The Effect of Self-Compassion on the Development of Depression Symptoms in a Non-clinical Sample

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Abstract Self-compassion, or the ability to kindly accept oneself while suffering, is a topic of significant and growing scientific interest. Past research has shown, for example, that self-compassion is associated with less concurrent depression. So far, however, it remained untested whether self-compassion also prospectively predicts depression symptoms. Three hundred and forty-seven first-year psychology students (303 women; 44 men), ages 17–36, completed measures of self-compassion and depression symptoms at two assessments separated by a 5-month period. Results showed that self-compasion significantly predicted changes in depression symptoms, such that higher levels of self-compassion at baseline were significantly associated with greater reductions and/or smaller increases in such symptoms over the 5-month interval. These findings are consistent with the idea that self-compassion respresents a potentially important protective factor for emotional problems such as depression. Additional analyses further suggest that self-compassion is a relatively stable trait-like characteristic.

Keywords Self-compassion · Depression

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Introduction

> Mindfulness says, "Feel the pain" and self-compassion says, "Cherish yourself in the midst of the pain"; two ways of embracing our lives more wholeheartedly.
> (Germer, 2009, p. 89)

The popularity of mindfulness in academic psychology is rapidly increasing, but "research on self-compassion is following close on its heels" (Germer, 2009, p. 82). Although self-compassion is a relatively new concept in the fields of clinical, personality, and social psychology (Gilbert 2005; Neff et al. 2007), it already is drawing a great deal of interest. Of particular interest are recent findings highlighting self-compassion as one of the possible working mechanisms in mindfulness-based interventions (Bögels et al. 2010; Kuyken et al. 2010).

Self-compassion is about fully accepting oneself while in pain. Neff (2003a, b) defines it as the ability to join one's feelings of suffering with a sense of loving kindness, connection, and concern. She proposes three interacting components of self-compassion (Neff 2003a, b). The first is self-kindness or the ability to treat oneself with care and understanding rather than with self-judgment. The second is common humanity or the ability to recognize that all humans fail at times, rather than feeling isolated by one's

failures. The third is mindfulness or being aware of the present moment experience in a balanced way rather than overidentifying with one's emotions. Thus, "just as self-compassion is implicit in mindfulness practice, mindfulness can be found in self-compassion" (Germer, 2009, p. 83).

Initial research, mostly using the self-report Self-Compassion Scale (Neff 2003a; see below for more details), has shown that self-compassion is associated with psychological well-being, and it is considered a potentially important protective factor, fostering emotional resilience (see Neff 2009, for a recent review). A recurrent finding, for example, is that higher levels of self-compassion are related to less depression symptoms (e.g., Neff 2003a; Neff et al. 2007; Raes 2010).

However, most of this research is limited by its reliance on cross-sectional designs. Longitudinal research is needed to extend such cross-sectional evidence testing whether self-compassion also prospectively predicts the course of depression symptoms. This was precisely the primary aim of the present study.

As a secondary aim, the present study also sought to examine the test–retest reliability of the measure used to assess self-compassion, namely the Self-Compassion Scale (SCS; Neff 2003a). Earlier work already showed that the SCS's test–retest reliability is high (0.93; Neff 2003a). However, test–retest reliability in that study was only assessed over a fairly brief time span, i.e., 3 weeks. Evidence for the SCS's test–retest reliability would benefit from the use of longer time spans between measurement points. In the present study, an interval of 5 months was used. In addition, we used the recently developed Short Form of the Self-Compassion Scale (SCS-SF; Raes et al. 2010) of which the test–retest reliability has not been assessed previously. Finally, we did not only calculate the simple test–retest coefficient (r_{tt}) but also Howarth's μ index (Howarth 1978). This index was developed to determine whether scales represent either trait or state measures. Following Arrindell (1993), we used the attenuation corrected μ index (μ_a), defined as follows: $\mu_a = 1 - [r_{tt}/(\sqrt{\alpha_1} \cdot \sqrt{\alpha_2})]$, with α_1 and α_2 representing T1 and T2 internal consistency reliabilities, respectively. State scales have relatively high μ indices, $+0.3 \leq \mu \leq +0.6$, whereas typical trait scales have relatively lower μ indices, $-0.2 \leq \mu \leq +0.2$ (e.g., Arrindell 1993).

