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The Effectiveness of Group Compassion-Focused Therapy on Panic Symptoms, Self-Criticism, and Emotion Processing in Panic Patients

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The current study aimed to evaluate the efficacy and feasibility of group Compassion-Focused therapy (CFT) on self-criticism and emotion processing on panic patients. The statistical sample of this study included thirty students who were studying at Shiraz University in 2023-2024 and were suffering from panic disorder. According to the announced statistics, there were about 150 people, from whom, 30 students were randomly selected and assigned to intervention and control groups (each group consisting of 15 people). The method of this research was field experimental using pre-test post-test design where the participants in the intervention group received a 1-h session every week for 8 weeks. All of the participants responded to questionnaires of Hopkins Symptom Checklist-25 by Derogatis, Lipman (1974), a semi-structured interview for assessing panic disorder based on DSM 5-TR, the

levels of Self-Criticism (LOSC) Scale by Thompson and Zuroff (2004), and emotional processing scale (EPS) by Baker et. al. (2007). CFT was then administered to the intervention group. Thereafter, the questionnaires mentioned above were completed again by both groups. The results indicated significant effectiveness of CFT on the mean scores of panic symptoms, emotion processing, and self-criticism in the experimental group (P-value< .05). The means consisting 34.8% of the variance of panic symptoms, 25.9% of self-criticism, and 25.7% of emotion processing could be explained by compassion therapy. Also, based on the results, self-compassion therapy was able to account for 39.2% of the changes in the dependent variables.

Keyswords: compassion-focused therapy, panic disorder, self-criticism, emotion processing.

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Anxiety disorders are among the most prevalent and earliest forms of psychopathology with lifetime prevalence estimates ranging from 15 to 20% and a median age of onset of 11 years (Beesdo, Knappe, & Pine, 2009; Perrotta, 2019; Bandelow, Michaelis, 2015). As with all anxiety disorders, panic disorder (PD), phobias, and GAD share features of threat related responses (i.e., anxious apprehension, fear, and avoidance), but differ in the object and breadth of threat. Panic disorder affects 1.1–3.7% of the general population, and panic symptoms affect around 10% of the patients in primary

care (Weissman, Merikangas, 1986). It is characterized by resistance to spontaneous remission, comorbidity with other disorders (e.g. depression,

alcohol or substance use disorders) and a debilitating course if not treated (Ströhle, et al. 2018).

Among ‘Third wave’ psychotherapies over the last two decades, Compassion-Focused therapy (CFT) has been receiving increasing attention (Neff, et.al. 2007). Third wave interventions represent an innovation within the classic cognitive-behavioral

therapy (CBT), as they focus on promoting mental wellbeing through the practice of mindfulness, compassion, acceptance, and spirituality (Jahoda et al., 2017; Zessin, et.al. 2015; Takahashi, Sugiyama, Kikai, et al. 2019; Rector, Bagby, Segal, et al. 2000; Mohamadpour & Mohamadi, 2021, Roushani, et. al. 2018; Abbasi, 2021). In the CFT approach discussed in the present study, individuals establish a kind relationship with themselves which reduces self-criticism and internalized shame. It is argued that shame and self-criticism underpin a range of mental health difficulties such as depression, anxiety, eating disorders, and psychosis (Gilbert and Irons, 2004; Boersma, et.al., 2014, MacBeth, Gumley, 2012). There is evidence that individuals with high levels of self-criticism and shame may do less well with standard therapies such as CBT (Rector, Bagby, Segal, et al, 2000; Papola, et al. 2021). The primary focus of CFT is to help clients skillfully access their soothing system to experience affiliative emotions, which enable them to downregulate the threat system (Gilbert, 2010; Asano, 2019). CFT helps clients cultivate compassion toward themselves and others through the safety of the therapeutic relationship, compassion-based experiential exercises, and cultivation of compassion-based insights as well as skills (Gilbert, 2005, 2010). Thus, CFT aims to facilitate the development of the soothing system (Gilbert, 2009) through compassionate mind training (CMT). This training entails acquiring six compassionate skills (i.e., imagery, attention, feeling, behavior, reasoning, and sensory skills) so that they can apply the six key attributes of compassion towards oneself. The soothing system can be stimulated through mindfulness and CMT techniques such as compassionate letter writing, compassionate attention,

compassionate thinking, and compassionate imagery. Addressing shame and self-criticism exhibits the importance of CFT to clinical populations .

