

Master's Thesis

The effectiveness and feasibility of a positive psychology intervention for patients with persistent depression and anxiety

BMS Faculty – Positive Clinical Psychology and Technology (PCPT)

Marie Geise s283965

University of Twente

First supervisor: Mirjam Radstaak

Second supervisor: Thomas Vaessen

Abstract

Objective. Residual symptoms and lacking improvement are common among patients with persistent symptoms who received traditional complaint-focused treatment. Positive psychology interventions (PPI) focusing on enhancing well-being can complement traditional treatment approaches and proved to be effective at increasing well-being and reducing psychopathological symptoms. The present study explored the effectiveness and feasibility of a PPI for patients with persistent depression and anxiety. *Method.* A group of six patients participated in this study, which followed the 8-week group intervention program. The effectiveness and feasibility of the intervention were assessed with a mixed-method pre and post-design. The patients completed the Inventory of Depressive Symptomatology (IDS-SR) and the Generalised Anxiety Disorder Inventory 7 (GAD-7) to measure symptomatology, the Mental Health Continuum Short Form (MHC-SF) to measure mental well-being, and the Self-Compassion Scale Short Form (SCS-SF) to measure self-compassion prior to, and after completing the intervention. The feasibility of the study was assessed based on an evaluation questionnaire and evaluation interviews. *Results.* The intervention significantly reduced symptoms of depression and anxiety with large effect sizes ($d = 2.36$; $d = 2.12$). Increases in well-being in self-compassion were insignificant, with medium and moderate effect sizes ($d = 0.76$, $d = 0.91$). The feasibility of the intervention was evaluated positively during the questionnaire and interviews. *Conclusions.* PPIs cannot increase only well-being among patients with persistent complaints but also reduce symptoms of depression and anxiety. Further, PPIs are especially feasible for persistent complaints and should be used to complement traditional treatments.

Introduction

Anxiety and depression are two of the most common mental health concerns. Up to 18.7% of the Dutch population experience major depression once in life, and there is a lifetime prevalence of 19.6% for anxiety disorders (de Graaf et al., 2010). In Germany, anxiety disorders are the most common mental health complaint, with a prevalence of 16.2% (Jacobi et al., 2015). Further, depression affects one in ten people in Germany (Bretschneider et al., 2017). Both disorders are associated with negative consequences for individuals and society. The illness burden of major depression often extends to all areas of life: education, employment, family situation, and social role performance (Kessler, 2012). There are also associations with increased risk of physical illness and higher mortality (Kessler, 2012). In this context, not only further risks and problems arise for people suffering from depression, but also costs and losses for society as a whole. Similarly, anxiety disorders, the most common mental disorders, impose a comparable burden on sufferers. Specifically, anxiety disorders lead to a substantial proportion of sick leave (35%) and impair those affected in all domains of life due to the frequent chronic nature of symptoms. (Andlin-Sobocki & Wittchen, 2005).

Due to the high distribution of depression and anxiety disorders and the substantial burden of disease, numerous well-researched treatment practices are available to reduce depression or anxiety symptoms. Regular evidence-based treatment for depression involves cognitive-behavioural therapy (CBT), interpersonal therapy, behavioural activation or pharmacological treatment (National Institute for Health and Care Excellence, n.d.). For anxiety disorders, the usual treatment procedure consists of standard CBT, relaxation techniques and medication (National Institute for Health and Care Excellence, n.d.). Due to their evidence base, these treatment methods are expected to be successful.

However, patients with persisting complaints often resist these traditional treatments and report residual symptoms after finishing regular psychotherapy (Gaynes et al., 2020). For

example, nearly 50% of adolescents diagnosed with anxiety disorders lack improvements after terminating classic CBT treatment (Higa-McMillan et al., 2016). Similarly, about one-third of depressed patients fail to show improvements after several treatment attempts (McGrath et al., 2014). Often, severe complaints before the treatment predict this ineffectiveness of treatment (Vittengel et al., 2016). Moreover, there is the common misconception that treatment non-response is attributed to the limited time in classic CBT. However, this is a fallacy, as the number of sessions does not significantly influence treatment success, and treatment progress can often be observed after just a few sessions (McNeilly & Howard, 1991; Cuijpers et al., 2013). Thus, if treatment failure is not due to the quantity of treatment, it is reasonable to assume that the quality of treatment plays a decisive role. Accordingly, other treatment options should be considered when scientifically based treatments result in residual symptomatology in clinical reality.

A common possibility is often to modify existing, sound treatment approaches. An example of this-treatment would be mindfulness-based cognitive therapy (MBCT). MBCT combines the practice of mindfulness with classic cognitive interventions developed for treating anxiety and depression symptoms, among others (Kuyken et al., 2010). A study by Finucane and Mercer (2006) suggests an overall improvement in depression and anxiety symptoms after following MCBT. However, half of the patients reported significant residual symptoms, illustrating the previously described common problem of other regular treatment options and highlighting the need for different treatment possibilities (Gaynes et al., 2020).

Positive psychology is a different stream of psychology and may complement traditional complaint-based clinical psychology. Positive psychology is "the study of the conditions and processes that contribute to the flourishing or optimal functioning of people, groups and institutions" (Gable & Haidt, 2005). Positive psychological research comprises concepts such as positive emotions or strengths and aims at understanding and improving well-being and

quality of life (Seligman, 2002). Specifically, positive psychology in the clinical context or positive psychiatry focuses on fostering well-being with interventions targeting positive traits like resilience, optimism, personal mastery or self-efficacy (Jeste et al., 2015). These interventions are integral to positive psychotherapy, which entails a strength-based approach to mental health concerns and provides a more holistic approach than traditional complaint-focused psychotherapy (Rashid, 2015). Due to its shift in focus, positive psychology may provide the necessary treatment possibility for patients with residual or persistent depression and anxiety symptomatology by promoting well-being instead of focusing on symptoms and complaints.

According to the two-continua model of mental health, complete mental health consists of an absence of psychopathological symptoms and the presence of well-being (Westerhof & Keyes, 2010). On the one hand, this indicates that psychopathology and well-being exist on two different continua, which are correlated. On the other hand, the model suggests that treating symptoms alone may not help patients to regain their complete mental health. Accordingly, a treatment approach is needed that focuses on reducing symptoms and promoting the experience of well-being in general. This notion may explain why many patients still experience persistent depression or anxiety even though they followed extensive complaint-focused treatment (Gaynes et al., 2020). In order to abate residual symptoms and achieve complete mental health, further well-being-focused treatment is necessary. Once more, this highlights the need for complementary positive psychological treatment options.

PPIs aim at building positive facets contributing to well-being, such as optimism, self-compassion, positive emotions and relations, strengths utilisation and resilience (Schotanus-Dijkstra et al., 2017). In practice, PPIs consist of exercises or activities catering to the previously mentioned positive traits and well-being (Parks et al., 2015). Indeed, past research has demonstrated that PPIs are effective at increasing well-being (Chakhssi et al., 2018; Hone

et al., 2013). More specifically, PPIs effectively enhance subjective and psychological well-being (Bolier et al., 2013; Hendriks et al., 2019). Namely, PPIs reinforce a sense of completeness of life on the one hand and strengthen psychological functioning on the other hand (Bolier et al., 2013).

Even though well-being and psychopathological symptoms are correlated continua according to the two-continua model of mental health, the promotion of well-being often leads to significant complaint reductions via processes such as enhanced self-compassion, resilience or positive emotions (Westerhof & Keyes, 2010, Schotanus-Dijkstra et al., 2017). So, besides their efficacy for well-being, PPIs demonstrate convincing effectiveness in reducing mental health complaints among patients as such (Carr et al., 2020; Chakhssi et al., 2018). For example, past research has shown that PPIs can successfully reduce anxiety and depression symptoms (Bolier et al., 2013; Hendriks et al., 2019). Following these findings, PPIs are at least equally efficient as CBT for depression (Chaves et al., 2016). This seems to be especially true for patients with persistent or severe complaints (Geerling et al., 2020). In sum, research regarding PPIs proves their effectiveness in significantly increasing well-being and reducing patient complaints.

Besides their effectiveness, PPIs have proven feasibility in clinical practice. Feasibility corresponds to the degree to which an intervention can be implemented or further proved (Bowen et al., 2009). Usually, feasibility studies consider, among others, the acceptability, practicality and demand for a new intervention among the target population (Bowen et al., 2009). In previous literature, PPIs were considered feasible among individuals with mental health issues, such as eating disorders, addiction, depression, suicidality and other severe psychiatric conditions (Harrison et al., 2014; Huffman et al., 2014; Hernandez; 2018; Valiente et al., 2021; Krentzman, 2022). Further, patients report strong adherence to and positive opinions about PPIs (Hernandez et al., 2018; Valiente et al., 2021). Despite the demonstrated

effectiveness and feasibility of PPIs for clinical populations and the solid research base, PPIs are often underapplied in clinical practice (Linley et al., 2007). The current practice still favours standard treatment procedures over the application of PPIs for treating severe complaints, even though there is no demonstrated superiority of one over the other (Rashid, 2015; Geerling et al., 2020). Even though the feasibility of PPIs was already proven, the feasibility for persistent symptoms has to be assessed to facilitate the currently lacking implementation of PPIs for this target group.

The present study considers a particular PPI developed for depression and anxiety patients with residual symptoms to increase their overall mental health. The present intervention was based on 'Living well with bipolar disorder', a PPI treatment program intended to support patients with bipolar disorder in euthymic states adjusted for the previously mentioned target population. Initially, this intervention stems from the self-help book 'Dit is jouw leven' by Bohlmeijer and Hulsbergen (2013). Similar to both previous versions, the present intervention aims to reinforce personal recovery and well-being among patients with persistent complaints by introducing core concepts of positive clinical psychology and relevant exercises. Due to its additional focus on personal recovery, defined as adjusting one's life to and experiencing satisfaction despite the mental health concern, the intervention goes beyond solely improving mental well-being by trying to advance living with a persistent mental health concern (Anthony, 1993).

