Master Thesis:

Compassion Focused Therapy among clients with PTSD: a pilot study.

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Abstract

Introduction People who experience life-threatening event are at risk of developing Post traumatic stress disorder (PTSD). PTSD is recognized by several main symptoms: reexperiencing the traumatic event, avoiding trauma-related triggers and experiencing hyperarousal. PTSD is mostly treated through EMDR or Prolonged exposure. Nevertheless, positive psychology is an upcoming approach to treat PTSD. Individuals diagnoses with PTSD often experience feelings of guilt and shame. During the Compassion focused therapy (CFT), the clients learn to develop more self-compassion in order to diminish feelings of guilt and shame. Previous studies show that CFT can provide decrease in PTSD symptoms and increase in positive mental health. This pilot study aims to investigate possible effects of CFT regarding PTSD symptoms and well-being in an outpatient setting.

Method The setting of the study is the center of Psychotrauma of Mediant where individuals diagnosed with PTSD receive outpatient treatment. The current pilot study measured a pre- and posttest design regarding CFT. The study included 7 participants in analyzing the PTSD symptoms and 11 participants in analyzing the feelings of well-being. These participants received individual and group CFT. 2 CFT groups has been successfully carried out so far. Data of clients who participated in these 2 groups are included. The first CFT group has been carried out in April 2019 and the second CFT group started in January 2020. The following questionnaires were analyzed: Posttraumatic stress disorder Checklist for DSM-5 (PCL-5) and the Mental Health Continuum-Short Form (MHC-SF).

Results Results show no significant reduction in the PTSD symptoms after CFT. The subscale avoidance reveals a medium to large decrease, just not significant ($p = 0.072$, $r = -0.482$). Individual results display 4 individuals who decreased in PTSD symptoms and 3 who increased. 2 participants who decreased in PTSD symptoms show a large amount of decrease. Individual results display 4 individuals who decreased in total PTSD symptoms and 3 who increased after CFT. It is noticeable, that 2 individuals show a large change in total PTSD symptoms. These individuals both participated in group 2. Next to that, the study reveals a medium significant increase in well-being after receiving CFT ($p < 0.05$, $r = -0.46$). The subscale emotional well-being shows a medium to large increase after participation in CFT ($p = 0.028$, $r = -0.469$). Group level analyses reveal that the 5 participants in group 2 included in the analysis show an increase in well-being. In total, 9 participants experienced an increase in well-being and 2 participants reported a decrease in well-being.

Discussion Although only the data from a limited number of clients could be included, this pilot study indicates that PTSD symptoms might not decrease after receiving CFT. However, there might be an indication for increase in well-being in clients suffering from PTSD after participating in CFT. Due to the pilot study design, the small number of participants and other limitations of the study, no firm conclusions can be stated. Follow up research is recommended to execute larger trial research in order to further investigate the effects of CFT in the current setting taken into consideration the limitations of the current study. It is recommended to add demographical and personal data, include a control group and to add multiple measure moment in time in order to investigate the course of the PTSD symptoms and feelings of well-being. In that way, larger trial research can provide in further development and improvement of CFT focused on individuals suffering from PTSD.

Introduction

Many people experience a life-threatening event during their existence. Such as, a car accident, domestic violence, sexual assault or another event where the individual experienced high levels of life-threatening fear. The individual could also have witnessed a traumatic event, instead of experiencing it themselves, leading to posttraumatic stress. Posttraumatic stress can be defined as disabling stress after the experience or witness of a life-threatening traumatic event (Davey, 2014). It is considered a disorder when the individual reports the concerning symptoms over 1 months after the traumatic event occurred.

People suffering with Post traumatic stress disorder (PTSD) often experience feelings of guilt and shame (Langkaas, 2017). They experienced a traumatic event in which they felt powerless for example. Anger, guilt, shame, and sadness are common emotional responses to traumatic events. Langkaas (2017) also explains that such emotions contribute to the maintenance cycle of PTSD, causing PTSD symptoms to remain or even worsen over time. Due to this reason several interventions are developed in order to focus on the diminishing of these negative feelings and cognitions related to PTSD. One of these therapy's is Compassion focused therapy (CFT). By developing more self-compassion, these feelings and cognitions of shame, guilt and anger should decrease the PTSD-symptoms (Lawrence & Lee, 2014). Next to that, CFT aims to increase positive mental health through stimulating individuals to develop self-compassion in order to decrease feelings of guilt and shame (Gilbert, 2014). At the center for Psychotrauma of Mediant, where individuals diagnosed with PTSD receive treatment, two CFT groups has been fully carried out. So, to what extent are these possible effects regarding diminishing PTSD symptoms and increasing well-being noticeable in this two groups? Therefore, this current pilot study aims to investigate the first possible associations between CFT, PTSD symptoms and well-being among outpatients of the center for Psychotrauma of Mediant.

Posttraumatic stress disorder

People diagnosed with posttraumatic stress disorder (PTSD) encounter major obstacles in their daily lives. Symptoms of PTSD are defined into three cluster; reexperiencing the traumatic event, avoidance of trauma-related stimuli, and increased arousal known as hyperarousal (Segman & Shalev, 2009). The lifetime prevalence of PTSD is 6,8 % (Stubley, 2012), which means that 6,8 % of all people around the world will be suffering from a PTSD at some point during their lifetime. Several aspects play a role in the development of PTSD after experiencing a traumatic event, such as psychiatric comorbidity and the type of trauma (Helsley, 2008). Also, the persons natural resilience, genetic risks and earlier experiences with traumatic events all play an important role in the development of PTSD (Helsley, 2008). Avoidance is an important symptom of PTSD. This also contributes to the circle of maintenance of the post-traumatic stress disorder (Davey, 2014). People keep avoiding situations or places that reminds them of the traumatic event. So, the fear of not being able to manage these triggers will accelerate as they never confront themselves with the trigger. In that way they never learn they can manage the fear response and cognitive restructuring does not happen (Davey, 2014). The focus on the symptom of avoidance is important in treatment in order to diminish the PTSD symptoms severity. Over the years, several evidence based treatment approaches have been investigated.

Traditional PTSD treatment

One of the most used treatments for PTSD is imaginary exposure therapy (Langkaas et al., 2017). Exposure is an evidence based, standard treatment for excessive fear, in which clients are exposed to the traumatic event and the associated fears they experienced. Prolonged

exposure (PE) is a well-known form of treatment of PTSD. Prolonged exposure consists of two core elements: imaginary exposure (IE) and exposure in vivo. Through imaginary exposure the client repeatedly tells the memories of the trauma by revisiting the scene in their mind whilst guided by the psychotherapist. The client visualizes the memory in the present tense with all sensory stimuli that were present at the time of the traumatic memory. In that manner, the client will relive the trauma and its associated pathological fear. These exposures will repeatedly activate the fear structure associated with the traumatic event. This activation of fear structures is important in order to provide in corrective information regarding the trauma, which will provide in modification of the extensive fear structure that maintains the PTSD (Gallagher & Resick, 2012). The rationale behind exposure therapy is that the exposure will extinguish associations between trauma cues and fear responses, and it will help the individual to disconfirm any trauma-related dysfunctional beliefs developed after the traumatic event (Davey, 2014). The IE is combined with exposure in vivo, which means that the individual has to carry out activities that one's rather would avoid because fear responses related to the trauma will come up. Next to the exposure, another well-known treatment for PTSD is eye movement desensitization and reprocessing (EMDR). The client focusses on the traumatic event while simultaneously following a light ball or the psychotherapists finger moving backwards and forwards. This process continuous until the client feels a reduction of anxiety related to the traumatic event (Davey, 2014). The rationale behind EMDR is that the intensity of the traumatic memory will be reduced while the client focusses on the traumatic event and let associated cues pop up, while making eye movements (Lenferink, Meyerbröker & Boelen, 2020). However, the main goal of the therapy is not anxiety reduction, Shapiro (2017) would rename EMDR as 'reprocessing therapy'. The psychotherapist guides the client through EMDR to transform negative experiences into adaptive learning experiences. When the psychotherapist treats the client with the focus on specific internal responses, the client will be able to recall the event without overwhelming feelings of fear and guilt for example (Shapiro, 2017). Clients learn positive aspects from the traumatic events, and the event is restored into the memory in a nondistressing form.