To summarize, the present study tested the hypothesis that self-compassion would prospectively predict the change in depression symptoms over a 5-month period, in that higher self-compassion at T1 would be associated with less depression at T2, taking into account baseline depression symptoms. At T2, self-compassion was also reassessed to evaluate the trait vs. state character of the SCS-SF and the corresponding concept it assesses, i.e., self-compassion.

Method

Participants

Participants were 439 first-year psychology students at the University of Leuven, Belgium (373 women, 66 men). The average age was 18.37 years (SD=1.83; range, 17–37). Of these, 347 (79%; 303 women, 44 men) completed the follow-up questionnaires, and the remaining 79 were absent for the follow-up assessment or had left the university. All data analyses were performed on the 347 cases with complete data. The average age was 18.27 years (SD= 1.55; range, 17–36). All respondents participated in return for partial course credit.

Measures

Self-Compassion Scale Short Form (SCS-SF) The SCS-SF (Raes et al. 2010) consists of 12 items divided over six subscales corresponding to six components of self-compassion (negative aspects are reverse coded): Self-Kindness ("When I'm going through a very hard time, I give myself the caring and tenderness I need", and "I try to be understanding and patient towards those aspects of my personality I don't like"), Self-Judgment ("I'm disapproving and judgmental about my own flaws and inadequacies", and "I'm intolerant and impatient towards those aspects of my personality I don't like"), Common Humanity ("I try to see my failings as part of the human condition", and "When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people"), Isolation ("When I fail at something that's important to me, I tend to feel alone in my failure", and "When I'm feeling down, I tend to feel like most other people are probably happier than I am"), Mindfulness ("When something upsets me I try to keep my emotions in balance", and "When something painful happens I try to take a balanced view of the situation"), and Over-Identification ("When I'm feeling down I tend to obsess and fixate on everything that's wrong", and "When I fail at something important to me I become consumed by feelings of inadequacy") (Neff, 2003a). Adequate psychometric properties are reported, such as high internal consistency and a near-perfect correlation with the long form SCS (Raes et al., 2010). Items are rated on a seven-point response scale ranging from 1 (*almost never*) to 7 (*almost always*). Raes et al. (2010) recommend the use of a single total score over its subscales. A total self-compassion score is computed by reversing the negative subscale items and then adding all subscale scores.

Beck Depression Inventory (BDI-II) The BDI-II (Beck et al. 1996) assesses severity of depression symptoms (Dutch

version by Van der Does, 2002) and consists of 21 items. Results of recent studies using systematic confirmatory factor analyses (CFA) suggest that what is measured with the BDI-II is not a unidimensional construct (e.g., Vanheule et al. 2008). On that basis, Vanheule et al. (2008) recommend the use of three unidimensional subscales, which assess a somatic, an affective, and a cognitive dimension instead of one global score.

Procedure

Following written informed consent, participants completed the self-compassion and depression questionnaires, along-side a series of other measures that were not relevant to the present study. The SCS-SF always preceded the BDI-II. All measures were completed collectively in mass testing at two assessments separated by a 5-month period. The study was approved by the Ethical Committee of the University of Leuven.

Results

Test–Retest Reliability of the Self-Compassion Scale (Short Form)

Means, standard deviations, and scoring ranges for all variables at both assessment points are presented in Table 1. Cronbach's alpha for the SCS-SF at T1 and T2 was 0.84 and 0.87, respectively. The test–retest correlation for the Self-Compassion Scale (Short Form) was .71, which is quite high, especially considering the time span of 5 months. The corresponding Howarth's μ index value was .17, which

falls below .20, suggesting that the SCS-SF is indeed a trait measure.

Prediction of Depression Symptoms Change Scores by Self-Compassion

As recommended, and based on recent studies using confirmatory factor analyses on the BDI-II (see our introduction; e.g., Vanheule et al., 2008) we used three separate subscale scores instead of a single undimensional BDI-II score. The three unidimensional subscales assess somatic, affective, and cognitive symptoms of depression. We performed three similar hierarchical regression analyses with the standardized residual change scores on these three depression symptom domains of the BDI-II as the criterion variables. In each of the analyses self-compassion (SCS-SF total score) was the predictor. Standardized residual change scores represent the change in depressive symptoms from T1 to T2 that is not expected on the basis of the T1 depressive symptoms alone. The advantage of using standardized residual change scores, over simple change scores, is that they take initial individual differences in depression symptoms at T1 and overall level of change into account. Positive values indicate that individuals were more symptomatic at T2 than predicted; negative values indicate that individuals were less symptomatic at T2 than predicted on the basis of their T1 depressive symptoms alone.