Another integral part of the intervention, as seen in many PPIs, is the concept of self-compassion (Hendriks et al., 2019). Self-compassion can be defined as openness and understanding of one's own suffering and responding with a non-judgemental stance or kindness because one recognises that it is all part of a common humanity (Neff, 2003). Moreover, self-compassion was associated with higher life satisfaction and mental well-being

and reduced depression and anxiety symptoms, so it serves as an underlying attitude during the intervention (Neff, 2003; MacBeth & Gumley, 2012; Diedrich et al., 2014).

The intervention consisted of eight consecutive group sessions, which, over time, introduced the patients to the field of positive psychology and gradually helped them to change their perspective and apply the principles in daily life. The first session served as an introduction to the group and the basic idea of positive clinical psychology. 'The good life' was set as the ultimate goal for the intervention, and the corresponding determinants, namely goals and aspirations, the reality of the disorder and inner barriers, were explained. In the course of the intervention, these three recurring themes were addressed. The second session dealt with the topic of self-compassion and introduced the three systems of emotional regulation by Gilbert (2010). According to this theory, the interaction and activation of the threat, drive and soothing system of emotional regulation are responsible for mental health complaints. During the third session, the importance of experiencing positive emotions was highlighted and experienced through several self-experiment exercises. The fourth session dealt with anxiety as one possible internal barrier. Here, the *raison d'être* of fear or anxiety was explained, and authentic experiences were shared. Besides, the patients discussed dealing with fear and the importance of experiencing positive emotions in addition to fear. In the fifth session, the group discussed goals and the concept of optimism. During an exercise, the patients optimistically imagined their future. The sixth session dealt with strengths. In this session, the patients discovered and discussed their strengths and found ways to align their personal strengths and goals. Session seven considered positive relationships. During this session, the patients learned how positive relations influence their well-being and learned communication skills to promote positive relationships in their life. The last session concludes the programme by referring to flourishing and post-traumatic growth concepts, and patients re-evaluate their progress.

In light of the present PPI, the study aimed to assess the effectiveness and feasibility of the given PPI. Based on previous literature, the individual outcomes of the intervention were openly explored. For this reason, no hypotheses were made to exclude assumptions, do justice to the real-life data, and benefit from the open-ended nature of the exploratory approach. Overall, the study aimed to generate real-life implications for treatment work with patients based on patients' experiences. At an individual level, the study explored the effectiveness of the intervention in light of its ability to enhance well-being among patients with persistent complaints. Secondly, based on previous literature, possible symptom reductions were assessed, and factors contributing to or hindering the effectiveness of the PPI were explored. Moreover, self-compassion was included as another possible reflection of treatment effectiveness due to its previously described integral role in PPIs. Here, pre and post-measures of self-compassion were explored as well. Lastly, the feasibility of the PPI for patients with persistent symptoms was assessed based on patient satisfaction and the perceived suitability of the treatment option.

Method

Design

The study utilised a mixed-method pre-post design to determine the PPI's effectiveness and feasibility for patients. The study's variables regarding effectiveness were compared at baseline (T0) and immediately after terminating the PPI time frame of 8 weeks (T1). The feasibility measures were collected after the completion of the intervention (T1).

Participants

The participants in this study were a group of six patients with persistent diagnosed anxiety disorders or depression and followed treatments for > 2 years. The inclusion criteria for the patients were: (1) exhibiting moderate residual symptoms measured by the Generalised

Anxiety Disorder Inventory (GAD-7; cut-off scores 8 to 10) and the Quick Inventory of Depressive Symptomatology (QIDS-SR; cut-off score 11), (2) being Dutch-speaking, (3) having adequate reading ability, (4) not showing other comorbid disorders (e.g. substance use disorder, bipolar disorder or schizophrenia), (5) not reporting severe or comorbid somatic complaints, (6) not reporting high suicidal tendencies. The inclusion criteria were assessed in a diagnostic interview prior to the study.

Patient 1

Participant 1 was a 26-year-old man in higher professional education. He was diagnosed with depression, experienced his complaints for three and a half years and followed treatment for four months. Before the intervention, he reported mild depressive symptoms (IDS score of 27) and mild anxiety symptoms (GAD-7 score of 9). His overall level of mental well-being was moderate (MHC-SF score of 37). He received a self-compassion score of 30.

Patient 2

Participant 2 was a 66-year-old man with lower vocational education. He was diagnosed with depression and anxiety and followed treatment for nine years. He has already dealt with his complaints for 30 years. Before the intervention, he showed moderate depressive symptoms (IDS score of 39) and severe anxiety symptoms (GAD-7 score of 18). His overall level of mental well-being was moderate (MHC-SF score of 29). He received a self-compassion score of 23.

Patient 3

Participant 3 was a 37-year-old man in higher-professional education. His primary diagnosis was an anxiety disorder, and he has experienced his complaints for 20 years. He has followed treatment for his anxiety for 19 years. He reported mild depressive symptoms and borderline mild symptoms of anxiety prior to the intervention (IDS score of 16; GAD-7 score

of 5). His overall level of well-being was moderate (MHC-SF score of 38). He received a self-compassion score of 37.

Patient 4

Participant 4 was a 59-year-old male with higher professional education. He was also diagnosed with depression and experienced symptoms for eight years. He has also followed treatments for eight years. Patient 4 shows mild depressive symptoms and moderate symptoms of anxiety prior to the intervention (IDS score of 21; GAD-7 score of 12). However, his level of overall mental well-being was low (MHC-SF score of 26). He received a self-compassion score of 35.

Patient 5

Participant 5 was a 41-year-old male with a high school degree. He was diagnosed with depression, anxiety, and comorbid attention deficit disorder (ADD). He has experienced his complaints for 30 years and has followed treatment for six years. Before starting the intervention, he reported moderate symptoms of depression and anxiety (IDS score of 32; GAD-7 score of 12). His level of mental well-being was moderate (MHC-SF score of 31). He received a self-compassion score of 27.

Patient 6

Participant 6 was a 63-year-old woman with secondary vocational education. She was diagnosed with bipolar disorder and followed treatment for four months. Before the intervention, she reported moderate symptoms of depression and severe symptoms of anxiety (IDS score of 29; GAD-7 score of 17). Contrary to her symptoms, her level of mental well-being was high (MHC-SF score of 52). She received a self-compassion score of 24.

Effectiveness Measures

The relevant study variables for effectiveness were assessed via the following questionnaires. The patient scores were calculated as sum scores of the respective scales.

Inventory of Depressive Symptomatology (IDS- SR)

The inventory consists of 30 items and assesses the severity of depressive symptoms (Rush et al., 1986). The inventory assesses all significant symptoms of depression stated by the DSM-V. Items are scored on a 4-point Likert scale ranging from 0 to 3. The scoring options were formulated for every item individually. For instance, the scoring options for item 5 (Feeling sad) range from 0 "I do not feel sad" to 3 "I feel sad nearly all of the time", in accordance with the DSM-V criteria. Overall, the psychometric properties of the IDS are acceptable for depressive patients (Trivedi et al., 2004). Further, the IDS outcomes correlate with other measures of depression, such as the Hamilton Rating Scale for Depression (HRSD) (Gullion & Rush, 1998).

Generalised Anxiety Disorder Inventory 7 (GAD-7)

Anxiety symptomatology was assessed with the GAD-7, a 7-item inventory screening for common anxiety symptoms and their severity in the last two weeks based on a 4-point Likert scale ranging from 0 "not at all" to 3 "nearly every day" (Spitzer et al., 2006). Overall, the GAD-7 demonstrates good psychometric properties, such as reasonable sensitivity (68-77%) and specificity (82-88%) or test-retest reliability (Kroenke et al., 2007; Spitzer et al., 2011).

Mental Health Continuum Short Form (MHC-SF)

The 14 items of the Mental Health Continuum assess mental well-being based on the three dimensions of emotional, social and psychological well-being (Keyes, 2006). Participants

rated their exhibition of the 14 well-being components in the past week on a 5-point Likert scale ranging from 0 (never) to 5 (every day). The 14-item measure shows stable psychometric properties (Lamers et al., 2011). Overall, the Dutch MHC-SF proves high internal consistency for the entire measure ($\alpha = 0.89$) and the subscales of psychological well-being ($\alpha = 0.83$), emotional well-being ($\alpha = 0.83$), and social well-being (0.74) while additionally demonstrating convergent validity (Lamers et al., 2011; Franken et al., 2018).

Self-Compassion Scale Short Form (SCS-SF)

The 12-item scale assesses self-compassion on the six dimensions of self-kindness, self-judgment, common humanity, isolation, mindfulness and over-identification (Neff, 2003). The items are scored on a 7-point Likert scale from 1 (almost never) to 7 (almost always) and display the usual level of self-compassion. Generally, the measure proves good reliability ($\alpha = 0.87$) (Neff, 2003).

Feasibility Measure

Feasibility Questionnaire

The patients evaluated the intervention using an adjusted Client Satisfaction Questionnaire – 8 (CSQ-8) and additional questions referring to the intervention’s specifics. The Client Satisfaction Questionnaire -8 consists of 8 items rating the quality and satisfaction of a treatment measure on different aspects (Larsen et al., 1979). Usually, the items are scored on a 4-point Likert scale with different scoring possibilities. For instance, Item 1 (“How would you rate the quality of the service you received?”) ranged from 1 “poor” to 4 “excellent”. However, five of the eight items were scored on a 10-point Likert scale ranging from 1 “Not at all” to 10 “Very much”. Additionally, patients reported how useful they found each meeting and indicated their opinions on the number of sessions and amount of homework.

Feasibility Interview

In addition to the evaluation questionnaire, the patients participated in an interview post-intervention (T1). The interview aimed to gain further insights into patient satisfaction and gather explanations for the given questionnaire answers. The interview followed a preset structured interview scheme to code the patients' answers (Appendix A). For the sake of the present study, several relevant questions were selected and coded dichotomously (Yes/No; Positive/Negative), as visible in Table 1. Question 1 and 2 were coded with yes if all sessions were completed and the homework was practised consistently every week. The remaining questions were coded subjectively based on the positive or negative valence of the interview quotes. Further, the complete interviews provided context for the quantitative patient data and informed further implications.

