Original article

Effectiveness of Compassion Focused Group Therapy on Sleep Quality, Rumination and Resilience of Women in Isfahan City Suffering from Depression in Summer 2018

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Abstract:

Introduction: Nowadays, depression is the most common and important psychological disorder all around the world. This study was designated to investigate the efficacy of compassion focused therapy on sleep quality, rumination and resilience in women of Isfahan city suffering from depression.

Methods: This study was a semi-experimental one with pre and post test stages.The study population was all women in Isfahan suffering from depression in summer 2018. We randomly selected our sample by available sampling and applying Beck depression index (BDI-2) on women. Sample size was 20. The sample selected upon BDI-2 were randomly categorized into test and control groups with equal group size. Beck depression index, Pittsburg sleep quality index, Nolen- Hoeksema rumination styles scale and Conor-Davidson resilience questionnaire were the study instruments. We applied 8 sections of group compassion focused therapy for test group. The data were analyzed using MANCOVA test.

Findings: The results showed significant difference between the experimental and control groups in sleep quality variable (P <0/05). But there was no significant difference between these two groups in terms of rumination and resilience.

Conclusion: Compassion focused therapy can improve sleep quality but not rumination and resilience in women suffering from mild to moderate depression.

Keywords: Compassion focused therapy; Sleep quality; Rumination; Resilience; Depression.

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Introduction:

Depressive disorder is one of different types of mood disorders that specified by at least one depressive period without any manic symptoms or any manic period, and also, depressive mood should persist at least for two week or, we can specify lack of interest and anhedonia in depressed person (1). Accordingly, to statement of world health organization, depression is the main reason of disabling in the world, and it includes high percentage of women's disorders in developed or developing countries (2). According to national researches about illnesses and disorders in Iran, we find out that in this field, depression is third health problem in this country (3). Different aspects of depressed persons are affected by this disorder. For example, we can mention

sleep quality. Depression and lack of sleeping have mutual communication and they affected each other. In fact, lack of sleeping in addition of intensifying depression, it affects the poor response to treatment and repetition of depression, its intensity and duration. According to last studies in national sleep institute, high sleep quality is defined in this way: sleeping person should at least, being asleep in 85% of time that he / she is in bed, when he / she intend can sleep, being asleep in less than 30 minutes, and during the night wake up just once and no more (4). Also, depressed person has some degree of rumination. Rumination is defined by compulsive focus and attention on signs and cause of distress and its outcomes instead of suitable solution for this problem (5). Another component that has significant negative relation with depression is resilience (6). Resilience means positive compatibility in reaction to unpleasant situation. Resilience is not only a kind of resistance to harm and threatening conditions (7). It is not a passive way to dealing with dangerous situations. But it is active and impressive participation in the environment (8). Given that in 2013 near to 253 million people (3.6%) in all around the world had depression (9), and it is anticipated that by 2020, depression become the second most common disease after heart disease in the world, and also it is reported that the number of women patients compared with men patients are twice (10). Despite of vast improvements in diagnosis and treatment of depression, yet only in 50% of cases we can see relative remission (11). Therefore, due to the impact of depression in sleep quality rumination, and resilience and also impact of these components in intensity and duration of this disorder, some intervention to improve these problems in depressed women is necessary.

CFT is a psychotherapy method that is founded by Gilbert, and it integrate multiple techniques of CBT treatments and some concepts of developmental, evolutionary, social, Buddhist psychology and neuroscience. The main technique in CFT is compassionate mind training [Eirini (12) and Stalikas (13)]. Some of these interventions designed to study efficacy self – compassion and the amount of it, mood and life satisfaction, importance of self – compassion on mental health. Also, Trich et al (12) by reviewing numerous researches, find that there is inverse relationship between degree of self – compassion and degree of depression and anxiety even by controlling of the effect of self – criticism. Given that depressed patients mostly experience self – criticism and rumination, and also one of CFT achievements is decrease of self – criticism in this patients, it seems that CFT can play an important role in their improvement. As I know, there is no research about the efficacy of CFT in depressed women in Iran. So, as for destructive consequences of depression in women's individual, social, career life and …, this study aims to investigate the efficacy of CFT on sleep quality, rumination, and resilience in depressed women.

