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RESEARCH ARTICLE

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Effectiveness of compassion-focused therapy for self-criticism in patients with personality disorders: a multiple baseline case series study

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Abstract

Objective: Targeting self-criticism, the tendency to negatively evaluate and judge aspects of oneself, may improve treatment efficacy for personality disorders (PDs). This study aimed to test whether adding 12-week group compassion-focused therapy (CFT) that explicitly targets self-criticism to treatment as usual (TAU) would reduce self-criticism in patients with PDs.

Method: Twelve patients with PDs participated in a multiple baseline study, randomly allocated to different baseline lengths. The primary outcome was twice-weekly assessed self-critical beliefs during baseline, treatment, and follow-up phases. Secondary outcomes were self-criticism, self-compassion, and PD severity at the end of CFT and follow-up (trial registered: NL8131).

Nine participants completed the intervention. No significant changes were observed during CFT, but at follow-up significant decrease in self-critical beliefs (Cohen's $d = -0.43$; 95% CI $= -0.73$ to -0.12) was reported compared to baseline. On secondary outcomes, most participants showed reliable improvement on self-reported criticism (66.7%) and self-compassion (55.6%), and a minority of patients showed reliable improvement in PD severity (33.3%).

Conclusions: This study seems to provide preliminary evidence for the effectiveness of 12-week CFT for self-critical beliefs in patients with PDs compared to TAU. CFT for self-criticism in PDs may complement treatment offerings and warrant further research.

INTRODUCTION

Psychotherapy is the recommended psychological treatment for personality disorders (PDs) with several clinical trials providing evidence for its efficacy (Cristea et al., 2017; Storebo et al., 2020). However, existing psychotherapeutic approaches have small to moderate effects on relevant outcomes for patients with PDs (Budge et al., 2013; Chakhssi et al., 2021; Cristea et al., 2017), and thus, more research is needed to identify mechanisms that may augment current efficacy of psychotherapeutic approaches for PDs. One potential way to augment the efficacy of current psychotherapeutic approaches is to specifically target important risk

mechanisms for the development and maintenance of PDs, such as self-criticism (Gilbert, 2010; Gilbert & Procter, 2006; Low et al., 2020; Sato et al., 2020).

Self-criticism, defined as the tendency to negatively evaluate and judge aspects of oneself, can be seen as a transdiagnostic factor in patients with PD that increases vulnerability, exacerbates symptoms including affective variability, and elevates the risk of relapse (Gilbert & Procter, 2006; Sato et al., 2020; Vansteelandt et al., 2020). It is associated with poorer general psychotherapy outcomes (Low et al., 2020) and stands out as a defining feature of depression in patients with PDs (Bender et al., 2011; Kohling et al., 2015). Although existing psychotherapies for PD such as dialectical behavior therapy and schema therapy acknowledge the importance of self-criticism, it is not directly targeted. As a consequence, directly addressing self-criticism has been recommended to improve psychotherapy for PDs (Beaumont & Hollins Martin, 2015; Donald et al., 2019; Fagan et al., 2022; Leaviss & Uttley, 2015; Salgó et al., 2021; Wakelin et al., 2021).

Compassion-focused therapy (CFT; Gilbert, 2010) was specifically developed to ameliorate self-criticism. Compassion is described as the act of engaging with suffering and taking action to alleviate and prevent suffering (Gilbert et al., 2017). It has three directions: self-to-other, other-to-self, and self-to-self (self-compassion; Kirby et al., 2017). The model underlying CFT presumes that this form of therapy contributes to self-compassion, and thus less self-criticism, through two pathways: (1) through strengthening individuals' capacity for experiencing and tolerating affiliative/soothing emotions in the face of setbacks and (2) through strengthening individuals' capacity for regulating and engaging with unpleasant or feared emotions such as anger, anxiety, or guilt. Self-compassion seems to be a robust resilience factor for self-criticism (Barnard & Curry, 2011; Kannan & Levitt, 2013; MacBeth & Gumley, 2012).