Table 1

Coding Scheme Interview

Interview Question	Coding/Label
1. Did you complete all sessions?	Yes / No
2. Have you been able to practice the homework assignments?	Yes / No
3. What is your general opinion about the treatment?	Positive / Negative
4. How did you experience the group setting?	Positive / Negative
5. What did you think of the exercises?	Positive / Negative
6. What did you think of the timing for the treatment?	Positive / Negative
7. What effect did the treatment have on you?	Positive / Negative
8. Did the treatment change anything in your life?	Yes / No

Procedure

The study was implemented in cooperation with the mental health care institution Mediant GGZ in Enschede and executed at the department of mood and anxiety disorders. Suitable patients were selected based on the criteria described under participants, and the suitability of specific patients was discussed at a biannual progress meeting at the department. Afterwards, the patients received an invite and were informed about the intervention and study purpose orally and with an information letter. In case patients showed interest, they received additional information via a telephone call by the study's principal investigator.

In the following, suitable patients signed the informed consent form and filled out the baseline GAD-7 and QIDS-SR at the treatment centre. Subsequently, the previously explained inclusion criteria were inquired in an unstructured interview by a facility psychologist. Eventually, the included patients participated in the intervention groups of six to eight participants and followed an 8-week program of two-hour sessions.

Before starting the intervention groups, the patients filled in the mental well-being, anxiety, depression and self-compassion questionnaires (T0). After the intervention duration of 8 weeks, the patients filled in the measures again and participated in the evaluation interview (T1). Further, the participants filled in the previously named questionnaires again three months post-intervention (T2). This data was not included in the present study due to missing data. The summed duration for the questionnaire completion of all three measurement points was 120 minutes.

Data Analysis

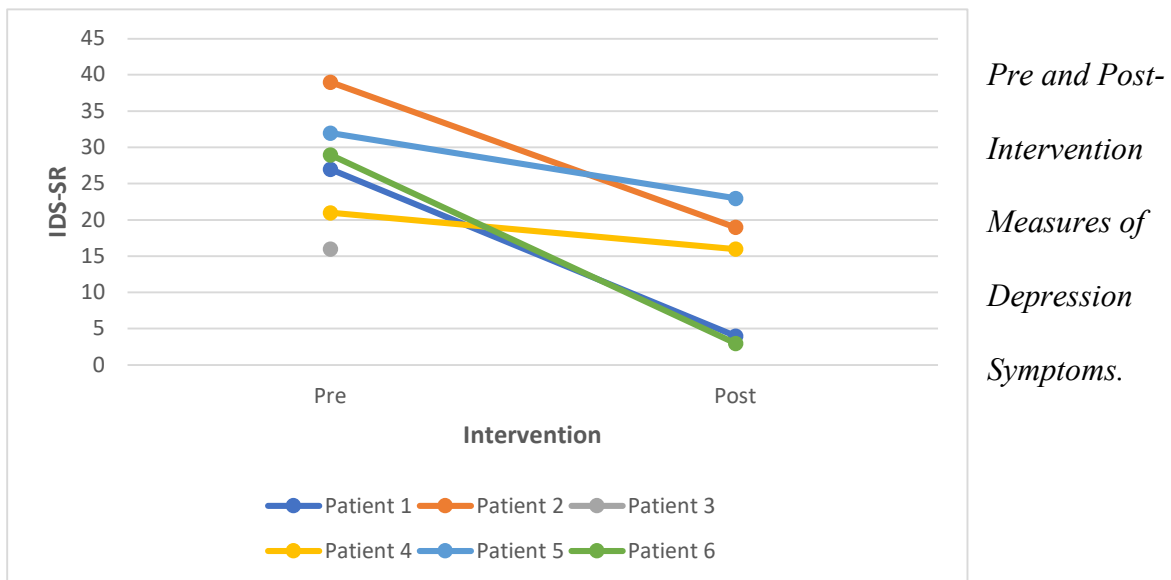
The mean scores and standard deviations of the effectiveness measures across all patients were calculated for the data analysis. Further, percentual changes in effectiveness measures at pre and post-intervention were calculated for both means across all patients and at individual level. Additionally, paired sample t-tests were conducted to compare the mean measures pre and post-intervention. Effect sizes were measured by Cohen's *d*, respectively.

Results

Summary of Effectiveness Outcomes

Pre- and post-treatment patient outcomes are presented in Figures 1 to 4. At baseline, all patients showed mild to moderate levels of depression and mild to severe levels of anxiety. Nevertheless, all patients except for patient 4 showed adequate mental well-being. Throughout the intervention, depression and anxiety symptoms decreased significantly for patients 1, 2, 4, 5 and 6. Similarly, mental well-being increased for patients 1, 2, and 4. Accordingly, the PPI was generally effective at reducing psychopathological symptoms and increasing levels of well-being. Unfortunately, patient 3 withdrew from post-intervention testing.

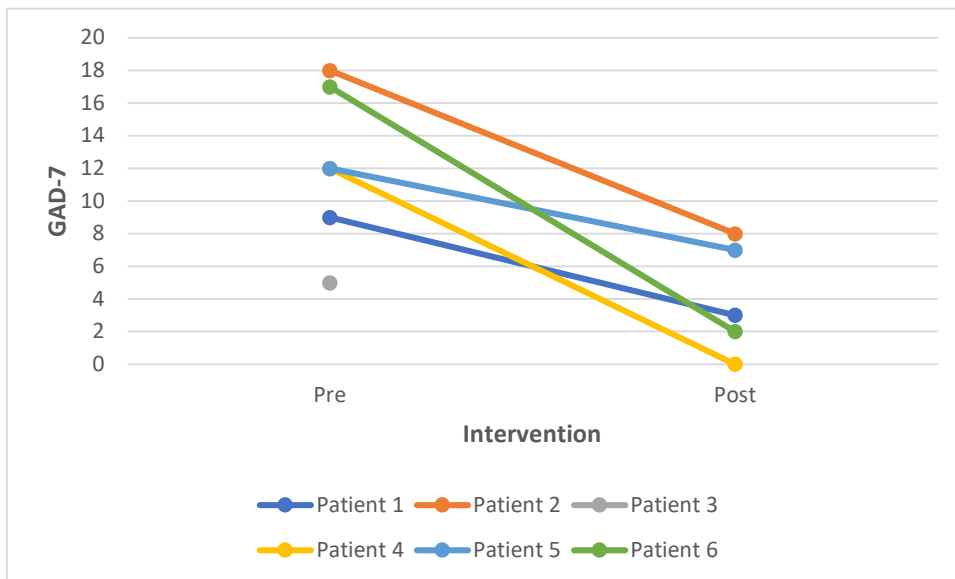
Figure 1



Note. The figure represents the individual scores on the Inventory of Depressive Symptomatology (IDS-SR) pre and post-intervention.

Figure 2

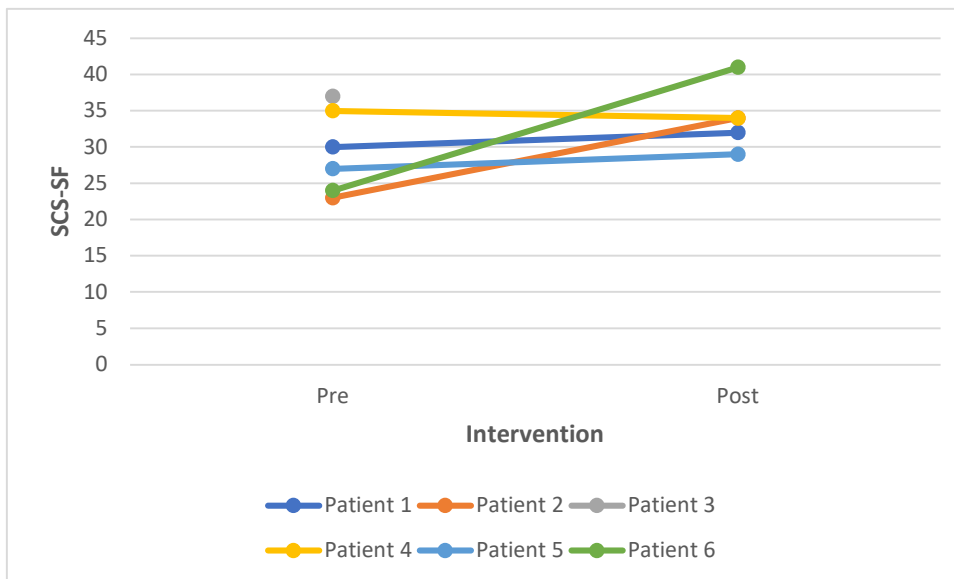
Pre and Post-Intervention Measures of Anxiety Symptoms.



Note. The figure represents the individual scores on the General Anxiety Disorder 7 (GAD-7) pre and post-intervention.

