Original Article

The effectiveness of compassion focused therapy on distress tolerance, difficulty in emotion regulation and anxiety sensitivity in patients with cardiovascular disease

Fatemeh Bronsi[1] , Zahra Bagherzadeh Golmakani[2*] , Ahmad Mansouri[3] , Ahmad Zande Del[4]

[1] PhD student in General Psychology, Department of Psychology, Neyshabur Branch, Islamic Azad University, Neyshabur, Iran.
[2] Assistant Professor, Department of Psychology, Neyshabur Branch, Islamic Azad University, Neyshabur, Iran.
[3] Assistant Professor, Department of Psychology, Neyshabur Branch, Islamic Azad University, Neyshabur, Iran.
[4]Assistant Professor, Department of Mathematics, Neyshabur Branch, Islamic Azad University, Neyshabur, Iran.
Corresponding author and reprints: Zahra Bagherzadeh Golmakani. , Department of Psychology, Neyshabur Branch, Islamic Azad University, Neyshabur, Iran.
Email: z.golmakan@gmail.com

Abstract

Background: Cardiovascular diseases (CVD) are among the most common, chronic and debilitating diseases. This study aimed at evaluating the effectiveness of compassion focused therapy (CFT) on the distress tolerance, difficulty in emotion regulation and anxiety sensitivity in patients with the CVD.

Methods: It was a quasi-experimental study with pre-test, post-test design and a control group. The statistical population included all cardiovascular patients in Mashhad city in 2019-2020. The sample consisted of 30 patients referred to Valiasr clinic that were selected by available sampling method and placed in experimental and control groups. The experimental group underwent CFT for 8 sessions of 2 hours and, at the end, both groups performed the post-test. The measurement tools were distress tolerance scale, difficulties in emotion regulation scale and anxiety sensitivity scale. Data were analyzed using SPSS software and multivariate analysis of covariance.

Results: The results showed that there was a significant difference between the experimental and control groups in the variables of distress tolerance, difficulty in emotion regulation and anxiety sensitivity ($P<0.05$); In other words, CFT has been effective on distress tolerance, difficulty in emotion regulation and anxiety sensitivity in patients with CVD.

Conclusion: Based on the results, CFT can be used to increase distress tolerance and reduce difficulty in the emotion regulation and anxiety sensitivity among the cardiovascular patients.

Introduction

Cardiovascular disease (CVD) is one of the largest health problems today. According to the WHO, about 30 million people are expected to die of CVD by 2030, and approximately one-seventh of health care spending will be spent on CVD (1). This disease has led to 46% of all deaths in Iran. CVD are the result of modifiable (e.g. diet, exercise) and non-modifiable (e.g. age, gender, family history, genetic predisposition) risk factors (2). Common risk factors for this disease

among Iranians include high blood pressure, high blood cholesterol, elevated triglycerides, diabetes, high LDL-C, low HDL-C, obesity and smoking (3).

CVD have various economic and psychological consequences (4), such as depression, anxiety and psychological distress. However, the relationship between depression, anxiety, psychological distress and CVD is bidirectional (5). It can also reduce the distress tolerance (6), the difficulty in emotion regulation (7-9) and the anxiety sensitivity in people (9, 10), thereby increasing the complications of the disease. Distress tolerance defined as the ability to experience and resist negative psychological states (11). Difficulty in emotion regulation refers to the problem of individuals in knowing, understanding and accepting emotions, controlling impulsive behaviors, behaving according to goals when experiencing negative emotions, and using flexible emotion regulation strategies to meet situation requirements (12). Effective emotion regulation enhances psychological health and is associated with positive psychological outcomes health (13). Anxiety sensitivity has been defined as the fear of anxiety-related symptoms and has been linked to psychiatric disorders and chronic medical illnesses as a transdiagnostic risk factor (14). So far, various therapies such as metacognitive based-training (9), dialectical behavior therapy (15), group acceptance and commitment therapy (16), schema therapy integrated with rehabilitation (17), existential group therapy (18) for distress tolerance, emotion regulation and anxiety sensitivity therapies have been used in people with CVD. Compassion focused therapy (CFT) can be used as another treatment that has been considered by therapists in recent years (19). This treatment is rooted in evolutionary approaches, attachment theories, and Eastern traditions (19, 20) and focuses on enhancing competencies and brain systems that play an important role in regulating

threat, well-being, and prosaically behaviors (20).