Furthermore, it is noteworthy to mention that panic patients have self-criticism and shame of having panic attacks in public places. They may also experience unpleasant emotions, such as fear, guilt, or shame, which can lead to rumination and an increase in self-criticism (warren, et.al, 2016). Many theorists have viewed self-devaluation, self-condemnation, and self-critical/ attacking feelings and cognitions as important components of psychopathology. For many centuries, depression has been linked to feelings of worthlessness and self-devaluation (Kotera, Dosedlova, et al. 2022) but findings indicate that panic patients scored higher in self-criticism than both the OCD patients and social anxiety disorder (Petrocchi, Cosentino, et al. 2021). Moreover, for adults, meta-analyses in community samples have indicated that self-compassion is negatively related to anxiety, depression, and stress while being positively related to emotional well-being (Werner, Jazaier, et al, 2012). In an experimental laboratory setting with adults, self-compassion seemed to buffer against anxiety when faced with an ego threat (Tali, Potharst, et al, 2023). Apart from that, according to Rachman emotional processing theory (1980), the way in which an individual processes stressful life events will determine whether they will act properly in a situation or not. For instance, Rachman argued that if emotional experiences were incompletely absorbed or processed then certain direct signs of this failure would appear, with instances of return of fears, obsessions, and intrusive thoughts. Furthermore, he proposed that excessive avoidance or prolonged and rigid

inhibition of negative emotional experiences would prevent their reintegration and resolution (Rachman, 1980). Based upon Rachman theory, panic patients experience sudden and unexpected attacks that express powerful feelings which are indicators of inadequate emotional processing. The role of emotion dysregulation in PD has remained understudied, but CFT has shown to be effective in helping clients work through the fear of affiliative emotions and experience self-compassion with greater ease (Lawrence & Lee, 2013). Thus, it can be stated that based on evidence; by cultivating compassionate mind in panic patients, they find the ability to recognize their emotions, try not to escape from them or suppress them which can be possible through mindfulness techniques in CFT.

In recent decades, a large number of randomized controlled trials (RCTs) have been conducted to examine the effects of psychotherapies for PD. They have identified cognitive–behavioral therapy (CBT) as often superior to other

therapies in terms of symptom reduction, though the effect size was small and the level of precision was often insufficient or clinically irrelevant (papola, Ostuzzi, et al, 2023). All other psychotherapies (EMDR; interpersonal therapy; psychoeducation; physiological therapy; supportive therapy; third-wave CBT) showed no superiority over treatment as usual comparisons showed behavioral therapy and CBT to be more effective than physiological therapies and third-wave CBT (Churchill, Moore, et al. 2013). Meanwhile, CBT has been found to work well for anxiety-related disorders albeit with a recognition of a need for further research and improvement (Kaczkurkin, Foa, 2015). Research and clinical practice indicate that one area, in which we may need to look at improving

anxiety-focused approaches, is dealing with individuals who are highly self-critical and experience shame. Such psychological phenomena have been found to be highly associated with each other (Gilbert, 2003) and highly prevalent in those suffering with difficulties such as social anxiety and posttraumatic stress disorder (PTSD) (Collimore, Carleton, 2010; Shahar, Doron, & Szepsenwol, 2015). Thus, in this research we chose to assess the efficacy of offering eight weeks of group-based CFT to students diagnosed with PD and investigate the results on self-criticism and emotion processing. There is evidence that individuals with high levels of self-criticism and shame may do less well with standard therapies (Marshall, Zuroff, McBride, & Bagby, 2008; Baker, et.al. 2004). Hence there may be a need to look at developments to traditional and specifically focused therapies to address this issue. Further, up to now there has been less clinical research on CFT protocol for patients suffering from PD. Although fear of compassion has been shown to be relevant to some forms of psychopathology, there is currently no published research on the extent to which people with anxiety and related disorders fear compassion. Although there are a lot of clinical research about the effectiveness of CFT on social anxiety disorder or other anxiety-related disorders, up to now a few studies have used this approach on panic patients. This research will answer questions related to the effectiveness of group-based CFT intervention on panic sample and by that it means reducing the number or severity of panic attacks and symptoms which one may experience. It also aims to investigate whether CFT protocol has any effect on reducing self-criticism, self-blame in panic patients thus increasing their mental health and finally to clarify whether CFT has any effect on improving emotional