Figure 3

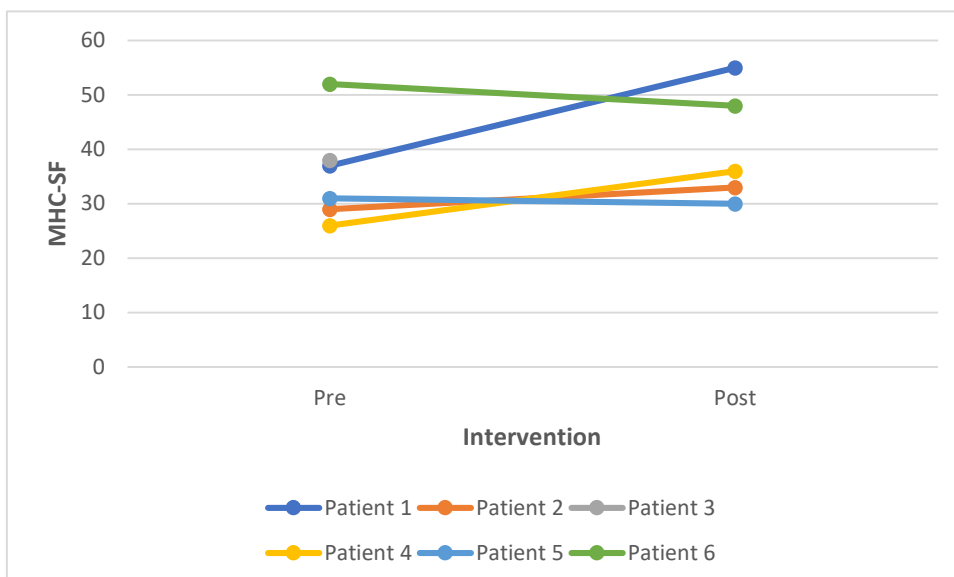
Pre and Post Intervention Measures of Wellbeing.



Note. The figure

represents the individual scores on the Mental Health Continuum Short Form (MHC-SF) pre and post-intervention.

Figure 4



*Pre and Post-
Intervention
Measures of Self-
Compassion*

Note. The figure represents the individual scores on the Self-Compassion Scale pre and post-intervention.

Table 2

Mean Scores of Patient Measures at Pre- and Post-Intervention

	Pre-Intervention	Post-Intervention			
	Mean scores (SD)	Mean scores (SD)	Paired sample t-value	Cohen's d	% change from pre- to post-intervention
IDS-SR	29.00 (7.48)	10.50 (8.18)	3.97*	2.36	-61.40%
GAD-7	12.17 (4.87)	3.25 (3.40)	5.69*	2.12	-73.29%
MHC-SF	35.50 (9.31)	43.00 (10.29)	1.50	0.76	+21.12%
SCS-SF	29.33 (5.75)	34.00 (4.41)	1.84	0.91	+15.92%

Table 2 shows a 61.40% decrease in depressive symptomatology and a 73.29% decrease in anxiety symptoms among the patient group. Further, all patients had a 21.12% increase in mental well-being. Paired sample t-tests for depression and anxiety showed significant symptom reductions. The increase in mental well-being was not statistically significant. Overall, the effect sizes (Cohen's d) were large for depressive and anxiety symptoms and medium for mental well-being. There was a 15.92% increase in self-compassion compared to baseline measures, with a moderate but insignificant effect. Generally, the intervention can be considered effective.

Summary of Feasibility Outcomes

Feasibility Questionnaire

Four of the six patients evaluated the PPI positively (Table 3). On average, no item received a negative score (<3 or <6). The highest scoring items of the adjusted CSQ-8 were Item 6 (“Would you recommend the course to other patients?”) with a mean score of 9 and Item 5 (“Did the course meet your needs”) with a mean score of 8.25. Further, the patient’s mean scores indicate that the intervention topics "positive emotions", "dealing with fear", "strengths", and "positive relationships" were most relevant for the patients. Items 11, 12, 14, and 15 received a mean score of 3.75. Table 3 also shows that patient 6 evaluated the intervention most positively. The PPI can be considered feasible in this patient sample based on the questionnaire.

Table 3

Feasibility Measure

	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6	Mean (SD)
<i>Adjusted CSQ-8 Items</i>							
1. What do you think of the quality of the course? (1-4)	3	3	3	3	4	4	3.33 (0.52)
2. Did you get the treatment you wanted ? (1-4)	3	3	4	3	4	4	3.50 (0.55)
3. How satisfied are you with the amount of help you received? (1-4)	4	3	2	3	2	4	3.00 (0.89)
4. How satisfied are you with the course (1-10)	8	6	8	8	8	10	8.00 (1.26)
5. Did the course meet your needs? (1-10)	8	7	8	8	8	10	8.16 (0.98)
6. Would you recommend the course to other patients? (1-10)	9	7	8	10	9	10	8.84 (1.37)
7. Did the course help you to better deal with your complaints? (1-10)	8	6	8	8	8	10	8.00 (1.26)
8. Do you think you will consult the course again in the future? (1-10)	9	5	8	8	9	7	7.67 (1.51)
<i>Additional Feasibility Items</i>							
9. How useful did you find meeting 1 on compassion? (1-4)	3	4	4	3	4	4	3.67 (0.52)
10. How useful did you find meeting 2 on emotions in balance? (1-4)	3	4	4	4	4	4	3.84 (0.41)
11. How useful did you find meeting 3 on positive emotions? (1-4)	3	4	4	4	4	4	3.84 (0.41)
12. How useful did you find meeting 4 on dealing with fear? (1-4)	4	4	4	3	4	4	3.84 (0.41)
13. How useful did you find meeting 5 on optimism? (1-4)	4	3	3	3	4	4	3.50 (0.55)
14. How useful did you find meeting 6 on strengths? (1-4)	4	4	4	3	4	4	3.84 (0.41)
15. How useful did you find meeting 7 on positive relationships? (1-4)	4	3	4	3	4	4	3.67 (0.52)

16. How useful did you find meeting 8 on living a good life with mental health problems? (1-4)	4	3	4	3	4	4	3.67 (0.52)
17. What do you think of the number of sessions of the course? (1-4)	3	3	1	3	1	1	2.5 (1.00)
18. What do you think of the amount of homework? (1-4)	3	2	3	3	2	3	2.75 (0.5)

Feasibility Interview

During the interview, it became apparent that the patients' assessment of the PPI was predominantly positive. The only criticism that can be identified from the coded interview at group level is the timing of the treatment. Two patients stated that they did not find the timing ideal, as they would have liked to have received such treatment much earlier. See Table 4 for the results of the feasibility interview.

Table 4

Overview of Interview Results

Question	Participant 1	Participant 2	Participant 3	Participant 4
1. Did you complete all sessions?	No	No	No	Yes
2. Have you been able to practice the homework assignments?	Yes	Yes	Yes	No
3. What is your general opinion about the treatment?	Positive	Positive	Positive	Positive
<i>Quote</i>	<i>"It was nice."</i>	<i>"Pretty good, right, purposeful."</i>	<i>"What I think is good is that in [this] treatment [it's]not so much focused on the</i>	<i>"It's enriching to me."</i>

4. How did you experience the group setting? <i>Quote</i>	Positive <i>"helps to do it anyway"</i>	Positive <i>"I liked those"</i>	<i>symptoms, on reducing them."</i> Positive <i>"Just the fact that you, that you're not alone in that, is already helpful."</i>	Positive <i>"I experienced it as pleasant."</i>
5. What did you think of the exercises? <i>Quote</i>	Positive <i>"I did find that very enjoyable."</i>	Positive <i>"That did have an effect yes, for me personally."</i>	Positive <i>"I benefited from that very much"</i>	Positive <i>"I'm convinced: I've succeeded"</i>
6. What did you think of the timing for the treatment? <i>Quote</i>	Positive <i>"Good treatment at this point"</i>	Negative <i>"I maybe should have had it earlier."</i>	Negative (earlier) <i>"Could have been earlier"</i>	Positive <i>"Yes, exactly right."</i>
7. What effect did the treatment have for you? <i>Quote</i>	Positive <i>"It did make me more positive"</i>	Positive <i>"I am more positive in life"</i>	Positive <i>"Not so much that the symptoms have become less [...]In the way you look at yourself and look at your symptoms. Less blaming."</i>	Positive <i>"Now I manage not to get completely carried away in the negative, in memories and things like that"</i>
8. Did the treatment change anything in your life? <i>Quote</i>	Yes <i>"Yes! The relationship with my partner is much more positive"</i>	Yes <i>"I hope so"</i>	Yes <i>"Yup, the way I look at myself, less deadening, yes."</i>	Unsure <i>"Yes, then the future will have to tell in the end"</i>

Note. The transcripts for the interviews of Patients 5 and 6 were unavailable.

Individual Outcomes

Patient 1

Table 5

Pre – and Post-Measures of Patient 1

	Pre-Intervention	Post-Intervention	% change from pre- to post-intervention
IDS-SR	27 (mild)	4 (none)	-85.19%
GAD-7	9 (mild)	3 (none)	-66.67%
MHC-SF	37 (adequate)	55 (flourishing)	+48.65%
SCS-SF	30	32	+6,67%

Patient 1 experienced significant reductions in depression (-85.19 n%) and anxiety symptoms (-66.67%) and reported that his well-being increased by nearly 50%. The expression of self-compassion did not change significantly compared to his baseline level (Table 5). Since he reduced his mild symptoms to none and describes high levels of mental well-being, he seems to experience complete mental health after following the intervention. Hence, the intervention can be considered effective for him.

Regarding the feasibility of the PPI, he evaluated it positively throughout the whole questionnaire and reached a score of 87 out of 100 (Table 3). It is worth noting that he found five of the eight sessions very useful and would recommend them to a friend. Also, he indicated that he could imagine returning to the PPI if necessary. These tendencies are also reflected in the evaluation interview (Table 4). The patient reported a positive opinion about the PPI. He stated that he initially felt misplaced in the intervention group because his complaints felt minor compared to the others. However, he quickly realised that the intervention affected his symptoms too. He also evaluated the group setting positively because the group kept him

motivated to participate and practise the exercises. Timing-wise, he found it was a “good treatment at this point”. Overall, he explained that he enjoyed the intervention and benefited from it because it gave him a positive attitude towards life. Besides, this positivity extends across several areas of his life: “The relationship with me partner is much more positive. At work things are better. I'm better at getting things off my chest. Taking things less personally as it were. I have a little more self-care. I can let myself regret it above other points. something I did less before.”