The goal of the CFT is to facilitate the spread of compassion through engagement with and the alleviation/prevention of suffering. Engagement with suffering as part of treatment includes sensitivity, empathy, well-being care, non-judgment and distress tolerance, while alleviation/prevention includes increased skills in imagery, reasoning, behavior, feeling and attention focusing (19). A literature review showed that this treatment was effective for a wide range of psychological problems including eating disorders, depression, anxiety, personality disorder, psychosis, brain injury, learning disability, substance use disorder and PTSD (19, 21). Also, the CFT is effective on emotion regulation in people with coronary heart disease (22), couples (23) and women affected by marital infidelity (24). Another study showed that

CFT was effective on distress tolerance, difficulty in emotion regulation and anxiety sensitivity of divorced women (25). Considering the prevalence (1, 3), economic, physical and psychological consequences of CVD (4, 5), other treatment approaches and little research in this field, the aim of this study was to evaluate the effectiveness of CFT on distress tolerance, difficulty in emotion regulation and anxiety sensitivity in patients with the CVD.

Methods

It was a quasi-experimental study with the pretest-posttest control group design. The statistical population included all patients with the CVD in Mashhad city in 2019-2020. The study sample consisted of 30 patients with the CVD referred to Valiasr clinic in Mashhad who were selected by convenience sampling method and were randomly placed in the control and experimental group. For this purpose, a number was assigned to each patient and then 15 people were placed in the

experimental group and 15 people in the control group. The sample size was determined based on and Cohen's tables (26). Inclusion criteria were receiving a diagnosis of CVD based on the specific symptoms, ages 30 to 50 years old (the reason for choosing this age group was the frequency of heart disease reports based on the research in these ages), having at least a diploma degree, not receiving concomitant psychological treatment and the initial diagnosis of the CVD.

Exclusion criteria included major mental disorders such as personality disorder, tics, schizophrenia and other psychotic disorders, bipolar disorder, substance use, lower than diploma degree, non-therapeutic motives, medical disorders and severe physical injuries, absenteeism in two sessions and dropping out of training, a score of more than 30 on the Beck Depression Inventory (BDI-II), the presence of acute psychosocial problems, family and severe occupational problems affecting the treatment process. Ethical considerations included informed written consent to participate in the study, observance of the principle of confidentiality, and avoidance of any harm to participants. This study also has an ethics code from the Ethics Committee in Biomedical Research, Islamic Azad University, Mashhad Branch (IR.IAU.MSHD.REC.1398.221). The following questionnaires were used to collect data. The data of this study were analyzed using SPSS software version 26 as well as descriptive statistics and multivariate analysis of covariance (MANCOVA).

The Distress Tolerance Scale (DTS): This scale was developed by Simmons and Gaher (11) and has 15 items and four subscales of tolerance, absorption, appraisal, and regulation. Items on this scale are scored on a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). The score range is between 15 and 75, and a higher score on this test indicates greater distress tolerance. Simmons and Gaher (11) reported Cronbach's alpha coefficients of 0.70 to 0.82. They also showed that this questionnaire has a good standard of criterion and convergence validity. Azizi, Mirzaei and Shams (27) reported the reliability of this test by internal consistency and retest by 0.67 and 0.79, respectively.

Difficulties in Emotion Regulation Scale (DERS): This scale was developed by Graz and Roemer (12) and has 36 items and six subscales; nonacceptance of emotional responses, difficulty engaging in Goal-directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies, and lack of emotional clarity. Each item in the questionnaire is graded on a five- point scale, ranging from 1 (almost never) to 5 (almost always). They reported Cronbach's alpha coefficient of the total score of the questionnaire and its subscales ranged from 0.80 to 0.93. The reliability of the total score of this questionnaire by the retest method (at intervals of 4-8 weeks) was calculated to be 0.88 and the reliability of its subscales was calculated to be 0.57 to 0.89 (12). In the research of Mansouri et al., (13) the total reliability of the test and its subscales has been reported as 0.60 to 0.89. The results of their confirmatory factor analysis also showed good and satisfactory indicators (CFI = 0.95, NFI = 0.91, NNFI = 0.94, IFI = 0.95, RFI = 0.90, GFI = 0.79 and RMSEA = 0.078) of this

questionnaire.

Anxiety Sensitivity Index (ASI): This index was developed by Reese and Patterson and has 16 items and three subscales of fear of physical anxiety, fear of not having cognitive control and fear of being seen by others. Each test item is scored on a five-point likert scale in the range of 0 (very low) to 4 (very high). The study of psychometric properties of this scale has shown its internal reliability and high retest reliability (28). The reliability of the

Persian version of this scale has been reported by three methods of internal consistency, retesting and half part to be 0.93, 0.95 and 0.97, respectively (29).