Recent meta-analyses show promising findings for compassion-based interventions in various (non)clinical populations, with moderate effects on mental health and well-being, especially for those individuals high in self-criticism (Kirby et al., 2017; Leaviss & Uttley, 2015; Wakelin et al., 2021). Exploratory and pilot studies indicate that patients with PDs may benefit from compassion-based interventions in terms of increased self-compassion and decreased self-criticism (Feliu-Soler et al., 2017; Gilbert & Procter, 2006). Although these findings are promising, to date, no studies have evaluated the efficacy of specific CFT on self-criticism for patients with PDs.

To the best of our knowledge, this is the first paper to report a multiple baseline case series study evaluating CFT for self-criticism in patients with PDs. An online group format for delivering therapy was chosen to circumvent the restrictions imposed by COVID-19. Evidence suggests that online therapy has equivalent results compared with face-to-face therapy (Carlbring et al., 2018) and group therapy has equivalent results compared to individual therapy (Burlingame et al., 2016). A multiple baseline design study was conducted with the aim to examine the hypothesis that CFT would significantly reduce self-criticism in patients with PDs when added to treatment as usual (TAU).

METHOD

Design

This study followed a multiple baseline across-subjects design that consisted of three phases (Krasny-Pacini & Evans, 2018). First was a baseline phase where TAU was given; the baseline duration varied from 3 to 7 weeks over the participants, with 12 participants randomly allocated to five lengths (either 3, 4, 5, 6, or 7 weeks of baseline phase length). The second phase was the CFT-intervention phase and consisted of 12 weeks of weekly CFT group sessions that were offered as an add-on to TAU. The last phase was a 6-week follow-up phase where again only TAU was given. The effectiveness of the CFT intervention on self-criticism can be assessed by comparing the intervention data and the baseline data. If changes in the participant's functioning occurred during or after the CFT intervention, these changes are seen as evidence of the effectiveness of that specific intervention (Kazdin, 2019).

Setting

This study was conducted in a treatment center for personality disorders, offering a multidisciplinary day-hospital psychotherapeutic treatment (3 days a week) during 9 months based on dialectical behavioral therapy (DBT), focusing mostly on acquiring skills to improve practical and emotional stability (Linehan, 1993; Oostendorp & Chakhssi, 2017), and schema-focused therapy (ST), focusing mainly on recognizing and adjusting own thought and behavioral patterns to stimulate reflection, insight, and better coping (Schaap et al., 2016; Young et al., 2003).

TAU existed of group therapy (DBT/ST) supplemented by art therapy, and psychomotor psychotherapy, and rehabilitation counseling. One psychiatrist, two clinical psychologists of which one was in training, two arts therapists, a psychomotor therapist, and psychiatric nurses form the multidisciplinary team. Each day lasted 6 h, divided in 3 days over group therapy (DBT/ST; 1.30 h),

group therapy (psychodynamic; 1 h), arts therapy (2 h), psychomotor therapy (1 h) and rehabilitation counseling (1 h), and divided over the day milieu therapy (1 h), lunch break (1 h) and opening and closing meetings (0.25 h, each). In previous research, the treatment program has proven to be effective in improving personality functioning, well-being, and quality of life (Oostendorp & Chakhssi, 2017).

Participants

Participants ($N = 12$) were patients admitted to a treatment center for personality disorders, where they were enrolled in a multidisciplinary day-hospital psychotherapeutic treatment (3 days a week) Participants with one or more PDs had at least a stable period of TAU (>2 months) were included. All of the participants could still be affiliated to the treatment center during the follow-up phase of the intervention. Exclusion criterium for this study was an insufficient Dutch language proficiency. All participants were women with a mean age of 39.3 years ($SD = 11.3$). Forty-six percent received higher education, and 67% were in a relationship. Participants had been in treatment for on average 5.7 years. Avoidant PD ($n = 7$), Borderline PD ($n = 6$), and Dependent PD ($n = 5$) were the most prevalent PDs on basis of a self-report questionnaire (Telepsy, 2014). Patients could have more than one PD diagnosis, which was the case for seven patients. The mean score on the Borderline Personality Disorder Severity Index-IV was 21.3 ($SD = 6.3$). As the cutoff score for dysfunction is 14.93, this indicates that our sample could be primarily described as high in borderline PD pathology (Giesen-Bloo et al., 2010). The most common comorbidity was depressive disorder ($n = 11$), panic disorder ($n = 5$), posttraumatic stress disorder ($n = 3$), eating disorder ($n = 3$), and obsessive compulsive disorder ($n = 3$).