processing in panic patients according to their emotion dysregulation as well as the inability to experience emotions correctly (Levit, et. al., 2004).

Method

The statistical population included all students diagnosed with panic disorder and were studying at Shiraz University in 2023-2024. The population was within the age range of 18 to 45 years, from whom 30 patients were selected randomly. According to the sampling procedure, 80% of the experimental group participants were between 20 and 25 years old, 13.3% between 26 and 30, and 6.7% were over 35 years old. Also, 53.3% of the participants in the control group were between 20 and 25 years old, 20% between 26 and 30, 13.3% between 31 and 35, and 13.3% were over 35 years old. Further, 13.3% of men and 86.7% of women were present in the experimental group and 26.7% of men and 73.3% of women were present in the control group. In the experimental group, 6.7% had postgraduate education, 40% had bachelor's degree and 53.3% had higher than bachelor's degree. In the control group, 66.7% were bachelors and 33.3% were higher than bachelor. Following the previous step, the selected individuals were divided into two groups of 15 people (in a quasi-experimental study, 15 students were recommended for each group). In order to assign subjects for the group therapy, all of the participants should complete a semi-structural clinical interview based on the diagnostic criteria of PD according to DSM-5-TR as well as complete SCL-25 questionnaire. Then, subjects were divided into one intervention group and one control group after sampling. The inclusion criteria for the participants included: diagnosis of panic disorder

according to DSM-5 TR criteria check list and SCL-25 which diagnoses mental health problems (the score lower than 75 according to cutoff point of SCL-25), full agreement to participate in group-therapeutic sessions and being a university student. The exclusion criteria included taking psychiatric drugs, undergoing psychological therapies for PD for the past three months, higher scores in SCL-25 which indicates serious mental health problem such as suicidal ideation or serious depression symptoms, absence for more than two sessions in the group therapy procedure and not doing the tasks, unpredicted events (disease, demise, etc.) and showing unwillingness to participate.
In this study all of the issues related to the internal validity like random sampling, maturation, diffusion is fully controlled by the researcher. The participants were selected randomly in to experiment or placebo group to ensure that the results are not influenced unintentionally by unwanted variables. The groups were isolated from each other and the passage of time has a natural effect on the study. Also, a standardized way in the CFT protocol was used to prevent experimenter, instrumentation or testing biases. Besides, we ascertained that none of the research participants had received or were receiving any other psychological or medical treatment for panic disorder during or before this study.

Instruments

All questionnaires were administered online via Porsline.

Participants in both groups completed all outcome measures online on three occasions: at baseline, and again after weeks 8 and for follow-up .

The Hopkins Symptom Checklist-25 Questionnaire (HSCL-25; Derogatis, Lipman, 1974)

It is derived from the 90-item Symptom Checklist (SCL-90) and used as a screening tool to detect symptoms of anxiety and depression and exclude interested participants with major mental health problems. It is composed of a 10- item subscale for anxiety and a 15-item subscale for depression, with each item scored on a Likert scale from 1 (not at all) to 4 (extremely). The period of reference was one month ego. Indeed, this questionnaire measures a person's psychological pathology. The Cronbach's α has been excellent in previous studies for the 25 items, .91) Al-Turkait, et. al. 2011). Both for the total scale as well as the proposed subscales of anxiety and depression the interpretation of the scores of the questionnaire is that the lower the scores of the person, the greater their mental health is, while higher scores represent lack of mental health of the person (Strand, Dalgard, et al. 2003)

