches like ACT (Hayes et al. 2012), we strongly recommend conducting randomized controlled trials in naturalistic settings, as done in adult psychotherapy research. The development of online training to facilitate access to psychotherapists might be an additional option (Hunt et al. 2021; Krieger et al. 2016b; Mander et al. 2019).

Conclusion

With some limitations, the SCS-CA proved to be a reliable and valid instrument to assess self-compassion in German children and adolescents. Further research should test the usability of this measure in clinical samples with exploratory longitudinal designs and try to gain more insights into the factorial connections with psychopathology. The association of self-compassion and mindfulness should be examined closer for a better understanding of adolescent well-being and mental health and to find potential benefits of a future application of these constructs.

Data availability

Data and R Codes can be made applicable upon reasonable request, the SCS-CA questionnaire can be found in the supplements.

Author Contributions All authors contributed to the study conception and design. Material preparation and data collection were performed by E.G., I.B., J.K., and J.M. Analyses were performed by E.G. The first draft of the manuscript was written by E.G. and all authors commented on the previous versions of the manuscript. All authors read and approved the final manuscript. Supervision was provided by J.K., J.M., and T.H.

Funding Open Access funding enabled and organized by Projekt DEAL.

Compliance with Ethical Standards

Conflict of Interest E.G. is supported by “Cusanuswerk, Bischöfliche Studienförderung (Cusanuswerk, episcopal study support)”. Hinrich

Bents, T.H., and J.M. receive royalties from mindfulness and self-compassion books they have authored. T.H. and J.M. receive stipends from workshops on mindfulness. All other authors have no competing interests to declare that are relevant to the content of this article.

Informed Consent All participants were provided with the study information and a declaration of consent and all participants (and their legal guardian if aged under 18 years) gave their informed consent. Data was collected online and saved anonymously according to the European privacy policy.

Research involving Human Participants Ethics approval was granted by the local ethics committee of the Faculty of Behavior and Empirical Cultural Sciences, University of Heidelberg (Date: 2020/07/16; AZ Kal 2018 2/2 – A2) and the study was carried out following the declaration of Helsinki. Participation was anonymous and voluntary.

Publisher’s note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third party material in this article are included in the article’s Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article’s Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Achenbach, T. M. (1991). *Manual for the youth self-report and the 1991 profile*. Vermont: University of Vermont Department of Psychiatry.
- Auer, S., Hampel, H., Möller, H.-J., & Reisinger, B. (2000). Translations of measurements and scales: opportunities and diversities. *International Psychogeriatrics*, 12(S1), 391–394.
- Azizi, A., Mohammadkhani, P., Lotfi, S., & Bahramkhani, M. (2013). The validity and reliability of the Iranian version of the Self-Compassion Scale. *Iranian Journal of Clinical Psychology*, 2(3), 17–23.
- Barnard, L. K., & Curry, J. F. (2011). Self-Compassion: Conceptualizations, Correlates, & Interventions. *Review of General Psychology*, 15(4), 289–303. <https://doi.org/10.1037/a0025754>.
- Barry, C. T., Loffin, D. C., & Doucette, H. (2015). Adolescent self-compassion: Associations with narcissism, self-esteem, aggression, and internalizing symptoms in at-risk males. *Personality and Individual Differences*, 77, 118–123. <https://doi.org/10.1016/j.paid.2014.12.036>.
- Baumann, I., Gruber, E., Vonderlin, E., Bents, H., Heidenreich, T., Kalmar, J., & Mander, J. (2022). Psychometric Properties of a German Version of the Child and Adolescent Mindfulness Measure (CAMM) in a Community Sample. *Mindfulness*, 13, 2082–2091. <https://doi.org/10.1007/s12671-022-01943-2>.
- Beesdo, K., Knappe, S., & Pine, D. S. (2009). Anxiety and anxiety disorders in children and adolescents: developmental issues and implications for DSM-V. *Psychiatric Clinics of North America*, 32(3), 483–524. <https://doi.org/10.1016/j.psc.2009.06.002>.
- Behling, O., & Law, K. S. (2000). *Translating questionnaires and other research instruments: problems and solutions*. London: Sage.

