Original Article

Effectiveness of Compassionate Mind Training on Depression, Anxiety, and Self-Criticism in a Group of Iranian Depressed Patients

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Objective: The purpose of this study was to examine the effectiveness of compassionate mind training (CMT) on symptoms of depression and anxiety in Iranian depressed sufferers .
Method: Nineteen depressed patients aged 20 to 40 (Beck Depression Inventory value≥20) were randomly assigned into two groups. The experimental group participated in 12 sessions of group therapy based on Paul Gilbert's manual of CMT. The control group was given no intervention. The participants were assessed by Beck Depression Inventory-II (BDI-II), Anxiety Scale (AS), and Levels of Self-Criticism (LSCS) questionnaires at the beginning and immediately after the intervention. To follow-up the therapeutic effect of CMT, the three questionnaires were answered again by participants two months after the end of the intervention. Data were analyzed by independent samples t-test.
Results: The results revealed that CMT significantly decreases depression ($P<0.05$) and anxiety score ($P<0.05$) in the follow-up study, but not immediately after the intervention. Although CMT decreased self-criticism, this effect was marginally insignificant.
Conclusion: The findings indicated that CMT could alleviatedepression and anxiety in a group of Iranian depressed patients.
Key words: *Major depressive disorders, Anxiety disorders, Self-criticism, Self-compassion, Compassionate Mind Training*

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Major depressive disorder (MDD) is the most common psychiatric disorder in general population and a significant cause of worldwide morbidity and mortality. According to WHO, more than 350 million people worldwide suffer from depression; it is the leading cause of disability and is a major contributor to the global burden of disease (1).The lifetime prevalence of MDD in USA, Australia and Europe is 5-7% (2).In Iran, the prevalence of MDD is estimated at 2.98%, and is 2.75 times higher among women(3).Furthermore, women in childbearing age (20 to 40) are at a high risk of MDD (4).The prevalence of MDD is much higher in the city of Tehran and is determined to be 4.4% (women= 5.7%, men= 3.1%) (5).There is a strong relationship between depression and self-criticism (6). Self-criticism is associated with lifetime risk of depression. It is even a potentially important prospective predictor of depressive symptomatology (6). On the other hand, dip in mood triggers self-criticism by itself. This mutual relationship sets up a vicious circle that worsens the condition (7).

Like self-criticism, anxiety has co-occurrence with depression (8). Comorbidity of anxiety and depression not only aggravates the prognosis, but also increases the risk of suicide commitment (2).The relationship between anxiety and depression is partly rooted in self-criticism. Some studies showed that self-criticism fully mediates the relationship between depression, anxiety, and parental shaming (9, 10). On the other hand, depression and anxiety, when one feels that they are uncontrollable, raise self-criticism (6).

There are different psychological concepts utilized recently to promote mental health, improve the ways of thinking and feeling processes, and to upgrade therapeutic methods for mental disorders. Self-compassion is one of these concepts newly presented to substitute with the older concept of self-esteem (11).

Self-compassion has been defined by Neff (2003) for the first time as being composed of three main components: (a) self-kindness versus self-judgment; (b)

common humanity versus isolation; and (c) mindfulness versus over-identification (11). Studies have shown that higher self-compassion is associated with lower depression and anxiety symptoms, mental disorder, self-criticism (12, 13), and more wellbeing and resiliency (14, 15).

Based on studies on self-compassion, Gilbert used this construct for therapeutic purposes. He structured compassionate mind training (CMT) from cognitive-behavior therapy (CBT) (16). Construction of CMT is rooted in inefficiency of CBT in treatment of negative emotions (17). CMT involves the elements of a specific psycho-educational focus on the qualities of self-compassion, locating self-criticism as a form of safety strategies/behavior, recognizing the fear behind it, developing empathy for one's own distress and safety efforts and refocusing on compassionate images, thoughts, emotions and behaviors with imaginary techniques and warmth (7)

Some clinical researches have recently shown the impact of CMT on depression and anxiety symptoms and self-criticism. Gilbert and Irons (2005) pointed out that CMT could help people with internal shame, self-criticism, and self-condemnation (18). In another study, Gilbert and Procter (2006) reported that CMT is useful for patients with chronic difficulties especially for those who have traumatic backgrounds. Depression, anxiety, self-criticism, shame, inferiority and submissive behavior have been significantly diminished in their study (7). All of these studies have been carried out in Western countries.