The Levels of Self-Criticism (LOSC, Thompson and Zuroff, 2004) questionnaire

This Scale was used to measure two dysfunctional forms of negative self-evaluation: Comparative Self-Criticism (CSC) and Internalized Self-Criticism (ISC). Comparative Self-Criticism is defined as a negative view of the self in comparison with others. The focus at this level is on the unfavorable comparison of the self with others, who are seen as superior and as hostile or critical; thus, there is discomfort with being evaluated or exposed to others. The other level of self-criticism, Internalized Self-Criticism, is defined by a negative view of the self in comparison with internal, personal standards. Thompson and

Zarov (2004) evaluated the validity and reliability of this questionnaire on a sample of 144 people. The obtained alpha for the two subscales of comparative self-criticism and internal self-criticism as .78 and .84, respectively. Also, Hassanpour, Alizadeh Mousavi, and Mohammadipour (2022) reported a suitable internal consistency for this scale with an alpha value of .90.

Emotional Processing Scale (EPS, Baker et al. 2007)

Baker established this scale according to Rachman's original conceptualization, and their new model of EP. Baker et al. first aims were to prepare a tool to add a range of dimensions to EPS such as separation of different EP types, categorization of patients for therapy and research, and evaluation of treatment interventions. In a later study, Baker et. al. (2002) tried to refine and shorten this scale and yielded a five-factor solution with a 25-item scale and a moderate to high reliability for all new factors. In the new version of scale, four factors remained in similar form, two of the original factors removed, and one new factor emerged. The coefficient α value for the scale was .92. Internal consistency was high ($\alpha \geq .80$) for three factors and moderate for two ($\alpha \geq .70$). The Pearson's test– retest correlation coefficient obtained for the entire scale was .74. The psychometric data on final 25-item version also showed internal consistency .92, and .90 for UK and Italian data, respectively. The Iranian validation of this scale was first done by Kharamin & et al (2021) with the result showing the Cronbach's alpha, split half, and test re-test reliability in acceptable ranges; .91, .90, and .91.

For screening PD in patients, semi-structural clinical interview based on DSM-5 TR (APA, 1980) has been considered.

All of the interested patients were asked to contact the research coordinator who then met them to assess eligibility, and to review the study objectives, requirements, and informed consent sheet. During this meeting, the participants

learned that they would be randomly assigned to either the control group or therapy group. Next, the interested participants completed pre-test

measures online to assess if they are eligible to enroll. For the convenience of patients, two group therapies were organized with one of them including 8 and the other 7 participants. Then, the research coordinator facilitated

the random assignment by blindly putting participants to one of the therapy groups .

CFT

The one-hour CFT group-based therapy was held at Shiraz University, by the faculty of clinical psychology for eight consecutive sessions. The weekly group session's protocol was inspired by CFT Made Simple: A Clinician's Guide to Practicing Compassion-Focused Therapy book which has been written by Russell Kolts (2016). Feedback from the original participants led the therapist to make slight changes to the present study's protocol such as lengthening time of the sessions to one hour. Further, it was revised by clinical psychology professors. In the first session of each therapy group, the facilitator gave an introduction to the manual, rules of the group therapy, the definition of self-compassion, and panic attacks. Since all of the

participants might not be familiar to the key features of PD or might not recognize the symptoms, this introduction not only helps them be aware of their own problem but also strengthen the principle of common humanity which is one of the main principles of self-compassion (Yolanda López-del-Hoyo, Collado-Navarro,2022; Gilbert, 2014 .(

Alongside self-compassion, self-criticism and emotion processing were the main topics. Some of the participants found it challenging to find the voice of their inner compassionate and tender version of themselves in some situations that made them feel anxious or made them experience panic attack. Some of them were ashamed of their panic symptoms especially when they experienced it in front of strangers. Talking theoretically about being compassion and kind to ourselves and not blaming ourselves in challenging situations of life was not helpful because the “inner critic voice” of panic patients was very loud that they do not hear the compassionate voice in their mind or in the moment of panic so it was not practical for them to just say “It’s not your fault, don’t panic!”. Thus, some psychodrama techniques such as empty chair, role reversal, doubling, and mirroring were used in the sessions. By using CFT protocol, the participants identified the functions that the self-blame has for them and tried to replace those functions with self-compassion. In addition, panic patients normally try to suppress, deny, or escape from their emotions or are not familiar with managing their fear or anger. Threat emotion monitoring sheet, understanding the three emotional systems in CFT, the practice of multiple selves and other tasks helped them to accept and confront with their tough emotions instead of panicking about them. Based on our observations, these techniques alongside