- Benda, J., & Reichová, A. (2016). Psychometrické charakteristiky České verze Self-Compassion Scale (SCS-CZ) [Psychometric characteristics of the Czech version of the Self-Compassion Scale]. *Československá Psychologie*, *60*, 20–36.
- Bentler, P. M. (2007). On tests and indices for evaluating structural models. *Personality and Individual Differences*, *42*, 825–829. <https://doi.org/10.1016/j.paid.2006.09.024>.
- Blakemore, L. K., Berenbaum, S., & Liben, L. (2009). *Gender development*. Clifton, NJ: Psychology Press.
- Blanck, P., Perleth, S., Heidenreich, T., Kröger, P., Ditzen, B., Bents, H., & Mander, J. (2018). Effects of mindfulness exercises as stand-alone intervention on symptoms of anxiety and depression: Systematic review and meta-analysis. *Behaviour Research and Therapy*, *102*, 25–35.
- Bluth, K., & Blanton, P. W. (2014). Mindfulness and Self-Compassion: Exploring Pathways to Adolescent Emotional Well-Being. *Journal of Child and Family Studies*, *23*(7), 1298–1309. <https://doi.org/10.1007/s10826-013-9830-2>.
- Bluth, K., & Blanton, P. W. (2015). The influence of self-compassion on emotional well-being among early and older adolescent males and females. *Journal of Positive Psychology*, *10*(3), 219–230. <https://doi.org/10.1080/17439760.2014.936967>.
- Bluth, K., Gaylord, S. A., Campo, R. A., Mullarkey, M. C., & Hobbs, L. (2016). Making friends with yourself: A mixed methods pilot study of a mindful self-compassion program for adolescents. *Mindfulness*, *7*(2), 479–492. <https://doi.org/10.1007/s12671-015-0476-6>.
- Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quinonez, H. R., & Young, S. L. (2018). Best Practices for Developing and Validating Scales for Health, Social, and Behavioral Research: A Primer. *Frontiers in Public Health*, *6*(149). <https://doi.org/10.3389/fpubh.2018.00149>
- 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>.
- Bronstein, L. R. (2002). Index of interdisciplinary collaboration. *Social Work Research*, *26*(2), 113–123.
- Bryne, D., Davenport, S., & Mazanov, J. (2007). Profile of adolescent stress: the development of the adolescent stress questionnaire. *Journal of Adolescence*, *30*(3), 393–416. <https://doi.org/10.1016/j.adolescence.2006.04.004>.
- Castilho, P., Carvalho, S. A., Marques, S., & Pinto-Gouveia, J. (2017). Self-compassion and emotional intelligence in adolescence: A multigroup meditational study of the impact of shame memories on depressive symptoms. *Journal of Child and Family Studies*, *26*(3), 759–768. <https://doi.org/10.1007/s10826-016-0613-4>.
- Castilho, P., Pinto-Gouveia, J., & Duarte, J. (2015). Evaluating the multifactor structure of the long and short version of the self-compassion scale in a clinical sample. *Journal of Clinical Psychology*, *71*(9), 856–870. <https://doi.org/10.1002/jclp.22187>.
- Clark, L. A., & Watson, D. (1995). Constructing validity: basic issues in objective scale development. *Psychological Assessment*, *7*(3), 309–319. <https://doi.org/10.1037/1040-3590.7.3.309>.
- Cleare, S., Gumley, A., Cleare, C. J., & O'Connor, R. C. (2018). An Investigation of the Factor Structure of the Self-Compassion Scale. *Mindfulness*, *9*, 618–628. <https://doi.org/10.1007/s12671-017-0803-1>.
- Comrey, A. I. (1988). Factor-analytic methods of scale development in personality and clinical psychology. *American Psychological Association*, *56*, 754–761. <https://doi.org/10.1037//0022-006x.56.5.754>.
- Costa, J., Marôco, J., Pinto-Gouveia, J., Ferreira, C., & Castilho, P. (2016). Validation of the psychometric properties of the Self-Compassion Scale. *Clinical Psychology and Psychotherapy*, *23*, 460–468. <https://doi.org/10.1002/cpp.1974>.