Novelty of CMT and self-compassion make more studies indispensable. Although self-compassion has an oriental background, i.e., Buddhism, most of its investigations have been done in Western countries. So far, nearly all studies on CMT have been limited to the West. Since CMT and its affecting components are dependently related to cultures, different civilizations may impress its therapeutic effects. Therefore, the present study attempts to show the effect of CMT as a complimentary therapy on depression and anxiety symptoms and self-criticism in Iranian culture for the first time.

Material and Methods

This study was designed as pretest/posttest with an equivalent control group. Twenty two patients were selected through convenient sampling from clients of a psychiatric clinic. They were randomly assigned to equal experimental and control groups. During the study, two participants of the experimental group and one in the control group dropped out because of difficulties of attending the clinic. Inclusion criteria consisted of: 1) age between 20 and 40; 2) diagnosis of MDD by a psychiatrist; 3) Beck Depression Inventory score (BDI) $\geq$ 20 which shows moderate to severe depression;4) female gender; and 5) no mental or physical comorbid disorders. All participants have been under the supervision of a psychiatrist and were prescribed fluoxetine capsule (20-40 mg/daily) according to their weight and severity of the illness. After a brief description of the study, informed consent was obtained from all participants.

The severity of depression and anxiety was evaluated by Beck Depression Inventory-II (BDI-II), and Costello & Comrey Anxiety Scale, respectively. Self-criticism was determined by levels of self-criticism scale (LSCS).

Measures

Beck Depression Inventory-II (BDI-II): The BDI-II is a 21-item self-report measure designed to assess depressive symptomatology in adolescents and adults. This questionnaire was developed by Beck in 1996. Respondents are asked to rate each of the depressive symptoms, ranging from 0 (not present) to 3 (severe), in terms of how they have been feeling during the past two weeks, including the date of completion of the questionnaire. The BDI-II is designed to provide a single overall score that can range from 0 to 63. The following cut-score guidelines are suggested for patients diagnosed with depressive disorder: minimal (0–13); mild (14–19); moderate (20–28); and severe (29–63).

BDI-II is positively correlated with the Hamilton Depression Rating Scale (Pearson r= 0.71). The test was also shown to have high one-week test–retest reliability (Pearson r =0.93), and also high internal consistency (α=0.91) (19). Dobson and Mohammadkhani confirmed its validity as 0.91 Cronbachalpha in the Iranian population (20). (Anxiety Scale: Costello and Comrey (1967) Anxiety Scale (α=0.73, M=1.77, SD= 0.67) assesses dispositional emotional traits rather than states. This scale contains 9 items and uses a 0 (strongly disagree) to 4 (strongly agree) Likert scale. Ghorbani confirmed the validity and reliability of this scale in an Iranian sample (21).

Levels of self-criticism scale (LSCS): This scale was developed by Thompson in 2004.It has two subscales including internalized self-criticism and comparative self-criticism. This questionnaire contains 22 items and responders should answer the questions in a 0-7 Likert scale. Thompson reported Cronbach alpha of the two subscales, i.e., comparative and internalized, to be0.84 and 0.88, respectively (22). In addition, Ghorbani and colleagues confirmed high validity and reliability of this scale among Iranian people (23) .

Procedure

All participants were diagnosed by a psychiatrist as having MDD according to DSM-IV diagnostic criteria. Then, they were interviewed by a psychologist and responded to BDI-II. Regarding BDI-II score (>20), participants were involved in the study. Members of the experimental group attended 12 two-hour sessions of CMT group therapy.