CFT protocol which is described in detail in appendix 1 made the participants understand the function of self-criticism and emotion regulation in PD.

All group sessions had the following format: (1) review of the previous week's homework with a focus on exploring the barriers and difficulties clients faced, (2) introduction of a specific CFT-related theme and practice of relevant CFT exercises within the group, and (3) assignment of homework for clients to practice over the subsequent week. One PhD student in clinical psychology and one Master's-level therapist led the group, with all of the sessions reviewed by the supervisor.

Results

Based on the results, two groups of participants were compared in terms of gender, age, and education using Chi-square test. The results revealed that groups are not significantly different from each other based on gender ($p=.36$, $x^2=.83$), age ($p=.34$, $x^2=3.33$), and education ($p=.26$, $x^2=2.69$). The information in Table 2 reports descriptive statistics about the mean and standard deviation of the experimental and control groups in the pre-test and post-test of the research variables.

Table 2

Mean and Standard Deviation of Research Variables by Stages and Groups

	Control group		**Experimental group**	
	Pre-test	Post-test	Pre-test	Post-test
	mean/ SD	mean/ SD	mean/SD	mean/SD
Panic Symptom	14.66(3.33)	13.13(3.60)	15.26(3.97)	8.73(4.38)
Self-Criticism	104.20(18.63	104.53(13.73)	106.66(9.88)	95.06(9.93)
Emotion Processing	84.06(4.38)	81.93(15.22)	90.00(9.73)	68.06(16.67)

Based on this information, the mean scores of panic symptoms, emotion processing and self-criticism in the experimental group diminished after self-compassion treatment. Also, the Kolmogorov-Smirnov test was used to check the normality of the distribution. The results indicated that the significance level of all variables was greater than 0.05 and the data distribution was normal. The second assumption of performing the multivariate covariance analysis test called homogeneity of variances was examined by Levene's test for homogeneity of variances, with its results outlined in Table 3.

Table 3

The Results of Levene's Test to Check the Homogeneity of Variances

Variables	F	df	df	Sig.
Panic symptoms	2.427	1	28	.131
Self-criticism	1.636	1	28	.211
Emotion processing	3.667	1	28	.059

Based on the above table, the variance error of the studied groups is homogeneous and equal, and the statistic obtained is not significant at the .05 level. The homogeneity of the regressions was examined by the homogeneity of slopes test, with its results shown in Table 4.

Table 4

The Results of the Regression Slope Homogeneity Test for the Main Variables

Dependent variables	sum squares	df	mean squares	F	Sig.
panic symptom	5.133	2	2.567	.227	.799
self-criticism	301.132	2	150.566	1.923	.169
emotion regulation	1054.618	2	527.309	2.642	.093

The results of this test indicate that since the interaction effect is not significant at the level of .05, the assumption of

homogeneity of regression is maintained in all dependent variables.

Table 5

M-box Test on Homogeneity of Covariance

Box's M test	*F*	*df 1*	*df 2*	*Sig.*
12.36	1.819	6	5680.302	.091

Table 5 reveals the results of the M box test related to the equality of covariance of the dependent variables. The results indicate that there is equality of covariance for the scores of the dependent variables. If this assumption is met, the analyst can use Wilks-Lambda.