- Cruz, D., Narciso, I., Pereira, C. R., & Sampaio, D. (2014). A Short Form of the Portuguese Version of the Youth Self-Report. *Journal of Child and Family Studies*, *23*(6), 1114–1127. <https://doi.org/10.1007/s10826-013-9770-x>.
- Cunha, M., Xavier, A., & Castilho, P. (2016). Understanding self-compassion in adolescents: Validation study of the Self-Compassion Scale. *Personality and Individual Differences*, *93*, 56–62. <https://doi.org/10.1016/j.paid.2015.09.023>.
- Deniz, M. E., Kesici, S., & Sumer, A. S. (2008). The validity and reliability of the Turkish version of the Self-Compassion Scale. *Social Behavior and Personality*, *36*(9), 1151–1160. <https://doi.org/10.2224/sbp.2008.36.9.1151>.
- DeVellis, R. F. (2003). *Scale development: theory and applications*. 2nd ed. Newbury Park: Sage Publications.
- Dundas, I., Svendsen, J. L., Wiker, A. S., Granli, K. V., & Schanche, E. (2016). Self-compassion and depressive symptoms in a Norwegian student sample. *Nordic Psychology*, *68*, 58–72. <https://doi.org/10.1080/190012276.2015.1071203>.
- El Mallah, S. (2020). Toward Equity-Oriented Assessment of Social and Emotional Learning: Examining Equivalence of Concepts and Measures. *Urban Education*, *00*(0), 1–29. <https://doi.org/10.1177/0042085920933335>.
- Farnik, M., & Pierzchala, W. (2012). Instrument development and evaluation for patient-related outcome measures. *Patient Related Outcome Measures*, *3*, 1–7.
- Field, A., Miles, J., & Field, Z. (2012). *Discovering statistics using R*. London: SAGE Publications.
- Finlay-Jones, A., Xie, Q., Huang, X., Ma, X., & Guo, X. (2018). A Pilot Study of the 8-Week Mindful Self-Compassion Training Program in a Chinese Community Sample. *Mindfulness*, *9*, 993–1002. <https://doi.org/10.1007/s12671-017-0838-3>.
- García-Campayo, J., Navarro-Gil, M., Andrés, E., Montero-Marín, J., López-Artal, L., & Demarzo, M. M. (2014). Validation of the Spanish version of the long (26 items) and short (12 items) forms of the Self-Compassion Scale (SCS). *Health and Quality of Life Outcomes*, *12*(4). <https://doi.org/10.1186/1477-7525-12-4>
- Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in Psychiatric Treatment*, *15*(3), 199–208. <https://doi.org/10.1192/apt.bp.107.005264>.
- Gilbert, P., McEwan, K., Catarino, F., Baião, R., & Palmeira, L. (2014). Fears of happiness and compassion in relationship with depression, alexithymia, and attachment security in a depressed sample. *British Journal of Clinical Psychology*, *53*, 228–224. <https://doi.org/10.1111/bjc.12037>.
- Gilbert, P., McEwan, K., Matos, M., & Rivis, A. (2011). Fears of compassion: Development of three self-report measures. *Psychology and Psychotherapy: Theory, Research, and Practice*, *84*, 239–255. <https://doi.org/10.1348/147608310x526511>.
- Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: Overview and pilot study for a group therapy approach. *Clinical Psychology and Psychotherapy*, *13*, 353–379. <https://doi.org/10.1002/cpp.507>.
- Grant, D. M. (2013). Anxiety in adolescents. In W. T. O'Donohue, L. T. Benuto, & L. Woodward Tolle (Eds.), *Handbook of Adolescent Health Psychology* (pp. 507–519). Springer. <https://doi.org/10.1007/978-1-4614-6633-8>
- Greco, L. A., Baer, R. A., & Smith, G. T. (2011). Assessing mindfulness in children and adolescents: development and validation of the Child and Adolescent Mindfulness Measure (CAMM). *Psychological Assessment*, *23*(3), 606–614. <https://doi.org/10.1037/a0022819>.
- Gruber, E., Bents, H., & Mander, J. (2020). Achtsamkeit und Selbstmitgefühl in der Psychotherapie - state of the art. In H. Bents, M. Gschwendt, & J. Mander (Eds.), *Achtsamkeit und Selbstmitgefühl*. Heidelberg: Springer.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2012). *Acceptance and commitment therapy. The process and practice of mindful change*. New York, NY US: Guilford Press.

