Working on self-compassion online: A proof of concept and feasibility study

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ABSTRACT

Objectives: Low self-compassion has repeatedly been associated with psychopathology. There are many promising face-to-face group format interventions focusing on self-compassion. We investigated the feasibility of an online self-compassion program.

Design: A feasibility and proof-of-concept study of an online adapted Mindfulness-based Compassionate Living (MBCL) program.

Participants: Self-referred participants suffering from harsh self-criticism ($N = 39$) were offered an online program and were asked to complete outcome measures at baseline, after 8 weeks (post-intervention) and after 14 weeks (follow-up).

Intervention: The online program consisted of seven sessions, including a first session introducing mindfulness and mindfulness meditation followed by a six-session adaptation of the MBCL program.

Primary and secondary outcome measures: The Self-Compassion Scale (SCS) was the primary outcome measure. Secondary outcome measures were the Forms of Self-criticizing/Attacking and Self-reassuring Scale (FSCRS), the Satisfaction with Life Scale (SWLS), the Comprehensive Inventory of Mindfulness Experience (CHIME), the Fear of Self-compassion (FSC), and the Perceived Stress Questionnaire (PSQ). Additionally, we assessed satisfaction with the program and negative effects related to the program. Furthermore, we used several measures of program usage (number of processed modules, number of logins, time spent in the program, number of diary entries, number of entries in completed exercises).

Results: Self-compassion, mindfulness, reassuring-self and satisfaction with life significantly increased whereas inadequate self, hated self, perceived stress and fear of self-compassion significantly decreased from pre- to the 8-week assessment. Results remained stable from post- to the 6-week follow-up. Pre-to-post within-effect sizes were medium to large ($ds = 0.50$–1.50) and comparable to those found within a face-to-face group format in a similar sample. Time spent in the program significantly predicted self-compassion at post.

Conclusions: The results of this pilot study are promising. However, they must be seen as preliminary since replication in a randomized controlled trial, with clinical measures/diagnoses and a longer follow-up period, is necessary.

1. Introduction

The general tendency to criticize oneself harshly and not treat oneself with compassion when facing personal failure or having a hard time has repeatedly been linked to psychopathology, such as depression, eating, bipolar, and social anxiety disorders (Krieger et al., 2013; Werner et al., 2011; Døssing et al., 2015; Blatt and Zuroff, 1992; Kelly et al., 2014; MacBeth and Gumley, 2012). Low levels of self-compassion and high levels of self-criticism have repeatedly been

found to predict psychological symptoms in longitudinal studies (Krieger et al., 2016; Sbarra et al., 2012; Terry et al., 2013; Luyten et al., 2007; Dunkley et al., 2009). Furthermore, self-compassion has also been shown to be an important resilience factor and to be associated with more positive affect and well-being (Trompetter et al., 2016; Krieger et al., 2015; Neff and Vonk, 2009; Zessin et al., 2015).

In a comprehensive review, Hofmann et al. (2011) concluded that loving kindness meditation and compassion meditation may provide potentially useful strategies for targeting a variety of different psychological problems. During the last years, several specific loving kindness and self-compassion training programs have been developed and studied in clinical and non-clinical samples (Fredrickson et al., 2008; Jazaieri et al., 2012; Neff and Germer, 2012; Shahar et al., 2014b;

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Wallmark et al., 2013; Pace et al., 2009; van den Brink and Koster, 2015; Gilbert and Irons, 2004; Gilbert and Procter, 2006). A recent meta-analysis came to the conclusion that kindness-based meditation showed evidence of benefits for the health of individuals in various samples through its effects on well-being and social interaction (Galante et al., 2014).