Methods:

Design of this research is semi – experimental one with pre and posttest stages and one control group. Its population

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was all of depressed women in Isfahan city in summer of 2018. In this study, available sampling is used. Researcher called women to participate in this study. For all of these women, Beck Depression Index was applied. Inclusion criteria for this study were being a woman, age of 18 – 50, mild or moderate depression (14 – 28 scores in Beck questionnaire), at least having fifth grade of elementary school, having letter of satisfaction for participating in this research. At first, sample size was 30.

Exclusion criteria were: all kind of psychosis (by using clinical structured interviews, we approved that our sample members, according DSM-5 have no psychosis). Member of our sample randomly devises in experimental and control groups. 5 persons were put aside because of unauthorized absence. As well as 5 persons of control group not answer to posttest questionnaire, and so they were put aside too. Then 20 people remained. In first session, before the intervention, subjects completed Pittsburg sleep quality index, Nolen – Hoeksema rumination styles scale and Conor - Davidson resilience questionnaire and simultaneously we applied pretest for control group. After 8 ninety – minutes session and using this intervention for experimental group, we applied posttest for both experimental and control groups. Intervention used in this study was made according to CFT model of Gilbert. This treatment was done by master student of clinical psychology who was trained specialized method of CFT for 18 hours. In order to respect to ethics, we insure subjects that their answers are completely secret, and in any time they want, they can leave the sessions. After posttest, for gratitude of control group, we applied 1 session about importance of self – compassion and simple techniques of CFT for them. Summary of this session are shown in table 1.

Study Instrument

Beck depression index – 2: This questionnaire has 21 multiple choice questions that each of them investigate one of depression symptoms. Construct validity of this questionnaire are investigated and emotional, social and cognitive component are identified (13). Validity and reliability of this questionnaire for internal consistency in 1971, 1979, 1985, and 1968 are confirmed by Beck et al, and they find that these values were between 0.92 – 0.73, and the mean was 0.86 (14). Generally, assessment of content, construct, differential validity and factor analysis shows desired results. Concurrent validity has clinical grading for psychiatric disease and it showed medium to high correlation coefficients (0.55 – 0.96 and r = 72) (15).

Pittsburg sleep quality index: this questionnaire was made in 1989 by Buysee et al. It has 18 question that were scored in 4 degree Likert scale from 0 to 3. Reliability of this questionnaire in some foreign researches are defined by Cronbach's alpha coefficient, and this shows 0.89 (16). This value in interior researches is 0.89 (17). In this study, validity of this questionnaire by using Cronbach's alpha is 0.757. In this questionnaire, the less earned scores represent higher sleep quality.

Nolen – Hoeksema rumination styles scale (RRS): This scale that named response

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styles questionnaire, measured 4 response styles to negative mood. It was made by Nolen Hoeksema and Morrow in 1991. It has 22 questions and it is a single factor questionnaire. It has 2 scale: rumination scale and distractions scale. It is scored by 4 degree Likert scale. Its scores are from 0 to 66 and in this questionnaire cut point is 33.

Concurrent validity coefficient of RRS with Beck depression scale was 875/0 and with cognitive beliefs in Wells questionnaire was 723/0 (16) and alpha value for its internal validity is 89/0 and also, pretest – posttest reliability is medium (r=0.47 after 1 year) to high (r=0.8 after 5 month) (18). Cronbach's alpha for this questionnaire 875/0 and its test – retest reliability is 78/0 (16). Current study shows that its reliability by using of Cronbach's alpha is 0.767.

Conor – Davidson resilience questionnaire: this questionnaire was made by Conor and Davidson. They reviewed all research resources about resilience from 1979 t0 1991 and then, they composed a questionnaire with 25 expressions in a 0 – 5 Likert scale. Test scores are from 0 to 100. Scores of this questionnaire have significant positive correlation with scores of Kobasa hardiness scale, and this scores have significant negative correlation scores of perceived stress scale and also, this scores have significant negative correlation with scores of Sheehan's stress vulnerability scale. So, we can say that it has concurrent validity (8).