Instruments

Self-critical beliefs

The primary outcome of the current study was a twice-a-week assessed level of self-critical beliefs during baseline, treatment, and follow-up phases. These beliefs were assessed using the Dutch version of the Forms of Self-Criticizing/Attacking and Self-Reassuring Scale (FSCRS; Sommers-Spijkerman et al., 2018). Each participant chose three to five self-critical beliefs from the questionnaire that they considered to be central to their symptoms. Participants rated each of these beliefs on a visual analog scale (VAS) from 0 to 100%.

The complete 22-item FSCRS was also administered at the start of baseline, before and directly after the CFT-phase, and at the end of the follow-up phase, in addition to the following measures:

Self-compassion

Self-compassion was assessed with the 12-item Self-Compassion Scale-Short Form (SCS-SF; Raes et al., 2011). The total score varies between 12 and 84, with higher scores reflecting higher levels of self-compassion. The Dutch version of the SCS-SF has adequate psychometric qualities (Raes et al., 2011).

Personality inventory for DSM-5 Brief Form

The Personality Inventory for DSM-5 Brief Form (PID-5-BF; American Psychiatric Association, 2013). The PID-5-BF is a 25-item self-rated measure for maladaptive personality trait assessment. Each item can be rated on a 4-point scale (0–3). The overall measure has a range of scores from 0 to 75, with higher scores indicating greater overall personality dysfunction. The total score was used as a measure of PD severity in the current study. The PID-5-BF has adequate reliability and validity (Anderson et al., 2018), which has been replicated in Dutch samples (Bastiaens et al., 2016).

Treatment credibility

Treatment credibility was assessed with the Credibility/Expectancy Questionnaire (CEQ; Devilly & Borkovec, 2000), a scale for measuring treatment expectancy and rationale credibility for use in clinical outcome studies. The score is the mean of three items asking participants to rate how logical the therapy seemed, how successful it was in treating their symptoms, and their confidence in recommending the therapy to a friend (1 = *not at all*, 5 = *somewhat*, and 9 = *very*).

Intervention and therapists

The CFT protocol (Gilbert et al., in press), consisting of 12 sessions, was translated and adapted into a group-based CFT protocol (Pol et al., 2020). The protocol included therapist instructions for guiding the treatment sessions. Each session included psychoeducation (e.g., the conceptualization of PDs, self-compassion) followed by an in-session experiential exercise

(e.g., soothing rhythm breathing), which participants were also asked to practice on their own between sessions (2 h per week). The first part of the protocol (Sessions 1–5) focused on compassionate insights, which consisted of psychoeducation about emotion regulation, self-compassion skills, and mindfulness skills. The second part of the protocol (Sessions 6–8) focused on the motivation to care, compassion from others, the compassionate self, and the relationship between the compassionate self and self-criticism. The third part of the protocol focused on compassion in action (Sessions 9–12), which is the use of compassion in daily life. Due to COVID-19 restrictions, the intervention was provided in group format via Zoom video teleconferencing software (Zoom Video Communications; USA) by a clinical psychologist (the first author; SP) who has extensive experience with treatment of PDs and had received basic and advanced training in CFT by Dr. Paul Gilbert.