Positive psychology, mental health and well-being

A growing body of research shows that next to the more traditional treatment of PTSD, like exposure and EMDR, positive psychological interventions can be effective treatments for PTSD as well (Belrose et al., 2019). Positive psychology is an umbrella term for the study of positive emotions, character traits and strengths and the interaction between these components. Social psychologists have studied mental health through the investigation of subjective well-being (Keyes, 2002). Keyes (2002) describes subjective well-being as the individual's perception and evaluation of their own life in terms of their affective state and their psychological and social functioning. According to Westerhof & Keyes (2010), well-being can be divided into three concepts: emotional, psychological and social well-being. Symptoms of emotional well-being are noted from individuals' responses to structured scales measuring presence of positive affect, the absence of negative affect and perceived satisfaction in life (Keyes, 2002). Well-being is not only the presence of positive affect and absence of negative affect, overall positive functioning in life is also an important construct. Emotional well-being includes feelings of happiness and satisfaction in life (Westerhof & Keyes, 2010). Psychological well-being can be explained as positive individual functioning such as self-realization (Westerhof & Keyes, 2010). Keyes (2002) describes six constructs of psychological well-being: self-acceptance, positive relations with others, environmental mastery, personal growth and autonomy. Thus, psychological well-being measures to what extent the individual likes most parts of themselves, has warm and trusting relationships, has a direction in life and the presence of self-determination. Next to the emotional and

psychological well-being, social well-being is an important construct of well-being. Westerhof and Keyes (2010) describe social well-being as the subjective evaluation of optimal functioning in the community. Keyes (2002) argues that positive functioning includes social challenges and formulated five dimensions of social well-being: social coherence, social acceptance, social actualization, social contribution and social integration. A person who is functioning optimally in society matched all the dimensions (Keyes, 2002). The positive psychology approach argues that mental well-being is more than the absence of psychopathology (Neff, Kirkpatrick & Rude, 2007) and aims to increase psychological well-being (Seligman, Steen, Park & Peterson, 2005). The emotional, psychological and social well-being combined should be an indication for the individual's mental health status (Keyes, 2002). Improving the individual's mental health is important as the presence of positive mental health works as a protective factor against developing psychopathology (Keyes, 2007). Positive mental health seems more than the absence of mental illness. Keyes (2005) describes his two continua model that presents the two continua of mental illness and mental health as two distinct continua. The model suggests that the two continua, mental illness and mental health, are related but distinct. One continua suggest the absence or presence of mental illness, and the other continua indicates the absence or presence of mental health. Therefore, complete mental health is described as the absence of mental illness, but also the presence of mental health. Keyes distinguished the stadia on the continuum of mental illness into languishing (low levels of subjective well-being), moderate and, flourishing (high levels of subjective well-being) (Keyes, 2005). The model suggests that stimulating mental health is just as important as diminishing symptoms of a mental illness. Someone could suffer from a mental illness, but experience more positive mental health than someone else without a mental illness for example. Therefore, the stimulation of mental health is important to increase positive mental health and to prevent psychopathology.

An important factor that could be stimulated in order to improve mental health, is compassion. Research suggest that stimulating compassion is in relationship with increased mental health (Zessin, Dickhäuser & Garbade, 2015; Pandey, Tiwari, Parihar, & Rai, 2019). Increased self-compassion is in line with higher rates of positive mental health. These findings indicate the importance of stimulating self-compassion in order to stimulate well-being.

Self-compassion

Self-compassion is a construct that is measured to an upcoming degree in the psychological research field. Increasing self-compassion is seen as a potential intervention to treat several psychological disorders (Winders, Murphy, Looney & O'Reilly, 2020). Self-compassion is also seen as a protective component in the potential development of a depressive and anxiety disorder for instance (Daneshvar, Basharpoor & Shafiei, 2020a). Neff's definition of self-compassion is defined as "being touched by and open to one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself, with kindness" (Neff, 2011). The construct self-compassion can be described by two models. First, the model by Neff (2003) divides self-compassion into three components: kindness, sense of common humanity and mindfulness. These components combine and interact to create a self-compassionate state of mind (Germer & Neff, 2013; Neff, 2003). Second, the model of self-compassion by Gilbert (2005). He defines compassion as an interactive flow and explains the evolutionary-based thoughts regarding to compassion. Gilbert (2005) involves three emotion regulation systems, threat, drive and sooth, which interact with each other and therefor regulate themselves (Winders et al., 2020). Figure 1 shows an overview of the three emotion regulation systems (Gilbert, 2005). The three emotion regulation systems are based on the evolutionary functional analysis (Kolts, 2016). The first system is the 'threat

system'. The threat system is designed to detect and protect against life-threatening situations. This threat system reacts very quick from our reptile brain, in order to survive, think of the fight/flight/freeze reaction (Kolts, 2016: Gilbert, 2015). During the experience of a life-threatening situation, this system becomes active. However, with individuals suffering from PTSD, this part of the system is overly active. The second system is the drive system. This system is connected to our mammal-brain, which is associated with rewarding stimuli; a drive to receive a reward after completing a task (for example food or other rewards). The last emotion regulation system is the soothing system. Self-compassionate behaviors are linked to the soothing system (Winders et al., 2020). The soothing system is based on taking care of yourself, nurturing one's own suffering and developing self-compassion. People with high self-criticism, are most likely having trouble developing self-compassion (Winders et al., 2020). Gilbert (2019) states that underdevelopment of the soothing-system, for example by threatening or stressful environments early in life, can also result in a hyper aroused threat system. This is what individuals suffering from PTSD experience on a daily base. The threat system is overactive, resulting in hyperarousal symptoms for instance. Stimulating the soothing-system helps develop self-compassion and will decrease the hyper arousal of the threat system. The soothing system is linked to affection and kindness from others and the self and is essential in providing enhancement of well-being (Lawrence & Lee, 2014).

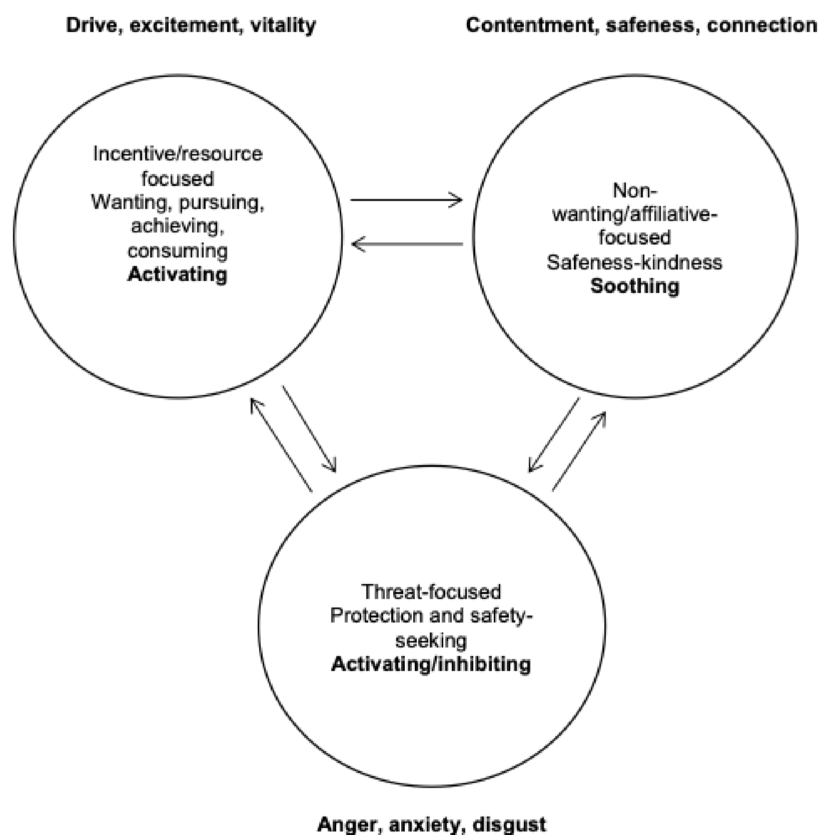

Figure 1. Interaction of the drive, soothing and threat system by Gilbert (2005).