Patient 2

Table 6

Pre – and Post-Measures of Patient 2

	Pre-Intervention	Post-Intervention	% change from pre- to post-intervention
IDS-SR	39 (moderate)	19 (mild)	-51.28%
GAD-7	18 (severe)	8 (mild)	-55.56%
MHC-SF	29 (adequate)	33 (adequate)	+13.79%
SCS-SF	23	34	+47.83%

Patient 2 exhibited the most severe symptoms out of all the other patients. He experienced moderate depression and severe anxiety symptoms prior to the interventions. After taking part in the PPI, his symptoms were bisected and remained as mild symptomatology (Table 6). In contrast to his strong symptomatology, his mental well-being was adequate, but he only experienced the smallest increase in mental well-being. Regarding self-compassion, he experienced an increase of 47.83%. Overall, the intervention can still be considered effective for this patient.

These more minor changes in effectiveness measures are also reflected by his comparatively moderate feasibility evaluation of the intervention according to the CSQ-8. With a score of 81 out of 100, he evaluated the PPI less positively than the others (Table 3). Even though his scoring is entirely positive, he evaluated items 4 to 8 significantly lower than the other patients. He expresses moderate satisfaction with the course and moderate helpfulness for his complaints. Also, he seems unsure whether he will consult the PPI again in the future. Besides these lower rankings, he indicated several sessions or intervention topics as very useful.

His critical feasibility interview also reflects this mixed evaluation (Table 4). Overall, he evaluated the intervention as “pretty good, right, purposeful”. He enjoyed the group setting because he felt recognised by the others, and the exercises in the group affected him positively. Also, he stated that he is “more positive in life”. However, he criticised several exercises, for example, writing a letter to himself and had difficulties adjusting to the PPI and attitude of self-compassion (“I don't recognise myself in the others”). Also, he notes that he should have had this type of treatment earlier in life since he is retired now and his “fear inhibited [him]” in life. In the future, he believes that the treatment will affect him. Accordingly, the intervention was primarily feasible for Patient 2.

Patient 3

Table 7

Pre-Intervention Measures of Patient 3

	Pre-Intervention	Post-Intervention	% change from pre- to post-intervention
IDS-SR	16 (mild)	n.a.	n.a.
GAD-7	5 (mild)	n.a.	n.a.
MHC-SF	38 (flourishing)	n.a.	n.a.
SCS-SF	37	n.a.	n.a.

Since patient 3 did not participate in the data collection, post-intervention results regarding effectiveness cannot be reported (Table 7). However, he participated in the feasibility evaluation of the interview. He evaluated the intervention positively according to the adjusted CSQ-8 questionnaire, scoring 84 out of 100 (Table 3). For most items, he scored higher than the mean. The only notable exception is the item on the amount of treatment, which he rated too low.

The interview gave additional insights into his opinion of the PPI (Table 4). Overall, his opinion was positive as he liked the focus away from his complaints. Also, he found the group setting helpful because he felt less alone with his struggles and experiences. He “benefited from [the exercises] very much” and especially saw an effect regarding his attitude towards himself. “The compassion was very central”, and he felt “less blaming” towards himself. The only criticism was the treatment timing, which he would have wished to be earlier because he had only received medical treatment up to this point. Here he also mentioned that besides the amount of treatment, he also criticised the timing of the treatment. He would have found the PPI more valuable earlier in his medical history or hoped for such a treatment method earlier. After following the PPI, he realised he would need to find a way to live with his complaints and enjoy a meaningful life despite them. Accordingly, even though the post-treatment data is missing, Patient 3 states that the intervention affected him and was mostly feasible.

Patient 4

Table 8

Pre – and Post-Measures of Patient 4

	Pre-Intervention	Post-Intervention	% change from pre- to post-intervention
IDS-SR	21 (mild)	16 (mild)	-23.81%
GAD-7	12 (moderate)	0 (none)	-100%

MHC-SF	26 (languishing)	36 (adequate)	+38.46%
SCS-SF	35	34	-2.86

Regarding the effectiveness of the PPI, Patient 4 reported mild depressive and moderate anxiety symptoms before the intervention. Also, contrary to his moderate symptomatology, his level of mental well-being was low. Throughout the intervention, he decreased his depressive symptoms and fully resolved his anxiety complaints. He showed moderate self-compassion at the beginning that remained stable throughout the intervention. Overall, he also reported improved mental well-being (Table 8).

Regarding his feasibility evaluation of the intervention, he assigned positive scoring to all items and evaluated them as somewhat average compared to the others. He clearly, indicates that he would recommend the PPI and found the emotional regulation and positive emotion sessions most helpful (Table 3). However, he achieved an overall score of 81 out of 100, which falls lower than others.

His interview also reflected the positive evaluation, as he found the intervention "enriching" (Table 4). He experienced the group atmosphere as "pleasant" and greatly enjoyed the honest compliments by the other patients. Also, he enjoyed the exercises and found the timing of the intervention "exactly right". Overall, he feels more positive and states, "Now I manage not to get completely carried away in the negative, in memories and things like that". Even though he is not sure how the intervention will affect him in the future, Patient 4 was unable to find aspects of the intervention he did not like and would evaluate it as effective.

Patient 5

Table 9

Pre-Intervention Measures of Patient 5

	Pre-Intervention	Post-Intervention	% change from pre- to post-intervention
IDS-SR	32 (moderate)	23 (mild)	-28.31%
GAD-7	12 (moderate)	7 (mild)	-41.46%
MHC-SF	31 (adequate)	30 (adequate)	-3.23%
SCS-SF	27	29	+7.41%

Regarding the effectiveness of the PPI, Patient 5 showed relatively mild depressive symptoms pre and post-intervention, but his complaints were reduced by -28.31%. For anxiety, his symptoms were reduced from moderate to mild by 41.46%. However, there were no improvements in the well-being measure, but a slight reduction of 3.23%. Regarding self-compassion, he showed relatively low levels at baseline that remained stable throughout the intervention. Generally, the patient showed adequate mental health and mild psychopathological symptoms, so he was approaching complete mental health. Hence, despite his smaller symptom reductions and even minorly reduced level of well-being, the intervention can be considered effective (Table 9).

For the feasibility measure, Patient 5 scored 87 out of 100 (Table 3). His scores were almost exclusively above average and generally positively evaluated. As an exception, he stated relatively low satisfaction with the amount of help received during the PPI, so it can be assumed that this client would have expected more intensive treatment.

Patient 6

Table 10

Pre – and Post-Measures of Patient 6

	Pre-Intervention	Post-Intervention	% change from pre- to post-intervention
IDS-SR	29 (moderate)	3 (none)	-89.66%

GAD-7	17 (severe)	2 (none)	-88.24%
MHC-SF	52 (flourishing)	48 (flourishing)	-7.69%
SCS-SF	24	41	+70.83

Patient 6 was one of two patients with the most severe complaints. She showed moderate depression and severe anxiety prior to the intervention. Contrary to patient 2, she benefited greatly from the intervention and reduced her symptoms by nearly 90%. Interestingly, even though she showed high levels of symptomatology, she showed the highest level of well-being before the intervention. However, her level of well-being reduced slightly by 7.69%. She also showed the greatest increase in self-compassion throughout the intervention (70.83%). Due to her incredible reduction in symptoms and substantial increase in self-compassion, the intervention was very effective for her (Table 10).

Regarding her evaluation of the feasibility of the intervention, she evaluated the PPI most positively and gave the highest scoring on the evaluation instrument (95 out of 100) (Table 3). She scored the majority of items with the highest possible value, except for the number of sessions, which were too small for her, and the likelihood of returning to the PPI. It is evident that this intervention was very feasible for her.

Discussion

The present study explored the effectiveness and feasibility of a PPI as a treatment option for patients with persistent depression and anxiety disorders. Specifically, the study focused on a group of six patients that have completed the intervention. It examined their individual changes in symptomatology, well-being, self-compassion and personal opinions about the PPI. The study examined the effectiveness of the intervention for all patients individually and, hence, provides real-life implications for clinical practice. Overall, the study demonstrated that the PPI could effectively reduce psychopathological symptomatology and

increase levels of well-being and self-compassion in the intervention group. Further, it proved the PPI's feasibility with high satisfaction ratings and generally positive evaluations during the post-intervention interviews, as shown by past research.

In line with previous research, the intervention effectively improved well-being levels (Hone et al., 2013; Schontanus-Dijkstra et al., 2019). However, the effects on reducing symptoms of anxiety and depression were significantly stronger compared to effects on well-being. Generally, previous research demonstrated that PPIs also improve symptoms of depression and anxiety besides overall well-being, so the observed reductions are common effects of PPIs (Bolier et al., 2013; Chaves et al., 2016; Chakhssi et al., 2018). Schotanus-Dijkstra et al. (2017) explained that the mechanisms of change in PPIs reducing depressive and anxiety symptoms were found to be well-being processes, such as enhanced self-compassion, optimism and positive relations. Also, this effect was more substantial for patients with severe mental disorders (Geerling et al., 2020). Hence, the effects of the present PPI may have been especially strong for symptom reductions due to the persistent complaints of the patients. Further, since most patients showed relatively adequate levels of well-being prior to the intervention compared to the partly severe psychopathological symptomatology, there was less room for improvement overall.

Besides being generally more effective at reducing complaints than improving levels of well-being, there seems to be a tendency that the intervention is more effective for anxiety symptoms. Similarly, a study by Chakhssi et al. (2018) showed moderate effects for anxiety compared to small effects for depressive symptoms. However, Hendriks et al. (2019) found larger effect sizes for depressive symptoms than anxiety. Accordingly, based on previous research, it is still unclear whether PPIs are generally more effective for depression or anxiety. Presumably, the stronger effect on anxiety symptoms could be explained by the additional focus on anxiety during session four. However, even though the mean symptom severity of both

complaints was moderate, baseline anxiety levels among two patients exceeded severe symptoms, so again the effect of anxiety may have been stronger due to the higher severity of complaints (Geerling et al., 2020). Future research must clarify the working mechanisms of PPIs for depression and anxiety to adjust them for different patient populations, if applicable.