Procedure

Approval for the study was obtained from a Dutch medical ethical committee, CMO Regio Arnhem-Nijmegen (#NL70940.091.19). The study was preregistered in the Dutch Trial Register (NL8131); NTR-new NL8131, NTR-old NTR8131 on November 2, 2019, https://onderzoekmetmensen.nl/en/trial/26546. Eligible participants that showed interest in the study were provided an information session and brochure about the study and asked to sign an informed consent. To increase the internal validity, the baseline duration varied from 3 to 7 weeks over the participants, with two participants randomly allocated to each of the five lengths. Standards recommend at the very least three but better five assessment moments in baseline; therefore, we used seven assessment moments. Participants were randomized (via random.org) to the different baseline lengths. Participants were requested to twice-weekly report, during the complete study period, their perceived level of self-criticism via a VAS (0%–100%). As stated earlier, the questionnaires FSCSR, SCS-SF, and PID-5-BF were administered at the start of baseline, before and directly after the CFT phase, and at the end of the follow-up phase.

Statistical analysis

A two-level multilevel modeling (assessments nested within subjects) was used to assess differences between the baseline, treatment, and follow-up phases, as well as the linear change within each phase for the self-critical beliefs ratings. These analyses were performed with an R package for estimating hierarchical linear models for single case designs (SCDHLM). This package was also used to calculate the between-case standardized mean difference (BC-SMD; Valentine et al., 2016), a standardized mean difference effect size that is comparable to what would be obtained from a between-group design. Also, the BC-SMD accounts for small samples, missing values, repeated within-subject assessments, and between- and within-case variances (Hedges et al., 2013; Valentine et al., 2016). An R package for estimating hierarchical linear models for single case designs (SCDHLM) was used for conducting the multilevel analysis and calculating the BC-SMD (Pustejovsky et al., 2021). Restricted maximum likelihood estimation was used, and a random effect for treatment level was specified, which permits the treatment effect to vary across subjects. Time was centered at the time of the first measurement in the CFT phase, and the effect of CFT was estimated in the midst of the CFT intervention and midst of the follow-up phase. Centering time in SCDHLM provides a convenient interpretation of model estimates; however, it does not affect the actual value of the BC-SMD effect size estimate (Valentine et al., 2016). Effect sizes of 0.20–0.50 were considered small, effect sizes of 0.50–0.80 moderate, and effect sizes above 0.80 as large (Cohen, 1988). Using SCDHLM, graphs were created showing mean scores on self-critical beliefs ratings for all participants separately plotted over time per phase (i.e., baseline, CFT, and follow-up phase).

For the secondary outcomes measures, FSCSR, SCS-SF, and PID-5-BF, within-participant change from beginning CFT intervention to end of CFT intervention and to end of follow-up was evaluated by the Reliable Change Index (RCI; Jacobson & Truax, 1991). The RCI provides a standardized score representing change in a participant's score accounting for the standard error of measurement of the difference (*Sdiff*). RCI's larger than 1.96 exceeds the change that would be expected based on measurement unreliability and would be unlikely to occur without actual change ($p < 0.05$). SDs and internal consistency coefficients to calculate the *Sdiff* from the following (psychometric) studies in comparable samples were used for the FSCSR (Biermann et al., 2021), SCS-SF (Raes et al., 2011), and the PID-5-BF (Bach & Hutsebaut, 2018). Reliable change analyses, resulting in reliable improvement, no change or reliable deterioration, were performed using SPSS version 25 (IBM, USA).

RESULTS

Participants rated the treatment credibility/expectancy at the end of the first CFT with an average score of 5.70 ($n = 10$; $SD = 1.4$; range 2.3–7.3), meaning that the

participants on average found the therapy more than somewhat logical and successful in treating their symptoms and they had more than somewhat confidence in recommending the therapy to a friend. During the period of measurement, two participants dropped out (before the first CFT session), and two participants did not complete the weekly measurements, of which one participant did also not complete the questionnaires at the end of the CFT intervention and follow-up. This resulted in eight participants included in the analyses of the weekly measurements and nine participants in the analyses of the questionnaires at the four measurement moments in time: baseline, start CFT, end CFT, and the end of follow-up (see Figure 1 for the flow of participants in the study).