Compassion focused therapy

In order to stimulate self-compassion in individuals, compassion focused therapy was created (CFT) by Paul Gilbert. Gilbert (2018) explains the value of CFT as psychotherapy. He describes the evolutionary base of CFT where the emotion regulation system functions as working mechanism to learn to develop self-compassion. The primary focus of Compassion focused therapy (CFT) is to diminish self-criticism and shame (Kolts, 2016; Gilbert, 2018).

Clients with PTSD can have negative thoughts like: “I know what happened is not my fault, but maybe if I acted differently...”. They cannot find a comforting voice within themselves to sooth them. The main goal of CFT is to facilitate an emotional congruence between cognition and emotions (Gilbert, 2015; Kolts, 2016). Mindfulness, as derived from Neff’s model, is one of the main components of CFT. Individuals learn to pay attention to the body while breathing and be mild towards themselves if the mind wanders off. In that manner, people learn how to be mindful about momentary thoughts, but also about how to be mild and gentle towards their own thoughts (Daneshvar et al., 2020a: Gilbert, 2015). CFT starts with an individual process where the client writes his/her life story and develops insight in the working mechanism of the relationship between childhood experiences, trauma’s, psychopathology and their unwanted consequences. These sessions are followed by group sessions therapy in which the client learns to develop self-compassion. At last, individual sessions with the psychotherapist will focus on strengthening the developed self-compassion (Lee & James, 2013).

Self-compassion and PTSD

Sommers-Spijkerman, Trompetter, Schreurs and Bohlmeijer (2018) explored the CFT as guided self-help therapy, and suggest that CFT enhanced well-being and reduced psychological distress. CFT seemed to instigate well-being when the participant is able to feel compassion towards themselves and others (Sommers-Spijkerman, Trompetter, Schreurs & Bohlmeijer, 2018). However, the participants in that study did not suffer from PTSD and the CFT was provided through a guided self-help book, instead of through individual sessions and group sessions.

Multiple studies have found a negative association between self-compassion with PTSD symptoms and severity (Boykin et al., 2018; Scoglio et al., 2018; Winders et al., 2020). Therefore, improving self-compassion in individuals suffering from PTSD, might reduce the severity of the PTSD-symptoms (Hamrick & Owens, 2019). Hamrick and Owens (2019) investigated the relationship between self-compassion, self-blame, disengagement coping and PTSD among females who experienced sexual assault. The study found a correlation between post assault mental health and self-compassion. They conclude that interventions based on enhancing self-compassion contributes to the mental health of sexual assault survivors. Therefore, it is important to research the possible effects of therapy enhancing self-compassion with individuals suffering from PTSD. Stimulating self-compassion with CFT can be helpful to decrease PTSD symptoms (Germer & Neff, 2013: Daneshvar et al., 2020a). However, several studies conclude that more empirical research is needed in order to investigate the underlying factors of the relationship between self-compassion and PTSD symptom severity (Ashfield, Chan & Lee, 2020; Daneshvar et al., 2020a). Daneshvar et al. (2020a) also describe that there is limited literature on self-compassion as an aspect of trauma treatment. CFT needs more research to investigate the effects and the relationship between CFT and PTSD in order to diminish PTSD symptoms. CFT seems to increase well-being, however, there is lack of research proving that CFT increases well-being with clients suffering from PTSD. But, as the two continua model indicates, the presence of mental health is distinct from the absence of mental illness. To arrive at a complete state of mental health, the absence of mental illness and the presence of mental health is wanted. It is just as important to increase mental health instead of only decreasing symptoms of the mental illness. Traditional PTSD treatments mainly focus on the last mentioned aspect, instead of both. Therefore, it seems interesting to further explore the possible effects of CFT in the current setting regarding PTSD symptoms and well-being. It is important to investigate the relationship between CFT, PTSD symptoms and well-being among individuals suffering from PTSD in order to provide in further development of the therapy. Therefore, two hypotheses are tested in the current study:

- *Participation in Compassion focused therapy significantly decrease PTSD symptoms among individuals suffering from PTSD.*

- *Participation in Compassion focused therapy significantly increase feelings of well-being among individuals suffering from PTSD.*

Method

This study took place in an outpatient setting at the center of Psychotrauma of the mental health organization Mediant in Enschede. People receiving treatment of this department have all been diagnosed with PTSD during the intake procedure.

Design and participants

A pilot study of a pre-posttest study design was executed using quantitative research consisting of the analysis of 2 online questionnaires the participants filled in before and after receiving CFT. Individuals who received CFT were analyzed concerning possible changes in PTSD symptom severity and positive mental health. At the center of Psychotrauma, 2 groups of CFT has been successfully carried out. The first group started in April 2019 and the second group in January 2020. When the clients filled in the questionnaire at the start of the treatment, they gave permission to use this data of the questionnaires in research.

In total, 18 participants are included in the study. Two individuals dropped out or didn't participate at all in the CFT. They did not fill in any questionnaires and the group they would participate in is unknown. So, these two individuals are excluded from the study. Two groups of CFT are analyzed. The first group (group 1) took place is April 2019 and 7 participants took part in this group, and the second group (group 2) started in January 2020 consisting of 9 participants. The included participants are all women and over the age of 18. Due to privacy reasons mentioned above, no further demographical data is known.

Procedure

The regular intake procedure consists of an application form, an intake meeting with a health-psychologist, discussing the client's intake in a multidisciplinary team, and an advice meeting to discuss the treatment advice. During the intake it became clear what symptoms the person was suffering from and what kind of treatment would be most suitable. The diagnose PTSD is examined during the intake. After the intake the application is discussed in a multidisciplinary team in order to collaborate on making the choice for the best suitable treatment for the client. The choice for the best suitable treatment to advice is based on the severity of the PTSD symptoms, singular or multiple experienced trauma, previous treatment, and comorbidity for instance. Important inclusion criteria to receive treatment through CFT, is the suffering from feelings of guilt and/or shame in connection to the PTSD. If that is the case, the individual was indicated for CFT. In that manner, during the multidisciplinary meeting clients were selected to receive CFT. After this meeting, the client had an advice meeting with a therapist where the CFT, in this case, was further explained and advised. When the client and the therapist agreed on the treatment, the client received an online link to fill in 5 questionnaires. These questionnaires collected information regarding overall symptom severity, quality of life, extraordinary experiences, PTSD symptom severity and positive mental health. Thus, every client starting treatment at the center of Psychotrauma needed to fill in these questionnaire as a starting point of the treatment, regardless of the advised treatment. The results of the last two questionnaires regarding PTSD symptom severity and positive mental health of clients who carried out the CFT were included in the current study. So, the clients

filled in the questionnaires after the advice meeting and before the start of the CFT as baseline (T0). Then, clients received CFT. After CFT was finished, the clients filled in the same questionnaires again through an online link as post-measure of the treatment (T1).