Research's data were analyzed using spss24 software. Descriptive statistics are used for explaining of concepts (mean and standard deviation, for defining of age and scores of pre and posttest for dependent variables). Also, MANCOVA test with 0.05 significance level are used for evaluation of effectiveness of intervention on dependent variables.

Findings:

In this intervention, age mean was 36.5 in control group and 31.8 in experimental group (table 2). In this intervention, mean of sleep quality score in posttest compared to pretest are decreased in experimental group and this scores are increased in posttest compared to pretest in control group. Mean of rumination score in posttest compared to pretest are decreased in both control and experimental group (table 3). In order to evaluation of effectiveness of this intervention on 3 mentioned variables, multivariable analysis of variance is used. Evaluation of assumption was acceptable. As shown in the analysis of variance results, by adjusting pretest scores, between control and experimental groups in posttest stage, there is only significant difference in sleep quality (table 4). So, it can be said that CFT intervention have positive effect on improvement of sleep quality in depressed women, but it has no effect on rumination and resilience of them.

Discussion and Conclusion:

Current study aims to investigate effectiveness of compassion focused therapy on sleep quality, rumination and resilience of depressed women in Isfahan city. Analysis of covariance results shows that compassion focused therapy improve sleep quality in depressed women. This results are consistent with the findings of Rezayie Ashtiani et al (19), De niet et al (20), Unger (21) and another indirect studies that shows

[DOR: 20.1001.1.23222913.2019.8.4.6.2]

positive relationship between CFT and mental health (22). In explaining this findings, it can be said that probably this treatment decreases the sense of inner shame and self – criticism. So, subjects learn to express kind and compassionate words and practice kindness and respect for themselves (23).

Therefore, it seems that doing and practicing such training during the day, can bring mental relaxation for all subjects. In physiological study of sleeping, it was said that anxiety and external threat can decrease quantity and quality of sleeping, because amygdale that should protect integrity of the person stays active and don't let the person to sleep. A person who has high level of self – criticism, due to the sense of inner incompetence, feels more vulnerability against the external threats. CFT increase self – compassion and decrease self – criticism. So, it can be said that probably CFT can put down this incompatibility named self – criticism and can improve sleep quality. In addition, it seems that kindness imagination training that subjects have to do it before sleeping, effect recession and thus, effect sleep quality.

This intervention has no significant effect on rumination. This finding is inconsistent with the findings of Nourbala et al (24) who reported that this treatment didn't decrease rumination, but there is significant relationship between the intervention and rumination in compassion scores in pretest. It means that this intervention has more impact on the person who have higher self – compassion from the first and their rumination decrease, but this intervention has reverse effect on the person who don't have high self – compassion. So, it can be said because value of self – compassion was not measured in pretest, cannot find logical explanation for this findings. Most of negative emotions experienced by persons exist in mind because of the ruminations derived from negative experiences, and mindfulness reduce rumination in people, and then decrease their negative emotions (25). Mindfulness is one of three main components that CFT works on it and try to reinforce it (24). So. It was guessed that this component not reinforced well in subjects because of intensive sessions, therefore treatment couldn’t decrease rumination in this people. As well as, in should kept in mind that when this research was done (summer of 2018) because of currency fluctuations in this country subsistence – economic situation at the beginning of this study was different from the end of it. So, it seems that economic situation effect worries and rumination of people. It can be said that during this intervention, subjects don’t experience same situations and this matter can be one of mediating variables.