Table 6

The Results of Wilks-Lambda Test in Multivariate Covariance Analysis

	Amount	**F**	**df 1**	**df 2**	**Sig.**	**Eta Squared**
Wilks-lambda	.608	4.940	3	23	.009	.392
Pillais trace	.392	4.940	3	23	.009	.392
Hotellings trace	.644	4.940	3	23	.009	.392
Roys largest root	.644	4.940	3	23	.009	.392

The results of Table 6 indicate that there is a significant difference between the control and experimental groups in at least one of the dependent variables. Also, based on the results, self-compassion therapy was able to explain 39.2% of the changes in the dependent variables. To investigate this difference, multivariate covariance analysis was performed on the post-test scores, the results of which can be observed in Table 6.

Table 7

The Results of Multivariate Covariance Analysis

Dependent variable	Type III sum of square	df	mean square	F	Sig.	partial Eta squared
panic symptom	141.902	1	141.902	13.356	.001	.348
self-criticism	735.041	1	735.041	8.741	.007	.259
emotion regulation	1951.217	1	1951.217	8.640	.007	.257

According to the results of Table 7, there is a significant difference between the experimental and control groups in terms of panic symptoms, self-criticism, and emotional processing in the post-test stage. The effect coefficient for panic was .348, self-criticism was .259, and emotion processing was .257. That is, 34.8% of the variance of panic symptoms, 25.9% of self-criticism, and 25.7% of emotion processing were caused by compassion therapy, signifying that the changes in the post-test scores can be explained by applying the auxiliary variable of the pre-test.

Discussion

The primary aim of this study was to examine the effects of 8-weeks of CFT intervention on panic symptoms, self-criticism, and emotion processing in patients with panic disorder. The participants reported a decline in self-critical beliefs, panic and anxiety-related symptoms plus subscales of emotion processing. Self-criticism and emotion processing showed reliable change in most of the participants after the CFT intervention. Individuals with PD often require long length of treatment, approximately up to 12 sessions based on CBT protocol, each session 60 min every week (Grey, et. al. 2008), though changes can be observed in PD severity in some patients after only eight sessions of CFT. Most forms of psychological distress encompass both the relation to the self in the form of shame and self-criticism, with panic patients suffering mostly from self-attacks and rumination which leads to panic attacks. Taken together, these results added to the growing body of empirical evidence that CFT may be seen as a promising approach to address problems and disorders related to anxiety issues such as PD. These findings of the current study are consistent with the positive results of compassion-based interventions for people with other anxiety disorders found in pilot and exploratory studies (Gharraee, et. al. 2018; Boresma, et. al. 2014; Taher pour, et. al. 2019). Furthermore, it is in line with other studies which proved that CFT can reduce self-criticism (Vidal & Soldevilla, 2023; Beaumont, et. al. 2016; Shavandi, et. al. 2021; Egan, et al. 2022) .

Indeed, many patients in this study reported that they have been under other forms of therapy for years since they have been

harsh and critical toward themselves but, those methods did not pay attention to the relationship of the patient with themselves. The kind and understanding relationship with the vulnerable and anxious version of self was the main focus in CFT protocol throughout self-imagery exercises which was not considered in other forms of therapy. On the other hand, since many panic patients are suffering from mixed and confused emotional states, it is surprising that based on clinical observation, psychoeducational sessions related to emotion processing brought most of the patients a clear view on how our emotions are related to our thinking procedure and helped them realize fast-pace panic attack can be controlled through compassionate thinking and emotion regulation exercises, which is in line with other studies (Asano, 2019; Gilbert, 2017; Finlay-jones, 2017). Also, experiencing compassionate self in the multiple selves' exercise in CFT helped patients better understand and empathize with their anxiety symptoms instead of blaming or judging themselves. Thus, CFT has promising clinical implications, suggesting that the intervention increases compassion-based outcomes and reduces clinical symptomology as well as anxiety in those with anxietyrelated problems (Craig, et. al. 2020; Petrocchi, et. al. 2023 .(

The present study demonstrated that in spite of great body of literature about panic disorder and their related variables, the best treatment for this disorder is yet to be found and optimized. In this research, new findings indicated that CFT has a great impact on reducing self-criticism and improving emotion processing in panic patients which can affect their anxiety level and panic symptoms in the long run .