Compassion focused therapy

CFT starts with individual sessions guided by a psychologist. The therapy consists of 6 individual sessions, 12 group sessions and after the group again 6 to 12 individual sessions, depending on the needs of the client. The individual sessions are 60 minutes and depend in frequency on the needs of the client, the group-sessions are 2 hours once every week. The therapists carrying out the treatment in the group-sessions are three trained and experienced therapists. The overall content of the therapy is explained based on the book of Lee and James (2013) called 'Compassionate-Mind Guide to Recovering from Trauma and PTSD, Using Compassion-Focused Therapy to Overcome Flashbacks, Shame, Guilt, and Fear'.

The first individual sessions are aimed to guide the client in writing their life story. The client writes his/her own life story based on the guidelines provided by the book of Lee and James (2013). Writing their life story contributes to the process of the client becoming aware of negative and positive aspects in their life. Furthermore, writing their life story aims to help the client better understand how certain life events and trauma's might have shaped the person's being and how these aspects cause the maintenance of several complaints and patterns. After the life story is written, the CFT formulation is set up together with the therapist. The CFT formulation focusses on emotional memories, regulation systems and motives combined with the process of the client defining the self. The formulation concentrated on the early attachment processes the client experienced. If certain attachment patterns repeatedly occurred, specific believes (internalized and externalized) and basic fears (also internalized and externalized) are formed. Based on these basic fears, clients develop safety behaviors but often with unintentional consequences. The combination of experienced history of attachment, developed believes and developed safety behavior becomes a conditioned cycle which is hard to change. Together with the therapist the client will get insights in this CFT formulation. With these insights, the client will be ready to participate in the next phase of the CFT: the group sessions.

The aim of the CFT-group is to exchange knowledge of the compassionate brain, physical relaxation through mindfulness and to train behavior changes in a group with people facing similar challenges. Clients can profit from the group context on multiple levels. Feelings such as shame and guilt are mostly present in participants of the group. The group can function as a place of practice, where participants can expose their vulnerabilities in order to change their feelings of guilt towards feelings of innocence. The participants can feel guided and supported by the similarities of suffering experienced by other participants of the group. Table 1 shows an overview of the group sessions, their content and specific activities.

Table 1.
Content and activities of the Compassion focused therapy group.

	Content	Specific activities
1	Introduction	Meeting participants and therapists, explanation goalsetting, explanation compassionate brain, brainstorming self-compassion, psychoeducation PTSD and guilt and self-blame.
2	Creating acknowledgement for the way people react on traumatic events	Discuss homework, what happened to the seeds. Triangle character-parental environment-traumatic events, three human brains, imagination practice: ice-

	through brain, motives and feelings.	creams, three emotion regulation systems (draw your own), psychoeducation parts of brain.
3	Understanding how flashbacks, nightmares and intrusions work.	Working of the brain in memories and trauma, flashbacks/nightmares.
4	Understanding all components of shame.	Shame and social threat, protecting yourself against fears regarding others, shame and self-criticism. Practice: kind wish.
5	Understanding why you need compassion in your life.	Practice: best version of yourself. Practice: connecting to own CFT-formulation and discuss unwanted consequences, roleplay regulation systems.
6	Getting insight in capabilities of compassion and understanding you might allow self-compassion.	Six aspects of the charitable mindset. Important qualities of compassion according to Paul Gilbert: care for wellbeing, emergency sensitive, sympathy, tolerate distress, empathy, non-judgmental. Compassion cycle. Practice: disprove myths about compassion.
7	The satisfaction- and soothing system.	Breath and be present with awareness, three regulation systems. Practice: calming breathing.
8	Understanding why training is important and learning compassion exercises.	Use of positive imagination exercises stimulates the soothing system, creating your own 'safe place', ways to develop compassion. Practice self-compassion.
9	Understanding your own life story by using compassion. Learn to deal with traumatic memories and flashbacks.	Handling flashbacks. Exercise: rethinking the flashback. Enable our compassionate brain, taking responsibility, safety strategies, inner bully.
10	Using your compassionate mind to figure out your (often shameful) flashbacks.	Compassion thinking helps to figure out shameful flashbacks. Compassion reframing.
11	Explanation importance of compassionate letter. Understanding which eleven steps are necessary to write the letter.	Writing the compassionate letter, the eleven steps.
12	Closing session: Personal insights in terms of compassion and trauma. What is needed in the future.	Ten important insights for a compassionate approach, personal insights, what is different at the moment, useful compassionate exercises, compassionate version of me, my compassionate first aid kit, look at the future.

After the group, the client will receive a maximum of 16 sessions of individual therapy. During the participation of the client in the CFT group, the therapist writes down a

compassionate letter to the client. The life story, conducted in the first phase, is used as base information. The goal of the letter is to create compassionate insight regarding traumatic events out of the life story of the client. The goal is that the client feels and stays motivated to finish their own individual process until treatment goals are achieved. With the transition from the group to the individual therapy, the client receives the compassionate letter from the therapist. The individual sessions each start with a compassionate exercise in order to repeat the learning skills from the group. Traumatic events and patterns will be treated through further practice of compassionate skills and trauma therapy. The CFT will be closed by the client reading his/her compassionate letter.

Measurement tools

PTSD

The Post-Traumatic Checklist Scale for the DSM-5 (PCL-5) is a brief (20 items) and self-report questionnaire for reporting the four main PTSD symptoms (Bruno et al., 2019). The four sub-scales correspond to the four main symptoms of PTSD. The sub-scales are divided in Cluster B: reexperiencing (items 1-5), Cluster C: avoidance (item 6-7) and Cluster D: negative cognition and mood (item 8-14) and the last items (15-20) are combined in Cluster E which measures the symptom hyperarousal (Morrison, Su, Keck & Beidel, 2020). The PCL-5 measures the extent in which the participants suffer from the PTSD symptoms, following a traumatic event, in the past month. The items are rated using a 5-point Likert scale, from 0 (not at all) to 4 (extremely). The PCL-5 is a screener that indicates further exploration of the diagnoses of PTSD. The test shows an indication for severe PTSD if the total score is over 44. If the score is between 34 and 44 partial PTSD is indicated and below 34 gives no indication for PTSD (Bruno et al., 2019). Research shows that the PCL-5 has a sufficient test-retest reliability between .66 and .91 (Cheng et al., 2020), high internal consistency with a Cronbach’s Alpha between .85 and .94 (Ruggiero, Del Ben, Scotti, & Rabalais, 2003), and is therefore a valid and effective questionnaire to screen and asses PTSD in clinical practice (Yao et al., 2003). The subscales are summed up to form the total score of the PCL-5. The range of severity of the total score is from 0 till 80. In which 80 means highest severity and 0 means no severity of the PTSD symptoms (Asmundson et al., 2000).

Well-being

Mental Health Continuum-Short Form (MCH-SF) measures mental health in total and in three dimensions: the emotional (item 1-3), psychological (item 4-8) and social well-being (item 9-14). The questionnaire consists of 14 items with a 6-point Likert scale with a range from ‘rarely’ (0) up till ‘everyday’ (5) (Kennes et al., 2020; Lamers, Westerhof, Bohlmeijer, ten Klooster & Keyes, 2011). An example of a question is ‘During the past month, how often did you feel satisfied with life?’. In this study the Dutch version of the MHC-SF was used. This version has a good validity and the total scale has an internal consistency of 0.89 (Lamers et al., 2011) The reliability of the social well-being scale is 0.74 and the psychological and the emotional scales show a reliability of 0.83 (Lamers et al. 2011). The scores on the subscales are the average of the concerning items. The scores on all items can be averaged into the total well-being score.