A recently developed compassion-focused training is Mindfulness-based Compassionate Living (MBCL; van den Brink and Koster, 2015). The MBCL program builds on established mindfulness skills and consists of eight thematic sessions and a silent session with guided meditations. MBCL integrates secular adaptations from traditional practices, such as loving kindness meditation, compassionate breathing and other interventions such as compassionate imagery and dealing with the *backdraft* phenomenon (Germer, 2009) and fear of compassion (Gilbert, 2010), within a theoretical framework of Gilbert's evolution-based theory of three primary affect regulating systems (Gilbert, 2010). Main components of the program are theoretical inputs, instructions for formal meditation practices, by the trainer during sessions and aided by audio-material during home practice, and guidance on informal practice and observational exercises in daily life. During sessions there is, like in basic mindfulness training programs, opportunity to further explore with the trainer what came up during exercises by means of mindful dialogue or inquiry. Recently, MBCL has been tested in an open trial in a mixed psychiatric outpatient sample ($n = 33$). All participants had followed a mindfulness-based stress reduction (MBSR) program or a mindfulness-based cognitive therapy (MBCT) program beforehand. Since the developers of MBCL recommend to have a grounding in mindfulness before undergoing MBCL. Results of this pilot study indicated that the program significantly reduced depressive symptoms and increased mindfulness and self-compassion (Bartels-Velthuis et al., 2016). Furthermore, there is a large trial underway comparing MBCL plus treatment-as-usual (TAU) versus TAU in recurrent depression (Schuling et al., 2016).

It can be assumed that people with increased levels of self-criticism and low self-compassion suffer from increased self-stigmatization and feelings of shame. Most of the programs that focus on self-compassion mentioned above are offered in a face-to-face group setting. However, a face-to-face and/or group setting may pose an important barrier and discourage people with low levels of self-compassion from seeking support in such programs. In support of this assumption, a recent review and meta-analysis showed that internalized stigma is significantly negatively associated with help-seeking behavior (Clement et al., 2015). Therefore, it seems essential to test a low-threshold intervention, such as an internet-based intervention, in order to offer people suffering from low self-compassion and high self-criticism the opportunity to work on these issues.

During the last decade, internet-based interventions have drawn significant attention and have shown efficacy in trials for several psychiatric disorders and related conditions and problems, such as perfectionism and procrastination (Andersson, 2016). Internet-based interventions have numerous advantages including greater accessibility, anonymity, convenience and cost-effectiveness. So far, there are several studies of online interventions targeting mindfulness, which have shown promising results (Glück and Maercker, 2011; Cavanagh et al., 2013; Krusche et al., 2013), further confirmed by recent meta-analyses (Cavanagh et al., 2014; Spijkerman et al., 2016). However, to the best of our knowledge, so far there is no study that has investigated the feasibility and the efficacy of a self-compassion online intervention program. Despite this lack of research in internet interventions for self-compassion, it is important to mention that there are promising results from studies testing shorter interventions focusing on self-compassion without contact to a therapist or coach (McEwan and Gilbert, 2015; Kelly et al., 2009; Shapira and Mongrain, 2010).

The main goal of the present study was to test the feasibility of an internet-based 7-week program for people suffering from low self-compassion and harsh self-criticism and its effect on a broad set of constructs in an open pilot trial. Furthermore, we wanted to investigate whether program usage was predictive for the outcome.

2. Methods

2.1. Recruitment and procedure

Participants who judged themselves as being too self-critical were recruited in Switzerland, Austria and Germany through a study website. After registration on the study website, individuals received an email with detailed information on the study procedure and an informed consent form and were invited to ask questions about the study by phone. The inclusion criteria were 1) a subjective feeling that one treats oneself too self-critically, and 2) being at least 18 years of age. Those who returned the signed consent form were asked to complete questionnaires and to provide demographic information online. Subsequently, participants received an account for the self-help program. The study was approved by the local Ethics Committee of the Faculty of Human Sciences at the University of Bern, Switzerland.

2.2. Participants

Out of 56 individuals who received the detailed study information, 39 participants returned the signed informed consent and filled out the questionnaires at baseline. Participants were on average 30.15 years of age ($SD = 9.30$; range: 18–57). Thirty-five participants (89.7%) were females. Of the sample 51.3% were single ($n = 20$), 46.1% were married or in a relationship ($n = 18$), and 2.6% were widowed ($n = 1$). Regarding highest education, 66.7% indicated 'university degree' ($n = 26$), 23.1% 'high school' ($n = 9$), 5.1% 'apprenticeship' ($n = 2$) and 5.1% 'compulsory school' ($n = 2$). We asked participants whether they had any experience regarding meditation, 56.4% ($n = 22$) indicated that they have some experience, 12.8% ($n = 5$) indicated that they regularly practice some kind of meditation, and 30.8% ($n = 12$) indicated that they have no experience at all with meditation.