These sessions were held 2 times per week (Sundays and Thursdays) for 6 weeks. The structure of the sessions was based on Gilbert's "Manual of

Compassionate Mind Training" (16). In the beginning, the rationale of CMT was explained and the concepts of self-criticism, compassion, and self-compassion were introduced. In the next few sessions, they were asked to explore the way they thought about themselves and how they behave toward themselves. During these sessions, some techniques such as compassionate imagery, soothing breathing rhythm, mindfulness, compassionate letter writing, etc. were taught to the participants to improve their self-compassion.

In the final sessions, they were encouraged to find out and confront the factors leading them to fears of self-compassion. The tests of BDI-II, AS, and LSCS were taken prior to the first session, immediately after the final session, and in the follow-up study two months after the end of the sessions. The control group did not receive group therapy, but they responded to the questionnaires. It should be noted that all sessions of group therapy were held for free. Finally, data were analyzed by independent samples t-test with SPSS 18.

Result

This study consisted of 20 female participants aged 20 to 40 (mean=28.15). No statistical differences were observed in age, education, and marital status among experimental and control groups according to x2 (Table 1). Analysis of variance showed that there is no difference in age between two groups (df=1, F= 1.60, P= 0.223). Thus, these parameters were excluded from statistical analyses. All participants had female gender; therefore, the two groups were also similar in this factor.

The impact of our intervention (CMT sessions) on four dependent variables (depression, anxiety, internalized self-criticism, and comparative self-criticism) were measured in the pretest, post-test, and follow-up study by independent t-test. As presented in table 2, the results show that in spite of reduction in all variables in the pretest, post-test, and follow-up study, only the reduction of depression and anxiety in the follow-up study was significant (P=0.04, P=0.04 respectively). The effect size of these variables were also favorable (r=0.44).

In addition the power of the test was estimated between 0.81-0.83. Marginal reduction in comparative self-criticisms was also observed in our study as another result of CMT sessions (P=0.11). In spite of insignificancy, reduction in comparative self-criticism was considerable.

Table 1: Comparing distribution of study subjects, level of significancy, and X^2 of groups according to marital status and educational level

Variables		Experiment	Control	X^2	Degrees of freedom	P
		Frequency	Frequency			
Marital status	Married	4	7	1.26	1	0.260*
	Single	5	3			
Educational level	Diploma	0	1			
	Bachelor	7	8	1.35	2	0.513*
	Master	2	1			

*Not significant (P> 0.05)

Table 2: Comparing the parameters of post-test and follow-up study

Variable†	T	Df	P	Difference of means	SD
Depression 1	1.23	12	0.118	0.16	0.33
Depression 2	1.84	14	0.043*	0.29	0.38
Anxiety 1	0.99	12	0.171	0.22	0.57
Anxiety 2	1.88	14	0.040*	0.51	0.66
Comparative Self-Criticism 1	-0.02	16	0.491	-0.007	0.75
Comparative Self-Criticism 2	1.28	14	0.108	0.44	0.52
Internalized Self-Criticism 1	0.23	14	0.491	0.02	1.81
Internalized Self-Criticism 2	0.62	15	0.272	0.42	1.61

†All variables 1 were calculated as subtracting post-test score from pre-test score; All variables 2 were calculated as subtracting follow-up study score from pretest score.

* Significant (P< 0.05). Depression and Anxiety had significant reduction in follow study.

Discussion

According to the data presented here, CMT sessions could significantly decrease mean depression score in the follow-up study. The effect of CMT sessions on anxiety score was also statistically significant. These results are in the same line with previous studies conducted by Gilbert and Procter (2006), and Gilbert and Irons (2005) (7, 18). Moreover, several studies showed a negative correlation between self-compassion and symptoms of depression and anxiety. These studies revealed that more scores in self-compassion scale (ACS) are in association with less depression and anxiety (11, 12, 13and 15). In other words, high self-compassion predicts low possibility of depression and anxiety. Along with the previous researches, our results reconfirm the effectiveness of CMT on depression and anxiety of depressed patients.