Analysis

The data of the two questionnaires the PCL-5 and the MHC-SF were imported into SPSS-27. First, the file needed to be prepared for analysis, by deleting data based on participants who didn’t fill in the pre and post measure at all. First, reliability analysis was conducted. Reliability is used to be conducted when the sample size > 30 (Samuels, 2017). However, the small sample in the study is taken into consideration when interpreting the results. Due to the

small sample size of the current study, the normality of the data is questionable. Therefore, the Wilcoxon Signed-Rank test will be executed. Meek, Ozgur and Dunning (2007) discuss that for small sample sizes, the efficiency of the Wilcoxon SR test to the t-test is near 95 percent. Next to that, the test is recommended in small sample situations by Seward (2007). This non-parametric test is used in situations where the same participants have two sets of scores to compare, such as in the current study. The Wilcoxon SR test is the non-parametric equivalent of the dependent *t*-test according to Field (2009). The Wilcoxon SR test will display the presence of a significant change between pre- and posttest of the PCL-5 and the MHC-SF. To confirm a statistically significant difference between pre- and posttest, the results had to be $p < 0.05$. Next to that, effect size r was calculated. In that way the amount of the difference in scores is presented. Specifically, for the t-tests and their non-parametric alternatives, like the Wilcoxon SR test, a small standardized effect size was set at $r = 0.20$, medium was $r = 0.50$, and a large effect was set to be $r = 0.80$ (Kanyongo, Brook, Kyei-Blankson, & Gocmen, 2007). Based on this information the effect sizes were interpreted. The analysis of the Wilcoxon SR test and the calculation of the effect sizes were conducted regarding the total score, the scores on the specific subscales of the questionnaires and regarding the difference between the two CFT groups.

Results

Table 2 presents an overview of the questionnaires the individuals fulfilled before and/or after the CFT. As displayed, not all clients filled in both questionnaires at baseline (T0) and after the treatment (T1). 7 of the 16 participants filled in the pre- and posttest for the first questionnaire, the PCL-5. 11 of the 16 participants were adherent to analyze in order to test the second hypothesis concerning the MHC-SF. This means that 7 individuals were included in the analysis regarding the PTSD-symptoms, and 11 individuals are included in the analysis of the difference in well-being. Despite participating in the CFT, 4 individuals did not fill in any questionnaires due to unknown reasons.

Table 2.
Overview of clients with group number and filled in questionnaires

		T0		T1	
Client	Group	PCL-5	MHC-SF	PCL-5	MHC-SF
1	2	-	X	X	X
2	2	X	X	X	X
3	2	X	X	X	X
4	1	-	X	X	X
5	1	-	X	-	X
6	1	-	X	X	X
7	2	X	X	X	X
8	1	-	X	-	-
9	1	X	X	X	X
10	1	X	X	X	X
11	1	X	X	X	X
12	2	X	X	X	X
13	2	-	-	-	-
14	2	-	-	-	-
15	2	-	-	-	-
16	2	-	-	-	-

Note. X = fulfilled and - = not fulfilled.

PTSD symptoms

Total score

The reliability analysis shows a Cronbach's Alpha of α = 0.915 (N=7) for the total PTSD symptoms scale at baseline (T0). Total PTSD symptoms T1 shows a reliability of α = 0.950 (N=10). The reliability of both measure moments would not be higher if any items were deleted.

The first hypothesis to test is as follows: 'Participation in Compassion focused therapy significantly decrease PTSD symptoms among individuals suffering from PTSD'. The Wilcoxon Signed-Ranks test is conducted with data of participants who filled in the pre- and posttest of the PCL-5 (N=7). The Wilcoxon Signed-Ranks test indicated that PTSD symptoms post treatment (mean rank = 42.8) was not significantly lower than the "Total PTSD Pre" (mean rank = 52.286), z = -0.845, p > 0.05, r = -0.226. The z-score is based on positive ranks, which indicates a decrease in scores (Field, 2009).

Subscales

Reliability analysis of the subscales at baseline (T0) shows the following results: Cluster B (Reexperience) α = 0.894, Cluster C (Avoidance) α = 0.962, Cluster D (Negative cognition) α = 0.702 and Cluster E (Hyperarousal) α = 0.640. The last subscale shows not to be very reliable. The reliability would not have been higher if any item would be deleted. The posttest (T1) reveals the following Cronbach's Alpha: Cluster B α = 0.910, Cluster C α = 0.968, Cluster D α = 0.796 and Cluster E α = 0.901. The reliability of the subscales would not increase if any item is deleted.

Table 3 displays the differences in scores on subscale level of the PCL-5 after the analyze of the Wilcoxon SR test. The scales show the symptom phenomena that is measured in the subscale. All subscales show a decrease in mean scores, however there is not a statistically significant difference measured, except for the subscale avoidance. The symptom of avoidance displays a medium to large effect size, however the change is only marginally significant and based on a very small sample.

Table 3.

Wilcoxon SR test PCL-5 on cluster level (N=7)

Scale	M (SD)	z	p	r
Reexperience	T0 11.43 (5.62) T1 10.50 (5.35)	-0.315	0.752	-0.084
Avoidance	T0 6.23 (2.50) T1 4.60 (2.63)	-1.802	0.072	-0.482
Negative cognition	T0 19.43 (4.96) T1 15.30 (6.34)	-0.681	0.496	-0.182
Hyperarousal	T0 15.14 (3.30) T1 12.40 (5.50)	-0.943	0.345	-0.252
Total score	T0 52.23 (14.41) T1 44.57 (19.78)	-0.845	> 0.05	-0.226

Note. z-scores are based on positive ranks.

Group level

Three individuals participated in the first CFT group, and four individuals in the second CFT group. The Wilcoxon Singed-Rank test focused on group 1 (N = 3) of the CFT, shows a non-significant difference (p > 0.05) between pretest (mean rank = 40.67) and posttest (mean rank = 46). Next to that, group 2 also shows a non-significant difference between pre- (mean rank

= 61) and posttest (mean rank = 39.6) of the PCL-5 ($p > 0.05$). The small number of clients in the groups suggest that the results should be interpreted more on an individual level. The four clients in group 2 seem to show a decrease in PTSD symptoms, while the three clients in group 1 reveal an increase. None of the differences in pre- and postscore is significant. It is noticeable that participant 7 and 12 are included in group 2. These individuals show a large amount of decrease in scores as displayed in Table 4. Also, client 9 and 10 show an increase in PTSD symptoms, and they were both included in group 1.

In-dept analysis of individual scores

Individual scores and differences of PTSD symptoms are presented in Table 4. The table presents a more specific overview of the 7 individual changes in PTSD symptoms and the subscales. When the post-score differences 1 point or more compared to the pre-score, this will be notices as a change in scores. The higher the number, the bigger the change in scores. 4 individuals reported a decrease in PTSD symptoms, and 3 individuals experienced an increase of PTSD symptoms. 3 of the 4 individuals who show a decrease in Total score, all show their highest decrease score on the PTSD symptom of negative cognition. This concerns client 3, 7 and 12. Client 11, who also shows a decrease in the total score, reported his or her highest decrease on the symptom of hyperarousal. Next to that, 2 individuals who reported an increase in PTSD symptoms, client 2 and 9, present their highest increase in the symptom hyperarousal. The other individual, client 10, who reported an increase, reveals the highest increase score on the symptom of reexperiencing.

Table 4.
Individual differences of the PCL-5

Client	Group	Total score	Difference total score	Reexperience	Avoidance	Negative cognition	Hyperarousal
2	2	T0 65	+1	15	8	24	18
		T1 66		14 (-1)	7 (-1)	25 (+1)	20 (+2)
3	2	T0 75	-8	19	8	28	20
		T1 67		18 (-1)	7 (-1)	23 (-5)	19 (-1)
7	2	T0 57	-23	14	7	19	17
		T1 34		9 (-5)	4 (-3)	10 (-9)	11 (-6)
9	1	T0 32	+11	3	1	16	12
		T1 43		6 (+3)	2 (+1)	18 (+2)	17 (+5)
10	1	T0 45	+7	9	6	16	4
		T1 52		15 (+6)	6 (0)	17 (+1)	4 (0)
11	1	T0 45	-5	14	6	14	11
		T1 40		14 (0)	4 (-2)	15 (+1)	7 (-4)
12	2	T0 47	-37	6	8	19	14
		T1 10		2 (-4)	0 (-8)	4 (-15)	4 (-10)

Note. Clusters represent the symptoms of PTSD. The first scale, Cluster B, contains the symptom intrusion of the traumatic event of the PTSD. The second scale, Cluster C measures avoidance, Cluster D contains the cognition and mood and Cluster E the hyperarousal and reactivity (Asmundson et al., 2000).