2.3. Intervention

The intervention consists of a 7-week internet-based program that included an interactive self-help guide with text, audio files and a diary function. The program can be accessed on any computer and smartphone. We use SSL (Secure Sockets Layer) encryption to secure all internet-based communication, and participants are identified using anonymous login names and passwords. The program is interactive in the sense that participants can freely navigate through the web pages and repeat exercises and sessions whenever they want to.

The intervention was an adaption of the MBCL program by van den Brink and Koster (2015). Since the authors recommend previous experience with mindfulness meditation before doing MBCL, we created a first module that consisted of a text-based introduction into mindfulness and mindfulness meditation along with audio files for formal practice (available online and downloadable) and information on possibilities of informal practice. The next six modules are a shortened version of the MBCL program. Participants have to work through the program in a sequential order. Each module builds upon the previous one, and takes approximately 50 min to an hour to complete. Participants are asked to complete one module per week. Theoretically, all modules can be completed at once, thus, they were not gradually made available over the 7-weeks. However, apart from working through the lessons, participants are asked to repeat the exercises and to use the online diaries as often as possible. The intervention was unguided, but participants could receive guidance/assistance for the program from a psychologist on request. They were informed that the psychologist would respond within three working days.

2.4. Measures

At the beginning, participants answered sociodemographic questions and questions regarding their meditation experience. The following measures were assessed at the beginning, after 8 weeks (post) and at 6 weeks follow-up:

2.4.1. Self-compassion scale

Self-compassion was assessed with the Self-compassion Scale (SCS; Neff, 2003). The SCS is a 26-item self-report inventory that consists of six subscales: self-kindness, self-judgment, common humanity, isolation, mindfulness, and overidentification. Each item was rated on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). In the present study, we used the total score of the German version of the SCS (Hupfeld and Ruffieux, 2011). Cronbach's α in the present study was 0.86 for the total score. In addition, we calculated subscale scores for positive (SC-POS) and negative items (SC-NEG). Cronbach's α were 0.82 and 0.81, respectively.

2.4.2. Forms of Self-criticizing/Attacking and Self-reassuring Scale

A German version of the Forms of Self-criticizing/Attacking and Self-reassuring Scale (FSCRS) was used to evaluate the way people think about themselves when things go wrong (Gilbert et al., 2004). This scale is composed of 22 items rated on a 5-point Likert scale ranging from 0 (*Not at all like me*) to 4 (*Extremely like me*). The scale is composed of three factors: Inadequate self (e.g., 'I remember and dwell on my failings'), Hated self (e.g., 'I do not like being me'), and Reassured self (e.g., 'I can still feel lovable and acceptable'). Cronbach's α coefficients were 0.78 for hated self, 0.84 for reassured self, and 0.82 for inadequate self.

2.4.3. Satisfaction With Life Scale

The Satisfaction With Life Scale (SWLS; Diener et al., 1985) consisting of five items was used to assess global life satisfaction. Each item is rated on a 7-point scale ranging from strongly disagree (1) to strongly agree (7). Cronbach's α was 0.88.

2.4.4. Comprehensive Inventory of Mindfulness Experience

The Comprehensive Inventory of Mindfulness Experience (CHIME) consists of 37 6-point items that are assigned to eight different subscales referring to aspects of mindfulness without relying on technical expressions of meditation or Buddhism (Bergomi et al., 2015; Bergomi et al., 2014): (1) awareness towards internal experiences (inner awareness), (2) awareness towards external experiences (outer awareness), (3) acting with awareness (acting with awareness), (4) accepting and non-judgmental orientation (acceptance), (5) decentering and non-reactivity (decentering), (6) openness to experiences (openness), (7) relativity of thoughts (relativity), and (8) insightful understanding (insight). In the present study, we used the total score (Cronbach's α = 0.84).