Also, there seems to be a tendency for higher intervention effectiveness among patients with higher levels of well-being. This was observed for Patient 6, who had the most severe anxiety symptoms and showed the strongest relative reduction in symptomatology from severe complaints to clinically none. However, this patient also had the highest level of well-being at baseline and would be considered flourishing based on her MHC-SF results. Thus, despite her symptoms, she experiences mental health and is performing psychologically and socially well in life (Keyes, 2002). Individuals with flourishing mental health function better in life and high levels of well-being were found as a protective factor against mental disorders. Hence, it could be argued that higher levels of well-being enhanced the effectiveness of the PPI for patients with severe psychopathology (Grant et al., 2013; Schotanus-Dijkstra et al., 2017). This could explain why Patient 2 did not experience such a substantial improvement in anxiety symptoms because he generally experienced lower levels of well-being. These tendencies need to be analysed further with moderation analyses in future research.

Another observation was that patients with long complaint durations showed smaller reductions in symptom strength. It seems that Patient 2 and Patient 5, who have experienced their complaints for thirty years, showed smaller reductions in symptom strength. Also, both experienced lower levels of well-being than the other patients. Often, symptoms of depression occur prolonged, require long-term treatment and thereby impair those affected functionally (Geerling et al., 2020). Due to this, a significant disease burden often comes along with lower quality of life and hope (Hasson-Ohayon et al., 2009). This may explain the lower levels of well-being for the patients with prolonged complaints. Also, these lower baseline well-being

levels may result in a weaker treatment response due to a lack of hope and poorer quality of life. The interview of Patient 2 confirms this idea, with a reported lack of hope and lack of significant others. In summary, the burden of prolonged symptoms of mental disorders may lead to lower quality of life and eventually levels of well-being, which may hinder the treatment response to the present PPI.

Another observation was that patients with lower levels of self-compassion at baseline experienced the most significant improvements, and patients with higher baseline self-compassion remained more or less stable in their expression of self-compassion. Further, patients with higher baseline compassion showed the strongest treatment effects on symptom reduction and well-being improvement. This was the case for Patient 4, who showed the lowest level of well-being. Accordingly, these findings align with previous research that indicates that self-compassion affects well-being and reduces symptoms of depression and anxiety, thereby playing a crucial role in PPIs targeting these treatment populations (MacBeth & Gumley, 2012; Diedrich et al., 2014). Also, it proves the effectiveness of the present PPI at increasing levels of well-being (Bolier et al., 2013).

Besides, self-compassion improvements were strongest for the two patients with the most severe anxiety. Previous studies have shown that self-compassion positively affects the experience of anxiety symptoms (Werner, 2011). Usually, anxiety is caused by an obsession or overidentification with life experiences, especially failures and excessive worry. Here, self-compassion can counteract overidentification and offer a soothing alternative to worrying (Bergen-Cico & Cheon, 2013). Accordingly, these patients with severe anxiety may have benefited the most from the self-compassion aspects. Again, the working mechanisms of self-compassion in PPIs need to be examined further in future research.

Besides the overall effectiveness of the intervention, the intervention was feasible for all patients according to the evaluation questionnaire and interviews. This general feasibility of

PPIs among populations is also reflected in previous research. Similar to the findings by Valiente et al. (2020), the patients of the present study accepted the PPI and were satisfied with the program as a whole. Further, most patients in the present study reported higher life satisfaction and noticed changes in their life after following the intervention, which was also found among other patient groups (Harrison et al., 2015).

The only negative remarks regarding the intervention were about the timing of the intervention, as two patients would have wished for a similar treatment earlier in life. Frequently, persistent or severe complaints, as observed in the current intervention group, are treated with traditional, best-practice treatment options such as CBT (Rashid, 2015). However, the remaining complaints after up to 19 years of treatment, as seen in Patient 3, show that traditional approaches are not always effective. Hence, as another treatment option, PPIs should also be utilised in early treatment for severe complaints. In line with this idea previous meta-analyses suggest that PPIs cannot only be used for patients in remission but also in combination with traditional treatments or as a first step in the stepped care approach (Bolier et al., 2013). This is further supported by studies suggesting that PPIs are especially effective for severe mental disorders and show promising feasibility and acceptability among vulnerable patient groups (Huffman et al., 2014; Geerling et al., 2020; Valiente et al., 2021). Overall, it can be concluded that the intervention was generally well accepted and positively evaluated among the patients and seems especially feasible for patients with persisting complaints

Limitations

To contextualise the results of the present study, several limitations must be considered. First, the previously mentioned strength of the small-scale mixed method approach can also be considered a weakness of the study. Due to the small sample, the findings can only be considered observations made in the specific intervention group instead of generalisable, validated results. The present study should be repeated with an appropriate sample size in a

randomised controlled trial (RCT) to ensure the generalizability of the results. Secondly, the results of the present study only refer to the moment immediately after the intervention had ended and provide no information about the longevity of the results. Unfortunately, the data of a third measurement point three months after participating in the intervention was unavailable when this paper was written. Future studies must include multiple measures post-intervention to assess the sustainability of intervention effects. Thirdly, the tendencies reflected in the study results regarding influences of well-being levels, symptom strength, type of disorder or expression of self-compassion need to be validated by moderation analyses.

Fourthly, the feasibility measures had several limitations. On the one hand, the feasibility questionnaire was only partly based on a validated scale, and self-designed items were added to the measure. Due to this, validating the current results was impossible, and the individual scores could not be compared to reference values. On the other hand, the interview was initially held in Dutch and meant to be coded based on an extensive interview scheme. Due to the language barrier, the interview transcripts were automatically translated; therefore, some fragments were wrongly translated or challenging to understand. Also, due to the smaller scope of the present study, the preset interview coding scheme was not used. Instead, the interview questions were evaluated dichotomously based on the answers given by the patients. The negative or positive coding of answers was done by one researcher only and not validated by another coder. Therefore, there is no inter-rater reliability, and the interview results might be subjective. The feasibility of the present PPI should be re-assessed using standardised measures and reliable coding processes. Moreover, the qualitative interview data should be extensively analysed because it can provide insights into patients' opinions that support the implementation of PPIs.

Implications for practice

The present study prompts the following implications for treatment practice. First, as demonstrated in the present study, PPIs can be a valuable treatment approach for patients with persistent complaints. As Patient 3 stated in the interview, PPIs can promote living a good life with or despite the experienced mental health concerns. For patients, it seems relieving to follow a treatment that helps them to increase their well-being despite their complaints and is not just focused on reducing symptoms. Secondly, the present study showed that individual patients respond differently to PPIs, and these individual differences must be considered (Magyar-Moe et al., 2015; Antoine et al., 2018). For example, baseline well-being and self-compassion levels may influence an intervention's effectiveness, as seen in the present study. Further, patients with severe complaints and lower levels of well-being, such as Patient 2, struggled more with the exercises in the intervention. These patients might need more support in group interventions. Thirdly, besides the promising quantitative results of the study, the qualitative feasibility measures added significant value to the present study. Smaller-scale, qualitative studies can provide valuable insights into patients' actual experiences and are a quick possibility to adjust interventions according to the patients' needs (Binder et al., 2009). Moreover, feasibility studies as such ask for the patients' opinions, which should be treated as equally important as quantitative measures of effectiveness.

Conclusion

The present study proved that PPIs are an effective treatment approach for patients with persistent complaints when traditional treatments fail to improve their mental health. Further, the present study showed that PPIs are well accepted among patients and meet their treatment needs adequately. Moreover, two patients indicated that they would have preferred the PPI earlier in their treatment history, implying that professionals should not hesitate to use them in treating patients with severe or persistent complaints. This recommendation might be controversial, but the current evidence and previous research reflect the effectiveness of PPIs

for all kinds of patient populations. Nevertheless, further RCTs are needed to analyse different types of interventions to ensure a high-quality standard and strong effectiveness and feasibility for future PPIs.

References

- Andlin-Sobocki, P., & Wittchen, H.-U. (2005). Cost of anxiety disorders in Europe. *European Journal of Neurology*, *12*(s1), 39–44. <https://doi.org/10.1111/j.1468-1331.2005.01196.x>
- Anthony, W. A. (1993). Recovery from mental illness: the guiding vision of the mental health service system in the 1990s. *Psychosocial rehabilitation journal*, *16*(4), 11.
- Antoine, P., Dauvier, B., Andreotti, E., & Congard, A. (2018). Individual differences in the effects of a positive psychology intervention: Applied psychology. *Personality and Individual Differences*, *122*, 140–147. <https://doi.org/10.1016/j.paid.2017.10.024>
- Bakker, D., Kazantzis, N., Rickwood, D., & Rickard, N. (2016). Mental health smartphone apps: review and evidence-based recommendations for future developments. *JMIR Mental Health*, *3*(1), e4984. <https://doi.org/10.2196/mental.4984>
- Bergen-Cico, D., & Cheon, S. (2014). The mediating effects of mindfulness and self-compassion on trait anxiety. *Mindfulness*, *5*(5), 505-519. <https://doi.org/10.1007/s12671-013-0205-y>
- Binder, P.-E., Holgersen, H., & Nielsen, G. H. (2009). Why did I change when I went to therapy? A qualitative analysis of former patients' conceptions of successful psychotherapy. *Counselling and Psychotherapy Research*, *9*(4), 250–256. <https://doi.org/10.1080/14733140902898088>
- Bohlmeijer, E. T., & Hulsbergen, M. L. (2013). *Dit is jouw leven: Ervaar de effecten van de positieve psychologie*. Uitgeverij Boom.