Well-being

Total score

The reliability analysis shows a Cronbach's Alpha of $\alpha = 0.842$ (N=12) for the total well-being scale (T0). Total well-being T1 shows a reliability of $\alpha = 0.941$ (N=11). The reliability of both measure moments would not be higher if any items were deleted.

The Wilcoxon Signed-Ranks test is executed in order to answer the following hypothesis: 'Participation in Compassion focused therapy significantly increase feelings of well-being with individuals suffering from PTSD'. 11 participants filled in the pre- and posttest of the questionnaire. The analysis is executed with data of these 11 participants. The Wilcoxon Signed-Ranks test indicated that "Total Well-being Post" (mean rank = 2.203) was significantly higher than the "Total Well-being Pre" (mean rank = 1.571), $z = -2.137$, $p < 0.05$, $r = -0.46$. The analysis reveals a statistically significant difference of well-being. The z-score is based on negative ranks, which means that there is an increase in scores between pre and post measure (Field, 2009). The effect size shows there is a medium effect of change in scores of well-being after participating in CFT regarding to the current participants.

Subscales

The reliability analysis on subscale scores at baseline (T0) result in the following Cronbach's alphas: emotional well-being $\alpha = 0.789$, psychological well-being $\alpha = 0.479$ and social well-being $\alpha = 0.799$. There will be no increase in reliability if any item is deleted. Next to that, the reliability regarding the subscales of the posttest (T1) reveals the following Cronbach's alphas: emotional well-being $\alpha = 0.925$, psychological well-being $\alpha = 0.903$ and social well-being $\alpha = 0.833$. It is noticeable that the psychological well-being scale at baseline does not seem to be sufficiently reliable. However, the reliability will not be higher if any item is deleted. Therefore, the interpretation of the results of this subscale needs to happen with great caution.

Table 5 shows the test results with the focus on differences on subscale level of the MHC-SF. All subscales show an increase in mean scores. The subscale emotional well-being reveals a statistically significant difference with an effect size of $r = -0.47$. This indicated there is a medium effect of change in scores of the items regarding the emotional well-being. The other subscales social well-being and psychological well-being does not reveal a significant difference in scores but do show a small to medium effect size.

Table 5.
Wilcoxon Signed-Rank test MHC-SF on subscale level (N=11)

Scale	M (SD)	z	p	r
Emotional well-being	T0 1.58 (1) T1 2.55 (1.51)	-2.201	0.028	-0.469
Social well-being	T0 1.22 (0.67) T1 1.85 (1.57)	-1.538	0.124	-0.328
Psychological well-being	T0 1.86 (0.95) T1 2.32 (1.23)	-1.247	0.212	-0.266
Total score	T0 1.63 (0.72) T1 2.20 (1.3)	-2.137	<0.05	-0.46

Note. z-scores are based on negative ranks.

Group level

6 individuals participated in CFT group 1 and 5 individuals participated in group 2. Wilcoxon Singed-Rank test focused on group 1 of the CFT, shows a non-significant difference (0.344) between pretest mean rank of (1.698) and posttest mean rank (2.002), ($N = 6$, $p > 0.05$, $z = -0.946$, $r = -0.273$). This indicates that group 1 shows a small increase in scores, however the change is not significant. Next to that, clients in group 2 of the CFT, show a significant difference between pre- (mean rank = 1.400) and posttest (mean rank = 2.444) of the MHC-SF ($N = 5$, $p < 0.05$, $z = -2.023$, $r = -0.639$). This indicated that individuals in group 2 shows a medium to large increase in well-being scores after participating in CFT.

In-depth analysis of individual scores
Individual changes of the clients are presented in Table 6. The table presents an overview of the 11 participants included in the analysis of well-being. The table presents the specific changes of the individuals in total score and in the subscales emotional, social and psychological well-being. When the post-score differs 1 point or more compared to the pre-score, there is a change in scores. 9 individuals reported an increase in well-being, and 2 individuals experienced a decrease of feelings of well-being. Clients 1 and 12 present a large increase in total well-being score after participating in the CFT. They report an increase of 2 or more average points. Client 1 shows his or her highest increase in psychological well-being and client 12 in social well-being. Both clients participated in group 2. Next to that, two clients who showed a decrease in total well-being scores after participating in CFT, client 4 and 9, both presents to experience the most decrease in the psychological well-being scale. Both clients participated in group 1 of the CFT.

Table 6.
Individual differences of the MHC-SF

Clients	Group	Total score	Difference total score	Emotional well-being	Social well-being	Psychological well-being
1	2	T0 1.57 T1 4.00	+2.43	1.00 3.67 (+2.67)	2.40 4.20 (+1.80)	1.17 4.00 (+2.83)
2	2	T0 0.00 T1 0.07	+0.07	0.00 0.00 (0)	0.00 0.00 (0)	0.00 0.17 (+0.17)
3	2	T0 0.86 T1 1.43	+0.57	1.00 2.00 (+1)	0.60 1.00 (+0.40)	1.00 1.50 (+0.50)
4	1	T0 2.00 T1 1.93	-0.07	2.67 2.33 (-0.34)	1.20 2.00 (+0.80)	2.33 1.67 (-0.66)
5	1	T0 1.93 T1 2.29	+0.36	2.00 2.67 (+0.67)	2.00 1.80 (+0.20)	1.83 2.50 (+0.67)
6	1	T0 2.21 T1 2.79	+0.58	1.00 4.00 (+3)	1.40 0.60 (-0.80)	3.50 4.00 (0.50)
7	2	T0 2.14 T1 2.29	+0.15	2.33 2.33 (0)	1.40 2.20 (+0.80)	2.67 2.33 (-0.34)
9	1	T0 1.07 T1 0.50	-0.57	1.00 0.33 (-0.66)	0.40 0.00 (-0.40)	1.67 1.00 (-0.67)
10	1	T0 2.07 T1 2.50	+0.43	2.67 3.67 (+1)	1.40 1.80 (+0.40)	2.33 2.50 (+0.17)
11	1	T0 1.64 T1 2.00	+0.36	1.33 2.00 (+0.66)	1.60 1.80 (+0.20)	1.83 2.17 (+0.34)
12	2	T0 2.43 T1 4.43	+2	3.33 5.00 (+1.66)	1.40 5.00 (+3.60)	2.83 3.67 (+0.84)

Discussion

This pilot study provides first insights into the association between CFT and outpatients PTSD symptoms and feelings of well-being. The goal of this study was to contribute to a first investigation of possible effects of the CFT within the current setting. Although the limited number of clients included, the results showed no evidence for a potential contribution of CFT in the reduction of PTSD symptoms, but the study seems to reveal an indication for the improvement of wellbeing. The first hypothesis is therefore rejected, and the second hypothesis is accepted. However, due to the design of the study and its limitations, results are interpreted with caution. It is important to broaden the current study and to deepen it by

conducting in-depth interviews with clients and therapists involved. McLean et al. (2018) suggests that although self-compassion has been studied as an important component in therapy, limited literature is available on self-compassion in treatment of trauma. Also, Grodin et al. (2019) conducted research studying the impact of CFT on veterans with PTSD. One of their conclusions is that larger-scale research is much needed in order to test the intervention's efficacy (Andersen & Rasmussen, 2017; Grodin et al., 2019).