As indicated in Table 2, results showed that self-compassion significantly predicted change scores in somatic and affective depression symptomatology, such that higher levels of self-compassion at T1 were signifi-cantly associated with greater reductions and/or smaller increases in such symptoms from T1 to T2. Note that these change scores control for baseline symptomatology. The

Table 1 Descriptives for the Self-Compassion Scale (Short Form) and Beck Depression Inventory-II Subscales at both assessment points

Variable	M	SD	Range
Assessment T1			
SCS-SF	46.76	11.64	14–75
BDI-II-SOM	3.64	2.30	0–13
BDI-II-AFF	1.04	1.24	0–7
BDI-II-COG	2.28	3.28	0–13
Assessment T2			
SCS-SF	50.28	12.05	20–78
BDI-II-SOM	3.35	2.63	0–17
BDI-II-AFF	0.90	1.26	0–6
BDI-II-COG	2.00	2.34	0–12

SCS-SF Self-Compassion Scale Short Form, *BDI-II* Beck Depression Inventory-II, *SOM* Somatic subscale of BDI-II, *AFF* Affective subscale of BDI-II, *COG* Cognitive subscale of BDI-II

Table 2 Summary of Hierarchical Regression Analyses for Self-Compassion (SCS-SF) predicting residual change scores of somatic, affective, and cognitive depression symptoms (BDI-II)

	B	SE B	β values	R^2 values
DV: Δ somatic symptoms				
Constant	0.64	0.22		
Self-compassion	−0.01	0.01	−0.16***	0.03
DV: Δ affective symptoms				
Constant	0.64	0.22		
Self-compassion	−0.01	0.01	−0.16***	0.03
DV: Δ cognitive symptoms				
Constant	0.39	0.22		
Self-compassion	−0.01	0.01	−0.10*	0.01

SCS-SF Self-Compassion Scale Short Form, *BDI-II* Beck Depression Inventory-II

*$p=0.072$; **$p<0.05$; ***$p<0.01$; ****$p<0.001$ (two-tailed test)

predictive role for cognitive depressive symptoms was only marginally significant.

Discussion

Although self-compassion has been proposed as a potentially important protective factor for emotional problems like depression, this idea has rested mainly on correlational evidence from cross-sectional studies. The present study was the first to our knowledge to test whether naturally occurring levels of self-compassion also prospectively predict changes in depression symptoms in a non-clinical student sample. Consistent with the claim that self-compassion may foster emotional resilience our results indeed showed that higher levels of self-compassion at baseline were significantly associated with greater reductions and/or smaller increases in such symptoms over the 5-month interval.

The present study further showed that the Self-Compassion Scale-Short Form (SCS-SF), used to assess self-compassion, has quite high test–retest reliability, especially considering the relatively long time interval of 5 months. The low Howarth's μ index for the SCS-SF furthermore suggests that the scale is a trait (rather than state) measure and that the concept it assesses, i.e., self-compassion, is a relatively stable characteristic. This does not mean, however, that self-compassion cannot be increased using self-compassion-based interventions; on the contrary, see Germer (2009) and Gilbert and Proctor (2006) for examples of clinical interventions promoting self-compassion. In fact, our results underscore the validity of such compassionate-based practices and justify the further integration of self-compassion into mindfulness practices.

We acknowledge that the amount of variance in depression change scores predicted by self-compassion was fairly small (3% only). We believe that the predictive role of self-compassion would have been more substantial if, for example, stress—both episodic and chronic—had been assessed at T2 for the past 5 months. The interaction between self-compassion and stress would then most likely account for a significantly greater amount of the variability in depression change scores, above and beyond a simple self-compassion main effect.

The main limitations of the present study are the non-clinical nature of the sample and the exclusive reliance on self-report measures. However, the use of a non-clinical sample allowed us to establish the prospective association between self-compassion and depression unconfounded by treatment effects. Also, and notwithstanding the common disadvantages of self-report scales like the SCS (e.g., self-representational biases), the SCS has proven its validity not only through its association with other relevant self-report measures, but also through validation against experimental

data. Self-compassion, as measured by the SCS, has been found to attenuate peoples' reactions to experimentally induced distressing situations involving, for example, failure and rejection (Leary et al. 2007). Nevertheless, future studies should test whether the current findings also extend to clinical populations using, for example, clinician-rated instruments alongside self-report scales.

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