CMT is rooted in the concept of self-compassion. Mechanistically, self-compassion decreases fear and isolation through activation of self-soothing system. Based on research, over-activation of threat and protection system in most people engaged with psychological disorders results in high levels of stress (7). Furthermore, warmth and soothing system grows incompletely in such patients. Insufficient development of soothing system makes these people vulnerable to self-criticism and they experience low moods because their soothing system does not play its supportive role in such situations. The malfunction of soothing system makes body unprotected against psychological harms. In such condition, CMT resembles mind physiotherapy. It means that CMT, by stimulating soothing system, provides a suitable context for its development; and as a consequence, CMT will increase resiliency to depression and anxiety predisposing factors (17). In addition, it seems that performing CMT by group therapy has specific advantages which can accelerate treatment. For instance, initially each member of a group talks about her problems. Other members listen to her carefully and try to have sympathy and compassion with her. In this mutual relationship, the talker could get feedback about whether she has compassion for herself or not.

Mindfulness is another important component affecting the impact of CMT on depression and anxiety. Regarding the investigations, the structure of self-compassion is related to safety strategies and emotion regulation, too. This structure, from different aspects, is an emotion-based safety strategy because of Mindful Awareness of Emotions, not avoiding painful and annoying affects, being closed to emotions along with kindness, understanding, and sense of common humanity. Indeed, CMT, at the beginning, helps people become aware of their emotional experiences through mindfulness; and then, to have a compassionate attitude toward themselves (24). Mindfulness is the ability of holding difficult negative emotions in non-judgmental awareness without denial or suppression (12).

Reduction in comparative self-criticisms was also observed in our study. In spite of insignificancy, reduction in comparative self-criticism was considerable. Previously, Gilbert and Procter (2006) and Neff and colleagues (2007) showed that CMT could meaningfully decrease self-criticism (7, 12). In both studies, they measured quantitative self-critical thoughts and their consequential affects in specific situations. While they generally evaluated self-criticism, we assessed this parameter in two levels of internalized and comparative. Thus, the difference in results could be due to the difference in instrument. However, our observation about the reduction of self-criticism could be considered as a sign of a reductive procedure in its primary levels. Another long-time follow-up study may improve this assumption.

Beyond all the mentioned above, cross-cultural differences could be considered as another cause which reduces the impact of CMT on self-criticism in our study. According to the study conducted by Neff and colleagues in 2009,people who live in Asian collectivistic cultures have an interdependent self-concept which emphasizes concerns with interpersonal connectedness, caring for others, and social conformity, whereas people in Western individualistic cultures have an independent self-concept which emphasizes concerns with autonomy, meeting of personal needs, and individual uniqueness (13). In the same line, Kitayama and colleagues (2003) had shown that self-criticism is more prevalent in Japan, as an Eastern society with collectivistic culture, rather than Western individualistic ones (25). In these kinds of societies, self-criticism is the integral part of social relations and is even considered as a social value. Iran, as an Eastern country with collectivistic culture, is not exceptional. Our finding shows that limited sessions of CMT could not change the long lasting cultural parameters like self-criticism, rapidly. Hence, performing CMT sessions in amore extended period will probably increase the impact of CMT on self-criticism.

Limitation

Studying moderate to severe degrees of depression reduced the cooperation in both experimental and control groups. In addition, this study was a single-sex study conducted on female gender. Some investigations show that self-compassion of women is lower than men (11); and therefore, elevating this structure will be more difficult in females. Thus, more evaluation on the impact of CMT on depression and anxiety in Iranian depressed patients should be done on both sexes. To clarify the impact of CMT independently of antidepressant drugs, we also suggest another study comparing three groups of drug therapy, CMT group therapy, without drug therapy, and a group with no intervention.

Conclusion

This study is, to our knowledge, the first to evaluate the impact of CMT on depression, anxiety, and self-criticism in Iranian sufferers of depression. The findings of this study revealed that CMT reduces depression and anxiety symptoms in depressed patients. It means that CMT could be utilized as a complimentary treatment of depression and anxiety in Iranian population.

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