- Heffernan, M., Quinn Griffin, M. T., Sister Rita, M., & Fitzpatrick, J. (2010). Self-compassion and emotional intelligence in nurses. *International Journal of Nursing Practice*, 16(4), 366–373. <https://doi.org/10.1111/j.1440-172X.2010.01853>.
- Heim, E., Mewes, R., Abi Ramia, J., Glaesmer, H., Hall, B., Harper Shehadeh, M.,... Knaevelsrud, C. (2021). Reporting Cultural Adaptation in Psychological Trials - The RECAPT criteria. *Clinical Psychology in Europe*, 3. <https://doi.org/10.32872/cpe.6351>.
- Hu, L., & Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>.
- Hunt, C. A., Goodman, R. D., Hilert, A. J., Hurley, W., & Hill, C. E. (2021). A mindfulness-based compassion workshop and pre-session preparation to enhance therapist effectiveness in psychotherapy: A pilot study. *Counselling Psychology Quarterly*. <https://doi.org/10.1080/09515070.2021.1895724>.
- Hupfeld, J., & Ruffieux, N. (2011). Validierung einer deutschen Version der Self-Compassion Scale (SCS-D) [Validation of a German version of the Self-Compassion Scale (SCS-D)]. *Zeitschrift für Klinische Psychologie und Psychotherapie*, 40(2), 115–123. <https://doi.org/10.1026/1616-3443/a000088>.
- Kalmar, J., Baumann, I., Gruber, E., Vonderlin, E., Bents, H., Neubauer, A. B., & Mander, J. (2022). The impact of session-introducing mindfulness and relaxation interventions in individual psychotherapy for children and adolescents: a randomized controlled trial (MARS-CA). *Trials*, 23, 291 <https://doi.org/10.1186/s13063-022-06212-0>.
- Krieger, T., Berger, T., & Grosse Holtforth, M. (2016a). The relationship of self-compassion and depression: Cross-lagged panel analyses in depressed patients after outpatient therapy. *Journal of Affective Disorders*, 202, 39–45. <https://doi.org/10.1016/j.jad.2016.05.032>.
- Krieger, T., Hermann, H., Zimmermann, J., & Grosse Holtforth, M. (2015). Associations of self-compassion and global self-esteem with positive and negative affect and stress reactivity in daily life: Findings from a smart phone study. *Personality and Individual Differences*, 87, 288–292. <https://doi.org/10.1016/j.paid.2015.08.009>.
- Krieger, T., Sander Martig, D., van den Brink, E., & Berger, T. (2016b). Working on self-compassion online: A proof of concept and feasibility study. *Internet Interventions*, 6, 64–70. <https://doi.org/10.1016/j.invent.2016.10.001>.
- Kuyken, W., Warren, F. C., Taylor, R. S., Whalley, B., Crane, C., Bondolfi, G., & Dalgleish, T. (2016). Efficacy of mindfulness-based cognitive therapy in prevention of depressive relapse: An individual patient meta-analysis from randomized trials. *JAMA Psychiatry*, 73, 565–574. <https://doi.org/10.1001/jamapsychiatry.2016.0076>.
- 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). <https://doi.org/10.1371/journal.pone.0136598>.
- Leiner, D. J. (2019). *SoSci Survey*. In (Version 3.2.32) <https://soscisurvey.de>.
- López, A., Sanderman, R., Smink, A., Zhang, Y., van Sonderen, E., Ranchor, A., & Schroevers, M. J. (2015). A reconsideration of the Self-Compassion Scale's total score: Self-compassion versus self-criticism. *PLoS ONE*, 10(e1032940). <https://doi.org/10.1371/journal.pone.0103294>.
- Lou, X., Wang, H., & Minkov, M. (2022). The Correlation Between Self-compassion and Depression Revisited: a Three-Level-Meta-analysis. *Mindfulness*, 13, 2128–2139. <https://doi.org/10.1007/s12671-022-01958-9>.