Primary outcome: self-critical beliefs

The individual scores of the eight participants during the baseline, CFT, and follow-up phase are shown in Figure 2. Visual inspection suggests modest decreases in self-critical beliefs at the end of CFT for most participants, and especially during follow-up compared to baseline for all participants. Multilevel analyses showed that the effect of CFT during the intervention, averaged across all participants, was not significant, $t(10.96) = 1.83$, $p = 0.07$, with an effect size not different from zero (BC-SMD; $d = 0.16$; SE = 0.09, 95% CI = − 0.05–0.37). The effect at follow-up compared to baseline was significant, $t(9.13) = -2.97$, $p = 0.003$, with a small effect size (BC-SMD; $d = -0.43$; SE = 0.14, 95% CI = −0.73 to −0.12). Intention-to-treat analyses showed that the effect of CFT during the intervention compared to baseline was not-significant [$t(14.86) = 1.56$, $p = 0.12$] but significant at follow-up [$t(13.80) = -5.91$, $p < 0.001$] with a small effect size (BC-SMD; $d = -0.49$; SE = 0.14, 95% CI = −0.78 to −0.20).

Secondary outcomes

In Table 1, the percentage of participants is shown who reliably improved, showed no change, or deteriorated at

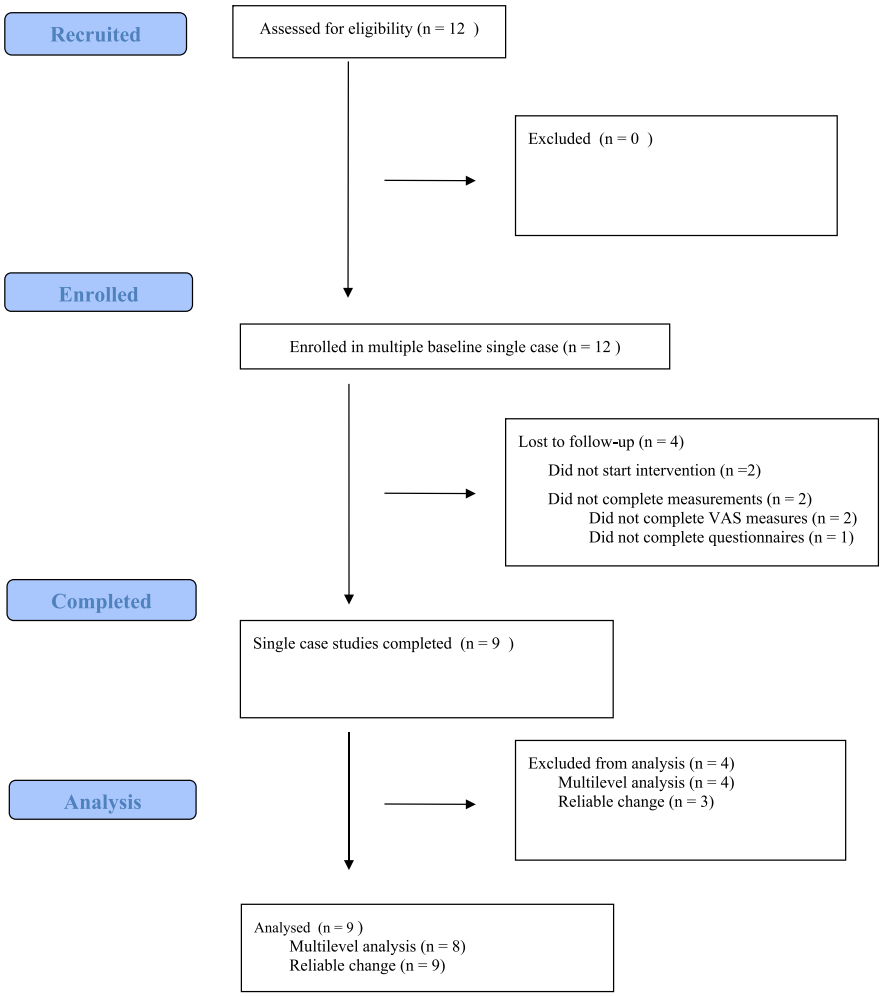

FIGURE 1 Flow diagram of participants.