2.4.5. Fear of self-compassion

Fear of self-compassion was assessed with the respective 15-item section of the Fear of Compassion Scales (Gilbert et al., 2011). This questionnaire asks participants to rate their agreement with statements about expressing kindness and compassion towards oneself using a scale of 0 (*don't agree at all*) to 4 (*completely agree*). Sample items include: "I feel that I don't deserve to be kind and forgiving to myself" or "I fear that if I am more self-compassionate I will become a weak person". Cronbach's α in the present study was 0.88 at baseline.

2.4.6. Perceived Stress Questionnaire

The Perceived Stress Questionnaire (PSQ) is a self-report questionnaire that assesses subjectively experienced stress independent of specific and objective triggers (Levenstein, 1993) (e.g., "You feel that too many demands are being made on you", or "Your problems seem to be piling up"). In this study, a German revised version of the PSQ (Fliege et al., 2005) was used, which consists of 20 items scored on a 4-point Likert scale ranging from 1 (*ever*) to 4 (*most of the time*) that asks for the perceived stress during the last week. Cronbach's α was 0.93 at baseline.

In addition to these questionnaires, the following to measures/questions were assessed at post.

2.4.7. Participant satisfaction

An adapted version of a patient satisfaction questionnaire that is widely used in Germany, the ZUF-8 (Schmidt et al., 1989), was used in this study. This brief and reliable instrument was originally developed as a translation of the Client Satisfaction Questionnaire (CSQ-8; Attkisson and Greenfield, 2004) and was originally intended to assess satisfaction with inpatient treatment. The eight items were reworded slightly to focus on satisfaction with the internet intervention examined in this pilot study. An averaged total score ranges from 1 to 4. Example items are "How do you rate the quality of the online program in general?", "Would you recommend the program to a good friend if he or she would need similar support?", or "Did the program support you in coping differently with your problems?".

2.4.8. Negative effects

There has recently been a call for regularly probing for negative effects in internet-based interventions (Rozental et al., 2014). Therefore, we asked participants the following two questions with an open answer format at the 8-week assessment: "Did working with the self-help program lead to an aggravation of symptoms you have had before?", "Did working with the self-help program lead to new psychological complaints that you have not experienced before?".

2.4.9. Adherence measures

The self-help program automatically registered several indices for the adherence with the program. Registered were number of modules started, number of logins and time spent in the program. Time spent in the self-help program was investigated by analyzing login data. Because participants could have potentially been logged in while not working with the program, usage time windows with no activity in the program for >10 min were not counted.

2.5. Statistical analysis

We used Mann–Whitney *U* tests to compare completers and non-completers. In order to investigate intervention effects we used depend *t*-tests. These analyses were repeated using a non-parametric test. However, since there were no deviances between the results of parametric and non-parametric tests, we only report results of the *t*-tests. We report Cohen's *d* as effect sizes with the corresponding 95%-confidence interval. To evaluate possible predictors of outcome, we used regression analysis by predicting the SCS post-score by potential predictors while controlling for SCS pre-score. Statistical significance was set at an alpha-value of 0.05 using two-tailed tests.

3. Results

3.1. Preliminary analyses

The total sample had a total self-compassion score of 2.43 ($SD = 0.45$). A recent study by Körner et al. (2015) in a representative sample of the German general population ($n = 2404$) revealed a mean SCS score of 3.47 ($SD = 0.40, n = 959$) for individuals without depressive symptoms and 2.74 ($SD = 0.73, n = 50$) for people with a high probability of suffering from a major depressive disorder. Statistical comparisons (using Welch tests) indicated that our sample was significantly less self-compassionate than people without depressive

symptoms ($t[40] = 14.21$, $p < 0.01$), and also less self-compassionate than people with a probable major depressive disorder ($t[82] = 2.46$, $p = 0.02$).

3.2. Dropout analyses

Thirty participants (76.9%) completed the 8-week assessment and were considered completers, whereas nine participants (23.1%) did not complete this assessment and were considered study dropouts. Completers and dropouts did not differ regarding, sociodemographic variables (all $ps > 0.25$), regarding previous experience with meditation or current meditation practice ($ps > 0.86$), and baseline variables (all $ps > 0.23$, see Table 1).