- Bolier, L., Haverman, M., Westerhof, G. J., Riper, H., Smit, F., & Bohlmeijer, E. (2013). Positive psychology interventions: a meta-analysis of randomised controlled studies. *BMC public health*, 13(1), 1-20. <https://doi.org/10.1186/1471-2458-13-119>
- Bowen, D. J., Kreuter, M., Spring, B., Cofta-Woerpel, L., Linnan, L., Weiner, D., Bakken, S., Kaplan, C. P., Squiers, L., Fabrizio, C., & Fernandez, M. (2009). How We Design Feasibility Studies. *American Journal of Preventive Medicine*, 36(5), 452–457. <https://doi.org/10.1016/j.amepre.2009.02.002>
- Carr, A., Cullen, K., Keeney, C., Canning, C., Mooney, O., Chinseallaigh, E., & O’Dowd, A. (2021). Effectiveness of positive psychology interventions: a systematic review and meta-analysis. *The Journal of Positive Psychology*, 16(6), 749-769. <https://doi.org/10.1080/17439760.2020.1818807>
- Chakhssi, F., Kraiss, J. T., Sommers-Spijkerman, M., & Bohlmeijer, E. T. (2018). The effect of positive psychology interventions on well-being and distress in clinical samples with psychiatric or somatic disorders: A systematic review and meta-analysis. *BMC psychiatry*, 18(1), 1-17. <https://doi.org/10.1186/s12888-018-1739-2>
- Chaves, C., Lopez-Gomez, I., Hervas, G., & Vazquez, C. (2017). A comparative study on the efficacy of a positive psychology intervention and a cognitive behavioral therapy for clinical depression. *Cognitive therapy and research*, 41(3), 417-433. <https://doi.org/10.1007/s10608-016-9778-9>
- Cuijpers, P., Huibers, M., Daniel Ebert, D., Koole, S. L., & Andersson, G. (2013). How much psychotherapy is needed to treat depression? A meta regression analysis. *Journal of Affective Disorders*, 149(1), 1–13. <https://doi.org/10.1016/j.jad.2013.02.030>

de Graaf, R., Ten Have, M., van Gool, C., & van Dorsselaer, S. (2012). Prevalence of mental disorders and trends from 1996 to 2009. Results from the Netherlands Mental Health Survey and Incidence Study-2. *Social Psychiatry and Psychiatric Epidemiology*, 47(2), 203-213. <https://doi.org/10.1007/s00127-010-0334-8>

Diedrich, A., Grant, M., Hofmann, S. G., Hiller, W., & Berking, M. (2014). Self-compassion as an emotion regulation strategy in major depressive disorder. *Behaviour Research and Therapy*, 58, 43-51. <https://doi.org/10.1016/j.brat.2014.05.006>

Finucane, A., & Mercer, S. W. (2006). An exploratory mixed-methods study of the acceptability and effectiveness of mindfulness-based cognitive therapy for patients with active depression and anxiety in primary care. *BMC psychiatry*, 6(1), 1-14.

Franken, K., Lamers, S. M., Ten Klooster, P. M., Bohlmeijer, E. T., & Westerhof, G. J. (2018). Validation of the Mental Health Continuum-Short Form and the dual continua model of well-being and psychopathology in an adult mental health setting. *Journal of clinical psychology*, 74(12), 2187-2202. <https://doi.org/10.1002/jclp.22659>

Gable, S. L., & Haidt, J. (2005). What (and Why) Is Positive Psychology? *Review of General Psychology*, 9(2), 103–110. <https://doi.org/10.1037/1089-2680.9.2.103>

Gaynes, B. N., Lux, L., Gartlehner, G., Asher, G., Forman-Hoffman, V., Green, J., Bolland, E., Weber, R. P., Randolph, C., Bann, C., Coker-Schwimmer, E., Viswanathan, M. & Lohr, K. N. (2020). Defining treatment-resistant depression. *Depression and anxiety*, 37(2), 134-145. <https://doi.org/10.1002/da.22968>

Geerling, B., Kraiss, J. T., Kelders, S. M., Stevens, A. W. M. M., Kupka, R. W., & Bohlmeijer, E. T. (2020). The effect of positive psychology interventions on well-being and psychopathology in patients with severe mental illness: A systematic review

- and meta-analysis. *The Journal of Positive Psychology*, *15*(5), 572–587.
<https://doi.org/10.1080/17439760.2020.1789695>
- Gilbert, P. (2010). An introduction to compassion focused therapy in cognitive behavior therapy. *International Journal of Cognitive Therapy*, *3*(2), 97-112.
<https://doi.org/10.1521/ijct.2010.3.2.97>
- Grant, F., Guille, C., & Sen, S. (2013). Well-Being and the Risk of Depression under Stress. *PLOS ONE*, *8*(7), e67395. <https://doi.org/10.1371/journal.pone.0067395>
- Gullion, C. M., & Rush, A. J. (1998). Toward a generalisable model of symptoms in major depressive disorder. *Biological psychiatry*, *44*(10), 959-972.
[https://doi.org/10.1016/S0006-3223\(98\)00235-2](https://doi.org/10.1016/S0006-3223(98)00235-2)
- Harrison, A., Al-Khairulla, H., & Kikoler, M. (2016). The feasibility, acceptability and possible benefit of a positive psychology intervention group in an adolescent inpatient eating disorder service. *The Journal of Positive Psychology*, *11*(5), 449–459.
<https://doi.org/10.1080/17439760.2015.1117125>
- Hasson-Ohayon, I., Kravetz, S., Meir, T., & Rozencwaig, S. (2009). Insight into severe mental illness, hope, and quality of life of persons with schizophrenia and schizoaffective disorders. *Psychiatry Research*, *167*(3), 231-238.
- Hendriks, T., Schotanus-Dijkstra, M., Hassankhan, A., De Jong, J., & Bohlmeijer, E. (2020). The efficacy of multi-component positive psychology interventions: A systematic review and meta-analysis of randomised controlled trials. *Journal of happiness studies*, *21*(1), 357-390. <https://doi.org/10.1007/s10902-019-00082-1>

- Hernandez, R., Burrows, B., Wilund, K., Cohn, M., Xu, S., & Moskowitz, J. T. (2018). Feasibility of an Internet-based positive psychological intervention for hemodialysis patients with symptoms of depression. *Social Work in Health Care, 57*(10), 864–879. <https://doi.org/10.1080/00981389.2018.1523268>
- Higa-McMillan, C. K., Francis, S. E., Rith-Najarian, L., & Chorpita, B. F. (2016). Evidence base update: 50 years of research on treatment for child and adolescent anxiety. *Journal of Clinical Child & Adolescent Psychology, 45*(2), 91-113. <https://doi.org/10.1080/15374416.2015.1046177>
- Hone, L. C., Jarden, A., & Schofield, G. M. (2015). An evaluation of positive psychology intervention effectiveness trials using the re-aim framework: A practice-friendly review. *The Journal of Positive Psychology, 10*(4), 303-322. <https://doi.org/10.1080/17439760.2014.965267>
- Huffman, J. C., DuBois, C. M., Healy, B. C., Boehm, J. K., Kashdan, T. B., Celano, C. M., Denninger, J. W., & Lyubomirsky, S. (2014). Feasibility and utility of positive psychology exercises for suicidal inpatients. *General Hospital Psychiatry, 36*(1), 88–94. <https://doi.org/10.1016/j.genhosppsy.2013.10.006>
- Jacobi, F., Höfler, M., Strehle, J., Mack, S., Gerschler, A., Scholl, L., ... & Wittchen, H. U. (2015). Twelve-months prevalence of mental disorders in the German Health Interview and Examination Survey for Adults–Mental Health Module (DEGS1-MH): a methodological addendum and correction. *International journal of methods in psychiatric research, 24*(4), 305-313. <https://doi.org/10.1002/mpr.1479>
- Jeste, D. V., Palmer, B. W., Rettew, D. C., & Boardman, S. (2015). Positive psychiatry: its time has come. *The Journal of clinical psychiatry, 76*(6), 14729. <https://doi.org/10.4088/JCP.14nr09599>

- Kessler, R. C. (2012). The Costs of Depression. *The Psychiatric Clinics of North America*, 35(1), 1–14. <https://doi.org/10.1016/j.psc.2011.11.005>
- Keyes, C. L. (2006). Subjective well-being in mental health and human development research worldwide: An introduction. *Social indicators research*, 77(1), 1-10.
<https://doi.org/10.1007/s11205-005-5550-3>
- Keyes, C. L. M. (2002). The Mental Health Continuum: From Languishing to Flourishing in Life. *Journal of Health and Social Behavior*, 43(2), 207–222.
<https://doi.org/10.2307/3090197>
- Krentzman, A. R., Hoepfner, B. B., Hoepfner, S. S., & Barnett, N. P. (2022). Development, feasibility, acceptability, and impact of a positive psychology journaling intervention to support addiction recovery. *The Journal of Positive Psychology*, 1–19.
<https://doi.org/10.1080/17439760.2022.2070531>
- Kroenke, K., Spitzer, R. L., Williams, J. B., Monahan, P. O., & Löwe, B. (2007). Anxiety disorders in primary care: prevalence, impairment, comorbidity, and detection. *Annals of internal medicine*, 146(5), 317-325. <https://doi.org/10.7326/0003-4819-146-5-200703060-00004>
- Kuyken, W., Watkins, E., Holden, E., White, K., Taylor, R. S., Byford, S., ... & Dalgleish, T. (2010). How does mindfulness-based cognitive therapy work?. *Behaviour research and therapy*, 48(11), 1105-1112. <https://doi.org/10.1016/j.brat.2010.08.003>
- Lamers, S. M., Westerhof, G. J., Bohlmeijer, E. T., ten Klooster, P. M., & Keyes, C. L. (2011). Evaluating the psychometric properties of the mental health continuum short form (MHC-SF). *Journal of clinical psychology*, 67(1), 99-110.
<https://doi.org/10.1002/jclp.20741>

- Larsen, D. L., Attkisson, C. C., Hargreaves, W. A., & Nguyen, T. D. (1979). Assessment of client/patient satisfaction: development of a general scale. *Evaluation and program planning*, 2(3), 197-207.
- Linley, P., Joseph, S., Harrington, S., & Wood, A. M. (2006). Positive psychology: Past, present, and (possible) future. *The Journal of Positive Psychology*, 1(1), 3–16.
<https://doi.org/10.1080/17439760500372796>
- 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>
- Magyar-Moe, J. L., Owens, R. L., & Conoley, C. W. (2015). Positive Psychological Interventions in Counseling: What Every Counseling Psychologist Should Know. *The Counseling Psychologist*, 43(4), 508–557. <https://doi.org/10.1177/0011000015573776>
- McGrath, C. L., Kelley, M. E., Dunlop, B. W., Holtzheimer III, P. E., Craighead, W. E., & Mayberg, H. S. (2014). Pretreatment Brain States Identify Likely Non-response to Standard Treatments for Depression. *Biological Psychiatry*, 76(7), 527–535.
<https://doi.org/10.1016/j.biopsych.2013.12.005>
- McNeilly, C. L., & Howard, K. I. (1991). The effects of psychotherapy: A reevaluation based on dosage. *Psychotherapy Research*, 1(1), 74-78.
<https://doi.org/10.1080/10503309112331334081>
- National Institute for Health and Care Excellence (n.d.). *NICE Guidelines*.
<https://www.nice.org.uk/guidance>
- Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, 2(3), 223-250. <https://doi.org/10.1080/15298860309027>

Parks, A. C., Kleiman, E. M., Kashdan, T. B., Hausmann, L. R., Meyer, P. S., Day, A. M., Spillane, N. S. & Kahler, C. W. (2015). Positive psychotherapeutic and behavioral Interventions. *Positive Psychiatry: A Clinical Handbook*. Arlington, VA: American Psychiatric Publishing; 147-165.