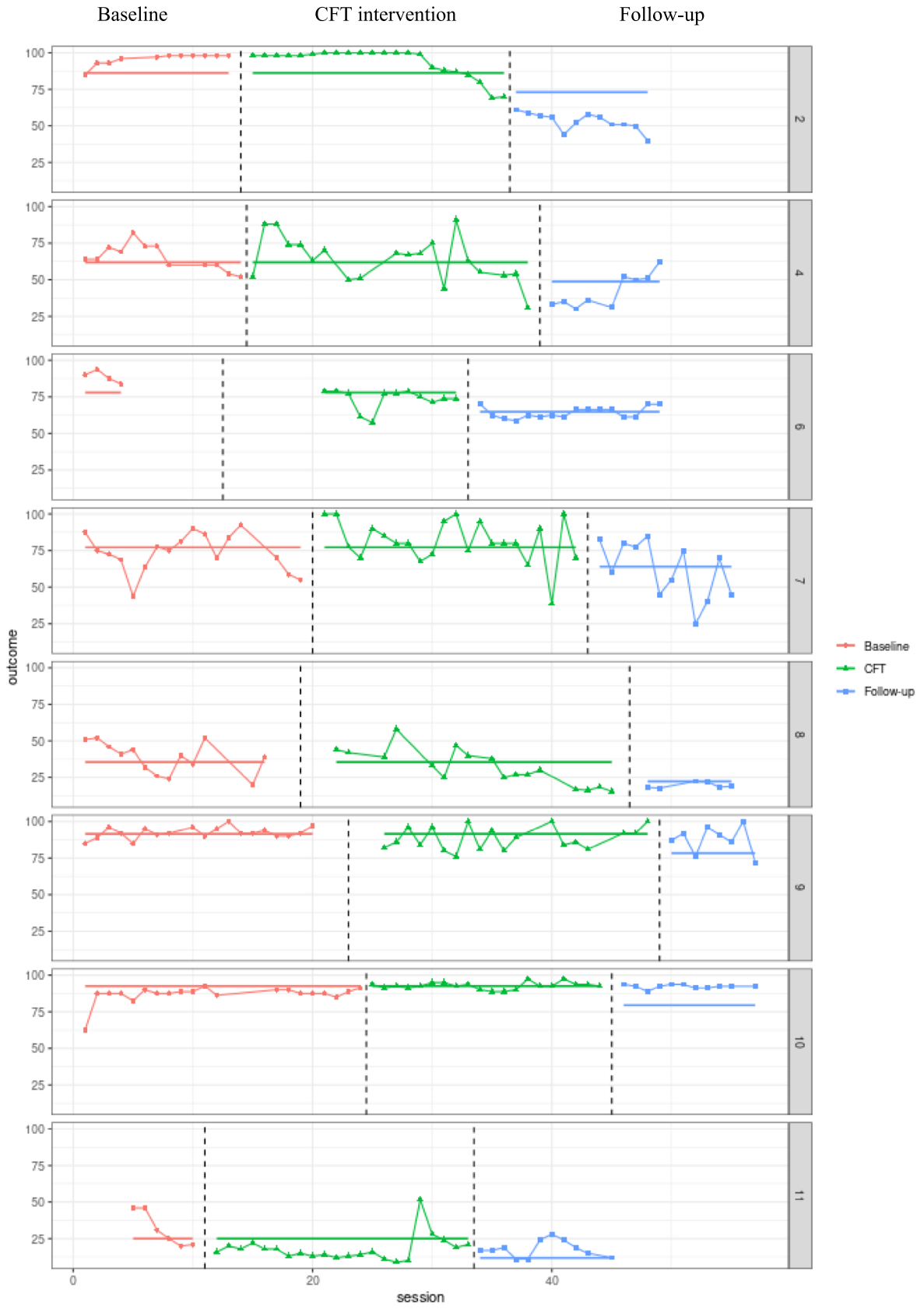

FIGURE 2 Individual self-criticism weekly ratings (VAS) during baseline, CFT, and follow-up. Lines are estimated time trends.