Interpretation of results

PTSD symptoms

The results does not show an overall effect of CFT regarding PTSD symptoms. The effect size is small, also the subscales does not reveal large effects. Only the symptom of avoidance reveals a larger effect size. The two groups show a difference in trends where the second group shows some individuals who reveal a larger decrease in overall PTSD symptoms. Therefore, there are clear individual differences in pre- and post-measure of the CFT where some clients reveal large changes and some clients do not show changes in PTSD symptoms.

As the current study did not show a difference in PTSD symptoms in outpatients after following CFT within Mediant, this result is deviating from existing literature. For example, Lee (2009) indicated that PTSD symptoms diminish after receiving CFT as treatment. Also, Daneshvar et al. (2020b) suggests that CFT is effective in the decrease of PTSD symptoms. However, the study of Daneshvar et al. (2020b) differs on some aspects compared to the current study. Daneshvar et al. (2020b) used a control group and the research was focused on women suffering from PTSD due to intimate partner violence (IPV). The current study lacks a control group and lacks further information about the specific traumatic events individuals experienced related to PTSD. The type of trauma could influence the related negative belief, like shame and guilt in some cases. Daneshvar et al. (2020b) describe that studies on IPV reveal the aspects of depression, emotional coping style, fear and childhood maltreatment in the development of PTSD. IPV could result in negative emotional malfunctions in daily life of the victims. CFT focusses on the improvement of these negative emotional patterns like the constant feelings and thoughts of shame and guilt. So, the type of trauma could influence the results of the effectiveness of CFT. The type of traumatic events that the clients in the current study experienced is unknown, and might have influenced the outcomes. Next to that, the study of Au et al. (2017) also suggests the effectiveness of compassion-based therapy to reduce PTSD symptoms and trauma-related shame. However, 8 of the 10 participants experienced sexual assault as traumatic event causing PTSD. This indicated that CFT reduces PTSD symptoms in individuals who suffered from PTSD due to sexual assault. It is known that victims of sexual assault struggle with severe negative emotions like shame and guilt related to the traumatic event. As explained by Gilbert (2018), the focus of CFT is to diminish self-criticism, shame and guilt. So, for this type of trauma, CFT seems to be effective. However, in the current study, the subject of the traumatic event the individual suffered from is unknown. So, the non-statistical outcome of the current study might be influenced by the subject of the trauma. However, there is no evidence to prove this as the pilot study design lacks in-depth information regarding the experienced traumas. It is interesting to further investigate the possible effectiveness of multiple types of traumatic events.

In addition, Seligowski, Miron and Orcutt (2015) state that not much is known about whether the relationship between focus on self-compassion and PTSD-symptoms is significant. The relationship between PTSD symptom severity and self-compassion is rather complex, with emotional regulation systems in between (Scoglio et al., 2018). Scoglio et al. (2018) suggests that the influence of PTSD symptoms on self-compassion may be partly linked to the impact of emotion dysregulation. This can be explained by the fact that self-compassion relies on components of emotion regulation like awareness of emotions. This

underlying link between the influence of PTSD symptoms on self-compassion is interesting to further investigate. In that manner, more in-depth research can contribute to improve therapy for clients with PTSD.

On a more in-dept level, the present study showed a trend in the decrease in the PTSD symptom of avoidance after clients received CFT. This finding is in line with Daneshvar et al. (2020b). They found that CFT has significant effect on decreasing the level of experiential avoidance. Daneshvar et al. (2020b) argues that the individuals seem to gain more acceptance towards traumatic events and instead of trying to control the associated memories, individuals are able to choose another action based on this strength. This implicated the significant link between self-compassion and experiential avoidance, which is also found by Thompson and Waltz (2008). In that manner, the current pilot study seems to carefully contribute of the existence of the link between stimulating self-compassion and the symptom of avoidance of PTSD. However, the effect is not significant in the current research. Therefore, it is interesting to investigate the symptoms of PTSD separately in larger scale research in order to investigate to what extent CFT affects the symptoms separately.

Additional analysis were conducted in order to investigate individual outcomes on group level of the PCL-5. The analysis on group level shows that 2 participants in group 2 reveal a large decrease of PTSD symptoms. The decrease is non-significant but it could be remarkable that these 2 participants are in the same CFT group. After group 1 wrapped up, improvements could have been made which might have benefitted group 2 for instance. This could contribute to the high score of decrease in PTSD symptoms of these 2 individuals in group 2. However, the number of participants is very small, therefore no conclusions can be drawn. Therefore, it is interesting to further investigate the difference between the CFT groups. It is interesting to research to what extent the scores might have been influenced by the group the client participated in, in order to explore possible influenceable factors regarding to the group.

4 individuals reported a decrease in PTSD symptoms, and 3 individuals experienced an increase of PTSD symptoms. 3 of the 4 individuals who showed a decrease in symptoms seem to experience the highest decrease in the symptom of negative cognition. The symptom of negative cognition consists of questions regarding feelings of guilt, shame and anger. One of the main goals of CFT is to learn the client to develop self-compassion, in order to decrease these feelings of shame and guilt (Lawrence & Lee, 2014). The results of these individuals seem to display a decrease in feelings of shame and guilt. Therefore, this might carefully be linked to the development of self-compassion after participating in CFT. However, due to the pilot study design conclusions about these findings cannot be stated. Despite that, it seems to be interesting to further explore in the future in larger scale research.

Well-being

The second hypothesis regarding the positive effect of CFT on well-being seems present in the current study. Well-being seems to change in a positive way and the emotional well-being reveals to increase also. Clients does not seem to change in psychological and social well-being after receiving CFT. Due to the pilot study and the small sample size, results need to be interpreted with caution. The two groups reveal difference outcomes. The first CFT group does not show an increase in well-being, while the second CFT group does reveal an increase in well-being. However, individual differences in sores are present and displayed.

The medium change in well-being seemingly resulting from this study, is in line with literature studying the effect of CFT on positive mental health with individuals with PTSD (Daneshvar et al., 2020b; Lawrence & Lee, 2014). A meta-analysis study of Wilson, Machintosh, Power and Chan (2018) investigated whether self-compassion-related therapies, like CFT, are effective in promoting self-compassion and reducing psychopathology. They

concluded that there is evidence that these therapies improve self-compassion and psychopathology, however there was a lack of control groups in the studies. They state that no statistical comparison was possible so the effectiveness could not be directly linked to the self-compassion focused therapies. The exploratory study of Trompetter, de Kleine and Bohlmeijer (2017), suggests that there is a negative relationship between positive mental health and psychopathology. The higher the positive mental health, the lower psychopathology. The study suggests that higher levels of self-compassion weakens the relationship between negative affect and psychopathology. Especially individuals with high levels of positive mental health seems to possess self-compassion skills. They state that enhancing self-compassion is a promising focus for clinical practice to reduce psychopathology as well as to reduce factors like rumination and self-criticism (Trompetter, de Kleine & Bohlmeijer, 2017). Therefore, the positive mental health will increase. However, the study does not focus on the psychopathology of PTSD. The study of Trompetter et al. (2017) indicates that future research focused on increasing positive mental health by focusing on developing self-compassion is important in order to prevent psychopathology.

The subscale emotional well-being shows a medium increase. This suggests that the individuals increased in terms of positive feelings (e.g. happiness and positive affect) and satisfaction with life (Lamers et al., 2011). The other two scales do show a small to medium effect size, however the change is not significant. The study of Marshall and Brockman (2016) among psychology students suggests the link between self-compassion and emotional well-being. The study does not include clients with PTSD, but it does suggest a possible relationship between compassion focused interventions and the increase emotional well-being. The other subscales do not show an increase in well-being.