- 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>.
- Mander, J., Blanck, P., Neubauer, A. B., Kröger, P., Flückiger, C., Lutz, W., & Heidenreich, T. (2019). Mindfulness and progressive muscle relaxation as standardized session-introduction in individual therapy: A randomized controlled trial. *Journal of Clinical Psychology*, 75(1), 21–45. <https://doi.org/10.1002/jclp.22695>.
- Mantzios, M., C, W. J., & Giannou, K. (2013). Psychometric properties of the Greek version of the Self-Compassion and Mindful Attention and Awareness Scales. *Mindfulness*, 6(1), 123–132. <https://doi.org/10.1007/s12671-013-0237-3>.
- Marsh, I. C., Chan, S. W. Y., & MacBeth, A. (2018). Self-compassion and Psychological Distress in Adolescents - A Meta-analysis. *Mindfulness*, 9, 1011–1027. <https://doi.org/10.1007/s12671-071-0850-7>.
- Marshall, S. L., Parker, P., Ciarocchi, J., Sahdra, B., Jackson, C. J., & Heaven, P. C. L. (2015). Self-compassion protects against the negative effects of low self-esteem: A longitudinal study in a large adolescent sample. *Personality and Individual Differences*, 74, 116–121. <https://doi.org/10.1016/j.paid.2014.09.013>.
- Mattejat, F., & Remschmidt, H. (2006). *ILK Inventar zur Erfassung der Lebensqualität bei Kindern und Jugendlichen*. Bern: Huber.
- Montero-Marín, J., Kuyken, W., Crane, C., Gu, J., Baer, R. A., Al-Awamleh, A. A., & Garcia-Campayo, J. (2018). Self-Compassion and Cultural Values: A Cross-Cultural Study of Self-Compassion Using a Multitrait-Multimethod (MTMM) Analytic Procedure. *Frontiers in Psychology*, 9, 2638 <https://doi.org/10.3389/fpsyg.2018.02638>.
- Morgado, F. F. R., Meireles, J. F. F., Neves, C. M., Amaral, A. C. S., & Ferreira, M. E. C. (2017). Scale development: the main limitations and recommendations to improve future research practices. *Psicologia: Reflexão e Crítica*, 30(3), 1–20. <https://doi.org/10.1186/s1155-016-0057-1>.
- Muris, P. (2016a). A Protective Factor Against Mental Health Problems in Youths? A Critical Note on the Assessment of Self-Compassion. *Journal of Child and Family Studies*, 25, 1461–1465. <https://doi.org/10.1007/s10826-015-0315-3>.
- Muris, P., Meesters, C., Pierik, A., & de Kock, B. (2016b). 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, 607–617. <https://doi.org/10.1007/s10826-015-0235-2>.
- Muris, P., Otgaar, H., López, A., Kurtic, I., & van de Laar, I. (2021). The (non)Protective Role of Self-Compassion in Internalizing Symptoms: Two Empirical Studies in Adolescents Demonstrating Unwanted Effects of Using the Self-Compassion Scale Total Score. *Mindfulness*, 12, 240–252. <https://doi.org/10.1007/s12671-020-01514-3>.
- 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. *Clinical Psychology and Psychotherapy*, 24(2), 373–383. <https://doi.org/10.1002/cpp.2005>.
- Neff, K. D. (2003). 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. (2016). The Self-Compassion Scale is a Valid and Theoretically Coherent Measure of Self-Compassion. *Mindfulness*, 7, 264–274. <https://doi.org/10.1007/s12671-015-0479-3>.
- Neff, K. D. (2021). Development and validation of the self-compassion scale for youth. *Journal of Personality Assessment*, 103(1), 92–105. <https://doi.org/10.1080/00223891.2020.1729774>.
- Neff, K. D., Hsieh, Y.-P., & Dejitterat, K. (2005). Self-compassion, Achievement Goals, and Coping with Academic Failure. *Self and Identity*, 4, 263–287. <https://doi.org/10.1080/13576500444000317>.