The present study had several limitations to consider. First, the sample size was small and most of the participants were women and young. Hence, larger and balanced samples are needed to verify the program's effectiveness. Second, all of the participants were university students diagnosed with PD who had higher diploma education. Therefore, the results of this group-based CFT did not cover all of the adults with PD. Third, program feasibility and efficacy should be examined with participants from other regions and cultural areas and with various panic attack histories. Further, this research only included panic patients with or without agoraphobia so the effect of agoraphobic panic was not evaluated during the therapy. In addition, steps should be taken to examine the role of relevant variables to further refine treatment, especially using longitudinal surveys, where the present study did not deal with follow-up. It would also be helpful to compare CFT group therapy for PD with other kinds of group-based therapies to demonstrate the exact outcomes of this therapy on panic disorder. Finally, although the screening tool for selecting the pure panic disorder patients has been applied, the effect of other mental health problems of participants was not fully controlled .

Ethical Considerations

This article had obtained a code of Ethics from Faculty of Clinical Psychology of Shiraz University (IR.US.PSYEDU.REC.1402.100). All of the participants in this research were aware of the purpose, benefits, risks, responsibilities, and funding before getting involved in the group therapy and they all had the right to agree or decline to join in the predicted procedure. The funding of this research was

totally paid by the researcher. In the beginning of the first session, the researcher explained the nature of this research and all of the steps, the type of information that will be collected, confidentiality conditions, and commitments and so on as far as possible. Further, the participants were all free to opt in or out of the research at any point in time. They had the right to withdraw from the research project at any time for any reason but they were asked to inform the researcher before this. It is noteworthy to mention that in this research, all of the data were collected by specific numbers and there was no need to keep the identities of patients. Apart from that the collected information was concealed and secured from everyone else. There were no specific physical, social, psychological or all other types of harm for participants in this research but if there will be, the harms would be kept to an absolute minimum.

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Appendix 1. Session-by-session summary of group-based CFT

week	session content
1	-Making primary relationship with the clients, educating clients about PD, self-compassion and group therapy. -Explaining the difference between PD and normal anxiety, difference between a supporting voice and a blaming voice and self- attack, Talking about fear of compassion and threat system. -Compassionate writing task for next session
2	-Reviewing the previous session and the task -Attention awareness, Body scan, Breathe mindfully and mindfulness training -Explaining the difference between anxious self and compassion self in confronting challenging situations with empty chair technique -Mindfulness eating or walking task. Mindfulness breathing task

	for next session.
3	-Reviewing the previous session and the task - Imagery exercises of a compassionate other with role reversal -Group discussion about the effects of self-kindness rather than self-judgment, -Compassion traits, compassionate reasoning technique, safe zone technique -Compassionate imagining technique - Threat emotion monitoring sheet and a safe place task for next session
4	-Reviewing the previous session and task -Discussing the function of self-blaming -Identifying the history of the self-blaming voice and psychoeducation about the barriers to self-compassion -Home task about self-criticism
5	-Reviewing the previous session and task -Discussing compassionate reasoning, identify different versions of self like Self-anxious, self-blaming -Getting to know how this distressed version of self was made and talking to that version compassionately. -Discussing the difference between compassionate reasoning and threat-focused reasoning in panic attacks. - Imaginary tasks for compassionate colors. home task
6	-Reviewing the previous session and task -Psychoeducation on the evolution of the brain and our neurons in the formation of self-attacking and their relations with our emotions. -Discussing about the effects of interpretive errors and negative attitude toward the self and others -Home task
7	-Reviewing the previous session and task -Explanation the three types of emotion regulation systems in self-compassion therapy -Explaining old and new brain theory in CFT -Discussing emotions that is engaged in panic attacks. -Discussing different manifestation of panic related emotions (physical, thoughts, behavior, excitement) -Home task

8	- Reviewing the previous session and task -Multiple-self task -Explaining three processes that influence the emotional regulation of the history of our relationships with others Offering the opinions of the participants about self-attack besides attention, thought, and sympathetic behavior -Training the manner of creating sympathetic images through offering necessary meditations -Reviewing all the techniques. -Reviewing all of the key points in 8 sessions. -Getting feedback and saying goodbye.