<http://dx.doi.org/10.1176/appi.books.9781615370818.dj08>

Rashid, T. (2015). Positive psychotherapy: A strength-based approach. *The Journal of Positive Psychology*, 10(1), 25-40. <https://doi.org/10.1080/17439760.2014.920411>

RKI. (2017). Depressive Symptomatik bei Erwachsenen in Deutschland. *Journal of Health Monitoring*, 2(3). <https://doi.org/10.17886/RKI-GBE-2017-058>

Roshanaei-Moghaddam, B., Pauly, M. C., Atkins, D. C., Baldwin, S. A., Stein, M. B., & Roy-Byrne, P. (2011). Relative effects of CBT and pharmacotherapy in depression versus anxiety: is medication somewhat better for depression, and CBT somewhat better for anxiety?. *Depression and anxiety*, 28(7), 560-567. <https://doi.org/10.1002/da.20829>

Rush, A. J., Giles, D. E., Schlessner, M. A., Fulton, C. L., Weissenburger, J., & Burns, C. (1986). The inventory for depressive symptomatology (IDS): preliminary findings. *Psychiatry Research*, 18(1), 65-87.

Schotanus-Dijkstra, M., Pieterse, M. E., Drossaert, C. H., Walburg, J. A., & Bohlmeijer, E. T. (2017). Possible mechanisms in a multicomponent email guided positive psychology intervention to improve mental well-being, anxiety and depression: A multiple mediation model. *The Journal of Positive Psychology*, 14(2), 141-155.

<https://doi.org/10.1080/17439760.2017.1388430>

- Schotanus-Dijkstra, M., ten Have, M., Lamers, S. M. A., de Graaf, R., & Bohlmeijer, E. T. (2017). The longitudinal relationship between flourishing mental health and incident mood, anxiety and substance use disorders. *European Journal of Public Health, 27*(3), 563–568. <https://doi.org/10.1093/eurpub/ckw202>
- Seligman, M. E. (2002). Positive psychology, positive prevention, and positive therapy. *Handbook of positive psychology, 2*(2002), 3-12.
- Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalised Anxiety Disorder: The GAD-7. *Archives of Internal Medicine, 166*(10), 1092–1097. <https://doi.org/10.1001/archinte.166.10.1092>
- Trivedi, M. H., Rush, A. J., Ibrahim, H. M., Carmody, T. J., Biggs, M. M., Suppes, T., ... & Kashner, T. M. (2004). The Inventory of Depressive Symptomatology, Clinician Rating (IDS-C) and Self-Report (IDS-SR), and the Quick Inventory of Depressive Symptomatology, Clinician Rating (QIDS-C) and Self-Report (QIDS-SR) in public sector patients with mood disorders: a psychometric evaluation. *Psychological medicine, 34*(1), 73-82. <https://doi.org/10.1017/S0033291703001107>
- Valiente, C., Espinosa, R., Contreras, A., Trucharte, A., Caballero, R., & Peinado, V. (2021). The feasibility and acceptability study of a positive psychology group intervention for people with severe psychiatric conditions. *The Journal of Positive Psychology, 0*(0), 1–14. <https://doi.org/10.1080/17439760.2021.1871940>
- Vittengl, J. R., Jarrett, R. B., Weitz, E., Hollon, S. D., Twisk, J., Cristea, I., David, D., DeRubeis, R. J., Dimidjian, S., Dunlop, B. W., Faramarzi, M., Hegerl, U., Kennedy, S. H., Kheirkhah, F., Mergl, R., Miranda, J., Mohr, D. C., Rush, A. J., Segal, Z. V., ... Cuijpers, P. (2016). Divergent Outcomes in Cognitive-Behavioral Therapy and

Pharmacotherapy for Adult Depression. *American Journal of Psychiatry*, 173(5), 481–490. <https://doi.org/10.1176/appi.ajp.2015.15040492>

Werner, K. H., Jazaieri, H., Goldin, P. R., Ziv, M., Heimberg, R. G., & Gross, J. J. (2012). Self-compassion and social anxiety disorder. *Anxiety, Stress, & Coping*, 25(5), 543–558. <https://doi.org/10.1080/10615806.2011.608842>

Westerhof, G. J., & Keyes, C. L. (2010). Mental illness and mental health: The two continua model across the lifespan. *Journal of adult development*, 17(2), 110-119. <https://doi.org/10.1007/s10804-009-9082-y>

Appendix A

Interview schedule

Bedankt dat u mee wilt doen aan dit onderzoek en tijd hebt vrijgemaakt om wat vragen hierover te beantwoorden. Dit interview duurt circa 30 minuten en zal met name gaan over hoe u de behandeling hebt ervaren en wat voor u wel of niet helpend is geweest.

Allereerst wil ik u een aantal praktische vragen stellen, zoals hoe vaak u aanwezig bent geweest en of het u lukte de huiswerkopdrachten thuis te maken. Daarna wil u vragen stellen over de inhoud van de interventie en hoe u deze ervaren hebt.

De interviewvragen en volgorde worden gehanteerd als handleiding en niet per se als strikte volgorde.

Interview vragen	Doorvragen op mening	Doorvragen op waarom	Codering/ label
<i>Feitelikheden</i>			
Heeft u de behandeling helemaal doorlopen? En hoe vaak gemist?		Doorvragen om reden van missen.	1. Helemaal gevolgd 2. 1 of 2 keer gemist <25% 3. 3 of 4 keer gemist <50% 4. Vaker dan 4 keer gemist 5. Helemaal gestopt Reden van missen of stoppen: 1. Geen tijd voor 2. Geen zin (meer) in 3. Niet relevant voor mij 4. Groepservaring was niet prettig of fijn? 5. Ik miste aansluiting in de groep

			6. Er was in de privésfeer iets aan de hand 7. Mijn klachten namen toe 8. Overig.....
Heeft u kunnen oefenen met de thuisopdrachten en hoe vaak?		Zo, ja.... Zo, nee..	1. Elke dag 5 tot 10 minuten 2. Elke dag 15 tot 20 minuten 3. Elke dag meer dan 20 minuten 4. 4 tot 5 keer per week 5. 2 tot 3 keer per week 6. 1 keer per week 7. Niet geoefend
Hoe ervoer u de accommodatie? En wat vond u van de faciliteiten?			8.
<i>Evaluatie van de interventie</i>			
Wat is uw algemene mening over de behandeling?	Waarom?	Kan je dat toelichten?	
Als u zo terugdenkt welke aspecten van de bandeling vond u het meest waardevol?	Waarom?	Kan je dat toelichten?	
Zijn er aspecten die u minder prettig vond?			

Hoe ervoer u de groepsmomenten?			
Wat vond u van de oefeningen?		Doorvragen op wat wel of niet prettig was. Alle context hierin meenemen (ruimte, stoelen, geluid etc).	Welke oefening(en) sprak u het meest aan? <ol style="list-style-type: none"> 1. Gericht op compassie 2. Ademhaling in kalmerend ritme brengen 3. Oma oefening 4. Mindful ademhalen 5. Drie-goede-dingen-oefening 6. Mindful savoring-oefening 7. Dankbaarheidsoefening posttraumatische groei 8. Oefening met het angstige zelf 9. Verbeeldingsoefening toekomst 10. Oefening barrières 11. Oefening sterke kanten 12. Oefening reageren 13. Oefening dankbaarheid 14. Oefening compassievolle brief
Welk onderwerp van de bandeling sprak u het meest aan?	<ol style="list-style-type: none"> 1. Compassion 2. Positieve emoties 3. Omgaan met angst 4. Doelen en wensen voor toekomst 5. Strekte kanten ontdekken 	Doorvragen op de thema's	

	6. Positieve relaties 7. Omgaan met psychische stoornis		
Welke onderwerpen sprak u het minst aan?	1. Compassion 2. Positieve emoties 3. Omgaan met angst 4. Doelen en wensen voor toekomst 5. Strekte kanten ontdekken 6. Positieve relaties 7. Omgaan met psychische stoornis	Doorvragen op de thema's	
Wat vond u van de timing van de behandeling gezien uw behandelverloop?			Wel of niet eerder nodig gehad? Te l=vroeg/ te laat Al mee bekend? Healing?
<i>Evaluatie van de geleerde lessen</i>			
Welk effect had de behandeling op u?		Wat werkte goed of niet goed? Op welk gebied?	Was het ook werkelijk iets anders dan u eerder heeft gehad? Heeft het gemaakt dat u anders met uw klachten omgaat? Heeft het voor u iets gedaan als u kijkt naar uw klachten?

Heeft het ook in uw leven iets veranderd?			
Wat betekende de groepsbehandeling voor u?		Had het een verschil gemaakt als het individueel was gegeven?	
Heeft u ook dingen gemist?			