3.3. Intervention effects

Table 2 shows means and standard deviations for the completer sample ($n = 30$) of baseline and 8-week assessment scores of the outcome measures. Dependent t-tests showed that participants indicated significantly more self-compassion, less inadequate self-criticism, and less fear of self-compassion. Additionally, they reported being significantly more mindful, having greater satisfaction with life and perceiving less stress. Effect sizes for all measures, except for satisfaction with life and perceived stress showed medium to large effect sizes, with 95%-confidence intervals that did not include zero.

3.4. Reliable improvement and deterioration

We calculated a reliable change criterion (Jacobson and Truax, 1991) for the Self-compassion Scale in order to determine how many completers showed reliable improvement and deterioration. Based on the standard deviation of 0.60 (Körner et al., 2015) and a retest reliability of 0.92 (Hupfeld and Ruffieux, 2011), we calculated a reliable change criterion of 0.47. Applying this criterion, zero participants (0%) showed a reliable deterioration, nine participants showed no reliable change (30%), and 21 participants (70%) showed a reliable improvement regarding self-compassion.

3.5. Maintenance of intervention effects

Of the 30 completers, 23 participants (77%) completed the 6-week follow-up assessment. Gains achieved during the intervention were maintained over a 6-week follow-up interval for all measures (see Table 3). However, the decrease from post- to follow-up in self-compassion almost reached statistical significance. Additionally, mindfulness scores kept on increasing from post- to follow-up assessment.

3.6. Program usage and time spent in the program

Participants who had completed the post-assessment started working on 4.93 ($SD = 2.12$; median: 5) modules, and logged in 112 times ($SD = 117$; median: 97) on average. They spent on average 318 min ($SD = 372$ min; median: 242 min) in the program.

3.7. Exercise entries and diary usage

On average, participants noted 4.23 entries in the diary ($SD = 8.85$; range $= 0–44$) and had 15.23 completed exercises ($SD = 21.66$; range $= 0–110$). Because participants often only gave a summary of exercises completed in a single entry, a student assistant, who was blind to hypothesis and outcome data, rated for each participant based on their entries whether a participant has completed exercises "daily or almost daily", "regularly" or "seldom or never". Based on these ratings 16 participants (53.3%) did exercises daily or almost daily, eight participants (26.7%) regularly, and six participants (20.0%) seldom or never.

3.8. Contact with the psychologist

Participants wrote on average 0.7 messages to the psychologist ($SD = 2.15$; range $= 0–11$). Messages concerned mainly technical issues or theoretical questions (e.g., the difference between self-compassion and self-pity).

3.9. Predictors of outcome

The number of started modules did not significantly predict residualized gain scores in self-compassion at post ($\beta = 0.19$, $p = 0.29$), nor did the number of logins, although there was a trend towards significance ($\beta = 0.34$, $p = 0.06$). However, time spent in the program was a significant predictor of the residualized gain scores ($\beta = 0.38$, $p = 0.03$). Furthermore, the number of diary entries ($\beta = 0.31$, $p = 0.08$) and the number of exercise entries ($\beta = 0.32$, $p = 0.07$) were not significant predictors but reached a trend towards significance.

3.10. Patient satisfaction and negative effects

Overall, participants reported a high level of satisfaction with the program. The mean score on the ZUF-8 (ranging from 1 to 4) was 3.14 ($SD = 0.33$; range: 2.13–3.63).

Regarding negative effects, four participants (13%) indicated an aggravation of symptoms. One person indicated that her tinnitus got temporarily a bit stronger at the beginning of the program and three participants indicated that they experienced more sadness realizing how self-critical they are. However, all three wrote that this turned out to be a good thing, because this "opened the door" for more self-compassion. In addition, one person (3%) indicated new psychological complaints. She indicated that she sometimes felt ashamed wishing herself something good or spending time with meditation instead of doing "something productive".

At 6-week follow-up, we asked the participants whether they would have done such a course also in a face-to-face-setting. About one quarter (26%) answered that they would have done it in a single or group

Table 1
Descriptives of the full sample and differences between the completer and the non-completer sample.