Similarly, the results show that in this intervention, CFT has no significant effect on resilience, too. This inconsistent with the findings of Gilbert (22) and Nouri and Shahabi (25). Several factors affect resilience (attachment styles, personal factors like sex and self – esteem, family factors like structure and protection, and social factors) (26) and hence, it is not expected that 8 session of compassion focused trainings, singly, could not have significant impact on resilience of subjects that depression make changing difficult for

[DOR: 20.1001.1.23222913.2019.8.4.6.2]

them. Furthermore, results of some researches show that in the long run, the effect of CFT on resilience becomes apparent (27). So, if we can follow up current study, it was possible that this assumption was approved. In Nouri and Shahabi's study, having diploma was one of the inclusion criteria. While in current study minimum education level is fifth grade in elementary school. So, it can be daid that highly educated subjects can learn these trainings better. Some of possible factors that commonly leading to no significant effect on rumination and resilience variables are: low sample size, existence of mediating variables in most of the behavioral researches. These factors are difficult to identify and their effect is difficult to remove, and also, they effect independent variable. Insufficient cooperation in doing homework from subjects is another factor, so they cannot learn treatment techniques well (effectiveness of CFT depend on practicing and repetition of these techniques). Some of restrictions for this study were: using of self – assessment questionnaires, study on depressed women in Isfahan (so we cannot generalize the result to men and other cities and cultures, and other mental disorders). At the end, it is suggested that therapists in mental health clinics, use CFT treatment to improve sleep quality in depressed women. Concerning to increasing prevalence of depression, self – compassion training should be in schools, culture centers, and mass media extracurricular programs. If this research is repeated, a follow up stage will be necessary.

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Tables and Charts:

Table 1: summary of content of training sessions.

Session 1	Introduction, sharing of the rules of the group, defining of compassion, determining of compassion components and assign homework about them
Session 2	Check the homework, stating the causes of suffering and the pain of human and the necessity of self – compassion, talking about their own pains, assign homework
Session 3	Check the homework, giving the parable of patch and funeral, motivate the members for self – caring by using of attention skills, reasoning and kind behavior, assign homework
Session 4	Check the homework, listening to member's targets and their accessibility to them. Practical practice of sympathy, pity, and helping them to find their own pain, giving the parable of kind mother, listening to members' point of view and their feeling about session, assign homework
Session 5	Listening to members' conversations about kind mother training, training of change the way of dealing with the pains by using kind behavior and attention and sensory experiences about kindness, explaining 4 trait of kind people, assign homework
Session 6	Check the homework, doing imaginary training (self – kindness, kindness for others) listening to comments and feelings, assign homework
Session 7	Having conversation about all of these homework with members, teaching for writing a kind letter for themselves, assign homework
Session 8	Reading these kind letters by members, listening to the comments about training of kindness, qualitative measurement of kindness, posttest, survey

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Table 2: age mean and standard deviation in control and experimental groups.

age	**grope**					
	control			experimental		
	number	mean	Standard deviation	number	mean	Standard deviation
age	10	36.5	8.37	10	31.8	7.79

Table 3: means and standard deviation of pre and posttest scores in sleep quality, rumination and resilience.

Group	**Number**	**Variable**	**Pretest**	**Posttest**
			Mean and standard deviation	Mean and standard deviation
Experimental	10	Sleep quality	(1.49) 7.00	(1.41) 6.00
Control	10	Sleep quality	(1.49) 7.00	(1.65) 7.60
Experimental	10	Rumination	(8.63) 47.60	(13.41) 45.40
Control	10	Rumination	(12.35) 49.90	(13.16) 49.30
Experimental	10	Resilience	(9.23) 52.80	(11.00) 56.20
Control	10	Resilience	(21.17) 57.60	(17.87) 57.80

Table 4: result of multivariable analysis of covariance in sleep quality, rumination, and resilience.

variable	**Sum of the squares**	**Degree of freedom**	**Mean square**	**F**	**significance**	**η^2**	**Statistical power**
Sleep quality	15.373	1	15.373	13.436	0.002	0.472	0.928
Rumination	1465.906	1	1465.906	13.290	0.002	0.470	0.926

[DOR: 20.1001.1.23222913.2019.8.4.6.2]

Resilience		2194.214	1	2194.214	27.027	0.00	0.643	0.998
posttest	Sleep quality	13.056	1	13.056	11.410	0.004	0.432	0.884
	Rumination	16.860	1	16.860	0.153	0.701	0.010	0.066
	Resilience	10.936	1	10.936	0.135	0.719	0.009	0.064

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