- Neff, K. D., & McGehee, P. (2010). Self-compassion and Psychological Resilience Among Adolescents and Young Adults. *Self and Identity*, 9, 225–240. <https://doi.org/10.1080/15298860902979307>.
- Neff, K. D., Pisitsungkagarn, K., & Hsieh, Y.-P. (2008). Self-Compassion and Self-Constraint 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., 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, 908–916. <https://doi.org/10.1016/j.jrp.2006.08.002>.
- Neff, K. D., Whittakar, T., & Karl, A. (2017). Evaluating the factor structure of the Self-Compassion Scale in four distinct populations: is the use of a total self-compassion score justified? *Journal of Personality Assessment*. <https://doi.org/10.1080/00223891.2016.1269334>.
- Neff, K. D., Yamell, L. M., Castilho, P., Guo, H. X., Hupfeld, J., Kotsou, I., & 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>.
- Nunnally, J. C. (1978). *Psychometric Theory*. New York, NY: McGraw-Hill.
- Parker, G., & Brotchie, H. (2010). Gender differences in depression. *International Review of Psychiatry*, 22(5), 429–436. <https://doi.org/10.3109/09540261.2010.492391>.
- Petrocchi, N., Ottaviani, C., & Couyoumdjian, A. (2013). Dimensionality of self-compassion: Translation of the self-compassion scale in an Italian sample. *Journal of Mental Health*, 23, 72–77. <https://doi.org/10.3109/09638237.2013.841869>.
- Pullmer, R., Chung, J., Samson, L., Balanji, S., & Zaitsoff, S. (2019). A systematic review for the relation between self-compassion and depressive symptoms in adolescents. *Journal of Adolescence*, 74, 210–220. <https://doi.org/10.1016/j.adolescence.2019.06.006>.
- Pullmer, R., Kerrigan, S. G., Grilo, C. M., & Lydecker, J. A. (2021). Factors Linking Perceived Discrimination and Weight Bias Internalization to Body Appreciation and Eating Pathology: A Moderated Mediation Analysis of Self-Compassion and Psychological Distress. *Stigma and Health*, 6(4), 494–501. <https://doi.org/10.1037/sah0000334>.
- Raes, F. (2010). Rumination and worry as mediators of the relationship between self-compassion and depression and anxiety. *Personality and Individual Differences*, 48, 757–761. <https://doi.org/10.1016/j.paid.2010.01.023>.
- Raes, F. (2011). The Effect of Self-Compassion on the Development of Depression Symptoms in a Non-clinical Sample. *Mindfulness*, 2, 33–36. <https://doi.org/10.1007/s12671-011-0040-y>.
- Reise, S. P., Moore, T. M., & Haviland, M. G. (2010). Bifactor models and rotations: exploring the extent to which multidimensional data yield univocal scale scores. *Journal of Personality Assessment*, 92(6), 544–559. <https://doi.org/10.1080/00223891.2010.496477>.
- Revelle, W. (2021). *psych: Procedures for Psychological, Psychometric, and Personality Research*. In (Version R package version 2.1.6) Northwestern University, Evanston, Illinois. <https://CRAN.R-project.org/package=psych>
- Rosseel, Y. (2012). lavaan: An R Package for Structural Equation Modeling. *Journal of Statistical Software*, 48(2), 1–36. <https://doi.org/10.18637/jss.v048.i02>.
- RStudioTeam. (2020). *RStudio: Integrated Development Environment for R*. Boston, MA: RStudio, PBC.
- Sharma, S., Mukherjee, S., Kumar, A., & Dillon, W. R. (2005). A simulation study to investigate the use of cutoff values for assessing model fit in covariance structure models. *Journal of Business Research*, 58(7), 935–943. <https://doi.org/10.1016/j.jbusres.2003.10.007>.