	Full sample ($n = 39$)	Completer ($n = 30$)	Non-completer ($n = 9$)	Mann–Whitney U test p-Value
	M (SD) Median	M (SD) Median	M (SD) Median	
Self-compassion	2.43 (0.45) 2.40	2.44 (0.34) 2.45	2.39 (0.74) 2.18	0.35
- SCS-POS	2.59 (0.50) 2.57	2.62 (0.45) 2.57	2.46 (0.67) 2.48	0.33
- SCS-NEG	3.73 (0.56) 3.90	3.74 (0.45) 3.88	3.67 (0.87) 3.93	0.50
Inadequate self	24.92 (5.96) 24.00	25.30 (4.63) 25.00	23.67 (9.42) 23.00	0.78
Reassure self	11.49 (5.43) 11.00	11.43 (4.80) 11.00	11.67 (7.52) 11.00	0.78
Hated self	7.41 (4.42) 6.00	6.73 (3.73) 6.00	9.67 (5.91) 9.00	0.23
Fear of self-compassion	21.21 (11.39) 20.00	20.87 (10.87) 20.00	22.33 (13.63) 24.00	0.61
Mindfulness	3.41 (0.47) 3.38	3.44 (0.42) 3.44	3.30 (0.50) 3.03	0.30
Satisfaction with life	20.92 (6.68) 20.00	20.53 (5.94) 20.00	22.22 (9.02) 23.00	0.59
Perceived stress	2.58 (0.57) 2.63	2.59 (0.59) 2.67	2.57 (0.51) 2.45	0.91

Notes. SCS-POS = self-compassion positive facets; SCS-NEG = self-compassion negative facets.

Table 2
Descriptives for pre- and post-assessment for post assessment completers ($n = 30$).

	Pre M (SD)	Post M (SD)	t	Cohen's d [95%-CI]
Self-compassion total	2.44 (0.34)	3.17 (0.60)	−6.97[**]	−1.50 [−0.90; −2.05]
- SCS-POS	2.63 (0.45)	3.24 (0.62)	−5.38[**]	−1.13 [−1.66; −0.57]
- SCS-NEG	3.74 (0.45)	2.90 (0.67)	7.15[**]	1.47 [0.88; 2.02]
Inadequate self	25.30 (4.63)	17.17 (6.72)	6.30[**]	1.41 [0.83; 1.95]
Reassured self	11.43 (4.80)	17.10 (5.50)	−5.99[**]	−1.10 [0.54; 1.63]
Hated self	6.73 (3.73)	3.97 (2.98)	4.67[**]	0.82 [0.28; 1.33]
Fear of self-compassion[a]	21.61 (10.81)	10.11 (9.20)	6.79[**]	1.15 [0.57; 1.69]
Mindfulness	3.44 (0.42)	4.01 (0.58)	−5.27[**]	−1.13 [−1.65; −0.57]
Satisfaction with life	20.53 (5.94)	23.70 (6.47)	4.68[**]	−0.51 [0.01; 1.02]
Perceived stress	2.59 (0.59)	2.15 (0.54)	3.97[**]	0.78 [0.24; 1.29]

Notes. SCS-POS = self-compassion positive facets; SCS-NEG = self-compassion negative facets.
[a] $n = 28$ due to missing values.
[**] $p < 0.01$.

setting, about one third (35%) said they would have only made it in a single setting, one person (4%) only in a group setting, and one third (35%) said that they would have only made in an online setting.

4. Discussion

The present pilot and proof-of-concept study aimed at investigating the feasibility of a self-compassion training program, i.e., MBCL, adapted for the use via the internet. Results indicated that the program was feasible and that participants were generally satisfied with the intervention under study.

Although we did not assess any symptom measures such as depressive symptoms or anxiety, we can say that people who were interested in undergoing the internet-based intervention had very low self-compassion scores. This is indicated by self-compassion scores that were significantly below the mean of a representative non-clinical sample and of a sample with a probable depressive disorder (Körner et al., 2015). This finding could suggest that a low-threshold online intervention may well attract "silent sufferers" with quite severe symptoms who otherwise avoid seeking help. This underscores the importance of designing online programs. It also demands that in the future studies more specific clinical measures should be used.