TABLE 1 Number (%) of reliable change on the secondary outcome measures from beginning of CFT to end of CFT and to end of follow-up.

Instruments	End of CFT *n* (%)	End of follow-up *n* (%)
FSCRS		
Improved	6 (66.7%)	6 (66.7%)
No change	3 (33.3%)	3 (33.3%)
Deterioration	0 (0%)	0 (0%)
SCS-SF		
Improved	3 (33.3%)	5 (55.6%)
No change	5 (55.6%)	4 (44.4%)
Deterioration	1 (11.1%)	0 (0%)
PID-5-BF		
Improved	3 (33.3%)	3 (33.3%)
No change	6 (66.7%)	6 (66.7%)
Deterioration	0 (0%)	0 (0%)

Abbreviations: FSCRS, Forms of Self-Criticizing/Attacking and Self-Reassuring Scale; PID-5 BF, The Personality Inventory for DSM-5 Brief Form; SCS-SF, Self-Compassion Scale-Short Form.

the end of CFT or at the end of follow-up. In line with the outcomes of multilevel analyses, six of nine participants reliably improved at the end of CFT on the FSCSR (66.7% both at post-CFT as well as follow-up). A smaller number of participants improved on SCS-SF (33.3% on post-CFT and 55.5% at follow-up) and PID-5-BF (33.3% on both follow-up measurements). At the end of follow-up, the percentage of reliably improved participants increased on the SCS-SF and remained the same on the FSCSR and PID-5-BF. Only one participant reliably deteriorated on SCS-SF at post-treatment. This deterioration was not seen at follow-up.

DISCUSSION

The primary aim of this study was to investigate the effects of a 12-week CFT intervention for self-criticism in patients with PDs, when added to TAU, using a multiple baseline case series design. Participants reported a decrease in self-critical beliefs after follow-up, but not from pre to post intervention, compared to a TAU baseline period. Further support was provided by reliable change after follow-up for six of nine participants on self-reported criticism and self-compassion and for a smaller proportion of patients on PD severity. The multiple baseline case series design required randomized baseline periods of 3–7 weeks, which added to the validity of the study as each participant acted as one's own control. These findings provide preliminary support that a 12-week CFT intervention may help ameliorate self-criticism in patients with PDs.

Self-criticism and self-compassion showed reliable change in most of the participants after the CFT intervention. These are remarkable findings because the study was conducted as add-on to an intensive treatment for PDs. PD severity showed reliable change in only a minority of the participants. Individuals with PDs often require long length of treatment, approximately 1year (Budge et al., 2013). It is therefore promising to observe changes in PD severity in some patients after only 12 sessions of CFT. Due to the current study design, we could not examine whether changes in self-criticism or self-compassion predicted changes in PD severity. Thus, the changes in PD severity could be induced by TAU. Still, the differential effect of CFT on self-criticism and self-compassion versus PD severity further supports the evidence for the impact of CFT on self-criticism and self-compassion beyond the effect of TAU. These findings encourage further research into the effect of CFT on PD severity.

The findings of the current study are consistent with the positive results of compassion-based interventions for people with PDs found in pilot and exploratory studies (Feliu-Soler et al., 2017; Gilbert & Procter, 2006). The between-group effect size on self-critical beliefs in our study was larger than the effect size for self-criticism found in the randomized pilot study for fostering self-compassion and loving-kindness in patients with borderline PDs (Feliu-Soler et al., 2017). Although it is difficult to compare findings from previous compassion-based interventions to the group protocol implemented in the current study (Gilbert et al., in press), the current findings are promising. The current study shows that multiple baseline case study designs are suitable for clinical settings for PDs where other designs, such as randomized controlled trials, are challenging to perform. The multiple baseline case study design permits drawing scientifically valid inferences about the effects of the intervention and their theoretical mechanisms (Kazdin, 2019). The design could be performed without withholding TAU and required fewer participants—acting as their own controls, thus increasing power. As such, future research in similar clinical settings may benefit from multiple baseline design studies.