- Stolow, D., Zuroff, D. C., Young, J. F., Karlin, R. A., & Abela, J. R. Z. (2016). A prospective examination of self-compassion as a predictor of depressive symptoms in children and adolescents. *Journal of Social and Clinical Psychology*, 35(1), 1–20. <https://doi.org/10.1521/jscp.2016.35.1.1>.
- Sun, C., Chan, D. W., & Chan, L. K. (2016). Self-compassion and psychological well-being among adolescents in Hong Kong: exploring gender differences. *Personality and Individual Differences*, 101, 288–292. <https://doi.org/10.1016/j.paid.2016.06.011>.
- Susman, E., & Dorn, L. (2009). Puberty: Its role in development. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology*. 3rd edition (pp. 116–151). New York, NY: Wiley.
- Terry, M. L., Leary, M. R., & Mehta, S. (2013). Self-compassion as a Buffer against Homesickness, Depression, and Dissatisfaction in the Transition to College. *Self and Identity*, 12(3), 278–290. <https://doi.org/10.1080/15298868.2012.667913>.
- Thapar, A., Collishaw, S., Pine, D., & Thapar, A. (2012). Depression in adolescents. *Lancet*, 379(9820), 887–898. [https://doi.org/10.1016/S0140-6736\(11\)60871-4](https://doi.org/10.1016/S0140-6736(11)60871-4).
- Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38(1), 1–10. <https://doi.org/10.1007/BF02291170>.
- Tóth-Király, I., Bőthe, B., & Orosz, G. (2016). Exploratory structure equation modeling analysis of the Self-Compassion Scale. *Mindfulness*, 8(4), 881–892. <https://doi.org/10.1007/s12671-016-0662-1>.
- Van Dam, N. T., Sheppard, S. C., Forsyth, J. P., & Earlywine, M. (2011). Self-compassion is a better predictor than mindfulness of symptom severity and quality of life in mixed anxiety and depression. *Journal of Anxiety Disorders*, 25, 123–130. <https://doi.org/10.1016/j.janxdis.2010.08.011>.
- Williams, M. J., Dalgleish, T., Karl, A., & Kuyken, W. (2014). Examining the factor structures of the five facet mindfulness questionnaire and the self-compassion scale. *Psychological Assessment*, 26(2), 407–418. <https://doi.org/10.1037/a0035566>.
- Yarnell, L. M., & Neff, K. D. (2013). Self-compassion, Interpersonal Conflict Resolutions, and Well-being. *Self and Identity*, 12, 146–159. <https://doi.org/10.1080/15298868.2011.649545>.
- Yarnell, L. M., Stafford, R. E., Neff, K. D., Reilly, E. D., Knox, M. C., & Mullarkey, M. C. (2015). Meta-Analysis of Gender Differences in Self-Compassion. *Self and Identity*, 14(5), 499–520. <https://doi.org/10.1080/15298868.2015.1029966>.
- Zeller, M., Yuval, K., Nitzan-Assayag, Y., & Bernstein, A. (2015). Self-compassion in recovery following potentially traumatic stress: Longitudinal study of at-risk youth. *Journal of Abnormal Child Psychology*, 43, 645–653. <https://doi.org/10.1007/s10802-014-9937-y>.
- Zeng, X., Wei, J., Oei, T. P., & Liu, X. (2016). The Self-Compassion Scale is not validated in a Buddhist sample. *Journal of Religion and Health*, 55(1996), 1–14. <https://doi.org/10.1007/s10943-016-0205-z>.
- Zensus. (2011). *Bevölkerung nach Alter in Jahren und Geschlecht für Gemeinden* Version 2014. Deutschland: Statistische Ämter des Bundes und der Länder.
- 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>.
- Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the mindfulness self-compassion program. *Journal of Clinical Psychology*, 69(1), 28–44. <https://doi.org/10.1022/jcnp.21923>.