It should be noted that an in-dept look at the data revealed that participants in group 2 seems to experience an increase in well-being. Participants in group 1 did not show a noticeable difference. A possible explanation for this difference in group 2 might be associated to the group dynamic. Group cohesion seems to be an important factor during group therapy (Burlingame, McClendon & Yang, 2018). The group cohesion might have influenced the dynamic during the group in a positive or negative way for example. Therefore, the outcome of the posttest might have been influenced. However, this could have been reflected in the scores of the social well-being scale. Burlingame, McClendon and Yang (2018) describe group cohesion as connection and coherence of a group, which could be linked to the description of Westerhof and Keyes (2010), who explain social well-being as the need to belong, be accepted and contribute to a certain group. The scores in the current study does not show meaningful individual differences between the social well-being scale of group 1 compared to group 2. However, it is impossible to draw conclusions based on the small number of participants in the current study. In larger scale research, it is interesting to further explore the difference between groups and the underlying effect among the difference types of well-being.

The overall outcome of the study suggest that clients does not show a change in PTSD symptoms after receiving CFT. However, multiple traditional treatments, like PE and EMDR, reveal to be effective in the decrease of PTSD symptoms. It might be interesting to further explore if the main goal of CFT is primarily to diminish symptoms, or to stimulate well-being. Or maybe, to impact both sides of the two continua model (mental illness and mental health). The focus of CFT seems to lay in the positive psychological approach to stimulate positive mental health (Gilbert, 2015). However, less is known about the effectiveness of CFT on well-being in clients with PTSD. In the current study the results reveal an medium increase in well-being, especially in emotional well-being. Clients seem to increase in feelings of happiness, satisfaction and interest in life (Westerhof & Keyes, 2010). Keyes (2007) states

that emotional well-being also includes evaluation in life in general in terms of positive emotions, and describes emotional well-being as the present of positive affects and the absence of negative affects. Marshal and Brockman (2016) suggest the presence of a relationship between self-compassion and emotional well-being in their study among college students. Also, Bluth and Blanton (2015) indicate there is a strong association between self-compassion and positive emotional well-being. However, these studies does not include clients suffering from PTSD. But, stimulating compassion, through CFT, seems to increase the feelings of positive emotions like happiness, satisfaction and interest in life. The development of self-compassion seems to increase emotional well-being. However, it is interesting to further investigate what specific aspect, phase and/or phenomena of CFT contributes to the stimulation of well-being among the clients diagnosed with PTSD.

Strengths and limitations

The aim of this pilot study was to contribute to future larger scale research to explore the effects of CFT regarding PTSD symptoms and feelings of well-being in individuals diagnosed with PTSD. In that way, the study presents a first research of the effects of CFT within the current setting at the center of Psychotrauma. The results give an indication for future larger scale research to test the effectiveness of CFT in terms of PTSD symptoms and well-being.

At the same time, the current study has several issues that require improvements during future research. These limitations include the small number of participants, the lack of demographical and personal data of the clients, and the absent of a control group. The most important limitation is the small number of participants which might have influenced the outcomes of the study. Due to the small number of adherent participants, results must be interpreted carefully and no hard statements can be made regarding the effects of CFT. With a larger sample size, the outcomes of the study would have been more reliable and representative to interpret. The small sample size studies seem biased upwards, as stated by Schweizer and Furley (2016). The smaller the sample size, the higher the likelihood to have a Type 1 error (also known as a false-positive result). Meaning, in reality the effect size is less than the effect size measured. In that way, the small sample size could have influenced the results of the effect sizes measured. So, the importance to conduct future research with a larger sample size is recommended.

A second limitation of this study is the lack of demographical and personal data of the participants. The known data consisted of the fact that participants were all women and all above the age of 18 years old. Participants only gave permission to use the data of the questionnaires in research, not personal demographical data that is saved in the individual dossier. So, the type of trauma, previous of simultaneous treatment was also unknown. Participants could have already received different intensive trauma therapy, which might influence their motivation in CFT and the results for instance. Besides that, the participants might also be receiving another therapy simultaneously of the CFT. If this data was known, possible trends could have been analyzed. The same applies to comorbidity. PTSD can be chronic and is often associated with depression, physical illness, sexual disfunction and stress-related violence for instance (Davey, 2014). This comorbidity is important in order to interpret the results regarding psychological conditions. Due to this limitations, the participants could not have been described and results cannot be further interpreted based on demographical information such as age, level of education, or previous successful or unsuccessful treatments for instance. If the participants did give permission to work with this personal data (anonymously), the researcher could have made categories of trauma and previous treatments for example. Next to that, it could have been asked afterwards, in that way the personal dossier doesn't have to be involved. Also, in the future it is recommended to add certain questions when the participant fill in the questionnaires. When the study involves

this kind of data, the study would have been more valuable to organize follow-up research, and to make statements connected to scientific literature. For example, if a certain category of trauma seems more or less affected by CFT, it could have been interesting to further explore this effect and to contribute to literature regarding this subject.

Lastly, the data is not compared to a control group. This makes it impossible to make any claims about the causality of CFT, considering there might be unknown external factors influencing the effects. Thus, it cannot be stated that CFT is the reason for the change in well-being and PTSD symptoms in the current study.

Future research and implications

The current pilot study gives a starting point of the results of change in PTSD symptoms and well-being of several clients diagnosed with PTSD who received CFT. In follow-up research it is recommended to add questions regarding the type of trauma and previous treatment for example. These questions can be added to the existing PCL-5 and MHC-SF questionnaires before the start of the treatment. In that manner, it is possible in the future to investigate if these factors might influence the effect of CFT on PTSD symptoms and well-being. Also, the need to include a control group in future research is recommended. In that way, more reliable results can be interpreted linked to the intervention measured and compared to the control group.

Due to the baseline and posttest measures, the course of the PTSD symptoms and well-being during the CFT remains unclear. As described in the method part of the current study, CFT can be divided into several phases. Initially individual sessions guided by a therapist, followed by 12 group sessions, and finished with another series of individual sessions. A lot of literature focused on the group component of the CFT (Daneshvar et al., 2020b; Andersen & Rasmussen, 2017; Ashfield, Chan & Lee, 2020; Grodin et al., 2019). However, there is no literature available, as far as the researcher knows, on the separate phases of CFT. Therefore, it would be interesting to take a look at the three phases of CFT and investigate differences by having multiple test moments. In that way, conducting multiple test moments is recommended to be able to analyze the development of the PTSD symptoms and positive mental health of the clients and to investigate possible underlying influences of the separate phases of CFT.

In line with the advice to further explore the separate phases of CFT, in practice this means more measurement moments. The PCL-5 and the MHC-SF can be taken before the start of CFT as baseline, secondly after the first individual sessions, thirdly after the group sessions and lastly after the last individual sessions as posttest. In that way, the therapist could take a moment to let the client fill in the questionnaires for instance. This will contribute to the stimulation of the clients to fill in the pre- and posttest more, in order to collect more data to analyze later on in future research. In the current study, the missing data of participants who did participate in the CFT but did not fill in the questionnaires, is a point of attention in the practice of future research. In regard to the current CFT treatment, this pilot study carefully indicates that the CFT seems to show effective results in terms of well-being. Next to that, it is recommended to keep offering CFT at the department, in order to carry out more CFT groups. In that way more data can be built to analyze later on in larger trial research.

Conclusion

The pilot study shows an increase in well-being and no significant changes in PTSD symptoms after outpatients suffering from PTSD received CFT. Due to the small sample size and other limitations, the results are interpreted with caution. Based on the results, follow-up research is recommended in order to investigate the effect of CFT with a larger sample size.

Important implications for larger trial research consist of the inclusion of more demographical and personal data to investigate possible underlying correlations and the inclusion of a control group to make more firm conclusions regarding the effect of CFT. At last, the multiple measure moments are recommended in order to investigate the course of PTSD symptoms and well-being. In that manner, future researchers might be more capable to explore the separate phases of CFT and to investigate the possible working mechanism of CFT among clients suffering from PTSD.

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