Regarding guidelines for sample sizes for multiple baseline case study design, several simulation studies have been carried out that show that multiple baseline designs have sufficient power with $n > 4$ participants, partly due to the large number of within-subject measurements during the study (see, e.g. Ferron et al., 2009,

2010, 2014; Ferron & Sentovich, 2002; Michiels et al., 2020). A review by Shadish and Sullivan (2011) also showed that (peer-reviewed) published multiple baseline studies have an average $n = 3.64$. Still, researchers should be advised, when possible, to increase the number of participants (Ferron et al., 2009).

The current findings give further support to the notion that self-criticism can be regarded as a transdiagnostic factor in PDs. Research suggests an association between insecure attachment style and increased self-criticism (Brophy et al., 2020). Self-criticism and low levels of self-compassion are thought to develop early in attachment relations in which emotions were either dismissed or went unrecognized (Neff & McGehee, 2010). Individuals with insecure attachment styles do not have the resources to cope with the threat of self-criticism and may use maladaptive strategies such as denial or dissociation to deal with threatening stimuli (Kim et al., 2020). In individuals with PDs, insecure attachment styles due to (early) negative attachment experiences are highly prevalent. The heightened levels of insecure attachment and self-criticism in individuals with PDs may explain the use of more severe maladaptive coping strategies as response to (perceived) threatening stimuli. Although self-compassion buffers the negative consequences of developmental trauma in individuals with PD (Pohl et al., 2021), there may be differences between individuals with PD that make them more or less receptive to CFT than others, because of a fear of self-compassion that individuals can experience (Naismith et al., 2019). Nevertheless, higher levels of self-compassion are considered to be relevant for recovery in individuals with PD (Donald et al., 2019; Fagan et al., 2022). There were several limitations of the current study that need to be mentioned. First, participants were not blind to the baseline length and start of CFT. Ideally, participants in multiple baseline designs should not be informed about the start of the intervention, until just before the start. Second, the observed improvements might be due to TAU in the background. However, the results of the analyses indicate specific improvement in self-criticism after CFT rather than a gradual improvement over all measurements. Third, participants were not asked if they noticed some improvement in their core self-critical beliefs during baseline. Fourth, targeting self-criticism as a core maintaining factor may have enhanced the impacts of TAU. We did not compare the results on TAU with and without CFT. Fifth, the preliminary results are limited in that they are only based on female participants with PDs. More research is needed on male patients with PDs. Sixth, this study solely used self-report measures to quantify PD symptomatology and severity. There is a discrepancy reported in the literature between self- and clinician-rated PD pathology. However, in a previous study in the same hospital, high agreement was found between self-report of PD pathology and clinician-rated PD pathology using semi-structured interviews (SCID-II) (Chakhssi et al., 2019), supporting the use of self-report for PD symptomatology and severity in the current study. Seventh, sessions were not audio- or videotaped, so adherence to the CFT protocol could not be examined. However, the therapist was the first author involved in translating the CFT protocol and is very well informed about the specific components of and interventions in the protocol. Finally, the therapist in the present study was, besides well versed in CFT and the protocol, highly experienced in the treatment of PDs, and replication studies with other therapists are necessary to generalize the results. Future studies could focus on (1) delivering the CFT intervention apart from TAU, possibly prior to regular treatment for personality disorder; (2) with a mixed group of participants on characteristics like age, gender, age, previous treatment, comorbidities, and current suicidal behaviors; and (3) therapists varying on years of experience with (4) audiotaped sessions to measure adherence to the CFT protocol, (5) or compare the impact of TAU with and without CFT, and (6) add a qualitative element examining in which phase and how participants experienced changes.

In conclusion, this study provides preliminary evidence of the effectiveness of 12-week CFT for self-critical beliefs in patients with PDs in addition to TAU. CFT seems to improve self-criticism and self-compassion in most participants at follow up and decreased PD severity at follow-up in some participants.

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