Two thirds of participants completed the treatment (78%). The completer sample showed medium to large within-group effect sizes from baseline to the 8-week assessment. Importantly, these gains were maintained at least over a follow-up interval of another 6 weeks.

Interestingly, within-group effect sizes of this pilot study were similar to effect sizes of a face-to-face group-based 8-week loving kindness intervention in a similar self-referred sample with high self-criticism scores (Shahar et al., 2014a), which showed within-group effect sizes of 0.73 for self-compassion (compared to 1.32 [0.75–1.86]

in the present study), and 1.11 for inadequate self-criticism (compared to 1.41 [0.83–1.95] in the present study) in the completer sample. Our results also mirror findings of a pilot study on a mindfulness online program (Krusche et al., 2013) that found similar effects on perceived stress in an online setting as in group-based interventions.

Notably, the number of processed modules was not associated with outcome. However, time spent in the program significantly predicted self-compassion at post. Furthermore, the number of diary and exercise entries showed a trend regarding the prediction of outcome. A possible explanation for this is that the time spent in the program is a proxy for how often participants listened to exercise instructions and performed the exercises. Therefore, it seems to be more important to do the exercises than to simply work through the online program without doing exercises.

Another interesting finding is the continued significant increase in mindfulness from post to follow-up. However, since we did not assess whether and how people continued with exercises, we cannot tell if this could be due to people continuing doing mindfulness exercises after the post-assessment. Relatedly, a short follow-up interval of six weeks post-intervention does not allow drawing conclusions regarding the long-term effects of the intervention.

The promising results of this study should be regarded as preliminary. Replication in a randomized controlled trial, including clinical measures/diagnoses and a longer follow-up period, is necessary.

Taken together, the results of this pilot study seem promising. Participants showed improvements in all measures, these improvements kept stable over a 6-week follow-up period and participants indicated to be satisfied with the program. In the light that self-compassion programs are currently mainly available in a group format, and that about two thirds in the present study indicated that they would not have undergone a similar program in a group setting, an online

Table 3
Descriptives for post and follow-up-assessment for follow-up assessment completers ($n = 23$).

	Post M (SD)	Follow-up M (SD)	t	Cohen's d [95%-CI]
Self-compassion total	3.17 (0.64)	2.97 (0.61)	1.94[+]	0.32 [−0.27; 0.90]
- SCS-POS	3.21 (0.66)	3.03 (0.69)	1.58	0.27 [−0.32; 0.84]
- SCS-NEG	2.87 (0.72)	3.09 (0.69)	−2.02[+]	−0.31 [−0.89; 0.27]
Inadequate self	17.48 (6.86)	18.13 (7.64)	−0.53	−0.09 [−0.67; 0.49]
Reassured self	16.61 (5.47)	16.83 (6.25)	−0.25	−0.04 [−0.61; 0.54]
Hated self	4.09 (3.19)	5.09 (4.08)	−1.69	−0.27 [−0.85; 0.31]
Fear of self-compassion[a]	10.62 (9.05)	12.57 (10.73)	−1.31	−0.20 [−0.80; 0.41]
Mindfulness	3.50 (0.43)	3.98 (0.50)	−3.95[**]	−1.01 [−1.63; −0.40]
Satisfaction with life	24.39 (5.35)	24.30 (4.11)	0.16	0.02 [−0.56; 0.60]
Perceived stress	2.15 (0.56)	2.21 (0.55)	−0.53	−0.11 [−0.68; 0.47]

Notes. SCS-POS = self-compassion positive facets; SCS-NEG = self-compassion negative facets.
[a] $n = 21$ due to missing values.
[+] $p < 0.10$.
[**] $p < 0.01$.

intervention may be a helpful complementary format for training in self-compassion, and a way to reach vulnerable individuals who would otherwise not seek help.

Contributors

All authors planned the paper and, EvdB and TB contributed to the first draft, which was written by TK. TK, DM and TB adapted and implemented it online. TK and TB designed the analysis plan, and TK analyzed the data. All authors critically revised the manuscript and approved the final version.

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