Structure of the CFT sessions: CFT sessions were held in 8 2-hour sessions in a group and weekly manner for the participants of the experimental group, while the control group did not receive any intervention. Therapeutic sessions were based on the Gilbert's treatment plan (30).

Session 1: Familiarity of group members with each other, statement of group rules, explanation of distress tolerance, difficulty in emotion regulation and anxiety sensitivity, its consequences on individuals, members' discussion about problems caused by distress tolerance, difficulty in emotion regulation and anxiety sensitivity; Explaining how the mind works and how and why it malfunctions.

Session 2: Explaining Compassion: What is compassion and how can problems be overcome?

Session 3: Thinking about compassion for others, focusing on compassion, compassionate thinking, compassionate behavior, compassionate imagery

Session 4: Increasing warmth and energy, mindfulness, acceptance, wisdom and strength, warmth and non-judgment

Session 5: Practicing awareness, mindfulness, examining the beliefs that bring with them useless emotions, its advantages and disadvantages

Session 6: Practicing the compassion task, the sound and image of compassion, and writing letters based on compassion

Session 7: Compassionate letter writing, practicing anger and compassion, practicing fear of compassion, preparing for end of the group sessions

Session 8: Reviewing, summarizing, end of the group work and post-testing.

Results

The mean age of the experimental and control group participants were 48.6 ± 5.50 and 48.93 ± 8.39, respectively. Their history of CVD was 4.73 ± 2.34 and 4.72 ± 2.46, respectively. The numbers of men and women in the experimental control groups were 7 (46.7%), and 8 (53.3%), whereas that of the control group was 8 (53.3%), and 7 (46.7%), respectively. The level of education of the experimental group was diploma (n = 9, 60%), and University degree (n = 6, 40%). Also, level of education of the control group was diploma (n = 8, 53.3%), and University degree (n = 7, 46.7%; Table 1). T-test and Chi-square test were used to compare the two groups and match them in demographic variables. T-test showed that there was no statistically significant difference between the two groups in the variables of age (t = -.13, P = 0.90) and history of CVD (t = 2.05, P = 0.99). The results of chi-square test also showed that there was not a significant difference between them in terms of gender (P = 0.72, $\chi 2$ = 0.13), and education (P = 0.71, $\chi 2$ = 0.14).

Table 1: Demographic data for age, history of CVD, gender and education

Variables		Groups		P
		CFT	Control	
Age		48.6 (5.50)	48.93 (8.39)	0.90
History of CVD		4.73 (2.34)	4.72 (2.46)	0.99
Gender	Women	7 (%46.7)	8 (%53.3)	0.72
	Men	8 (%53.3)	7 (%46.7)	
Education	Diploma	9 (%60)	8 (%53.3)	0.71
	University degree	6 (%40)	7 (%46.7)	

Table 2. Investigation of normality and homogeneity of variance of research variables

Variables	Groups	Shapiro-Wilk Test			Levene's test	
		Statistic	df	P	f	P
Pretest distress tolerance	CFT	0.96	15	0.68		
	Control	0.93	15	0.28	0.99	0.33
Posttest distress tolerance	CFT	0.99	15	0.99		
	Control	0.94	15	0.33		
Pretest difficulty in emotion regulation	CFT	0.95	15	0.56		
	Control	0.97	15	0.78	1.54	0.22
Posttest difficulty in emotion regulation	CFT	0.95	15	0.57		
	Control	0.97	15	0.78		
Pretest anxiety sensitivity	CFT	0.98	15	0.97		
	Control	0.97	15	0.86	0.65	0.43
Posttest anxiety sensitivity	CFT	0.96	15	0.73		
	Control	0.98	15	0.92		

Multivariate analysis of covariance (MANCOVA) was used to assess of differences between group means. The following explains each of the assumptions. Shapiro-Wilk test and Levene's test was used to evaluate the normal distribution and homogeneity of variances of variables, respectively (Table 2). The results of table 2 showed that the distribution of all variables is normal (P = 0.28-0.99) and the condition of homogeneity of distress tolerance (P = 0.33), difficulty in emotion regulation (P = 0.22) and anxiety sensitivity (P = 0.43) is observed. The Box's M test was used to assess the homogeneity of the variance- covariance matrix of the research variables. The results of this analysis showed that this homogeneity (P = 0.76, F = 0.56, Box`s M = 3.84) has been achieved. The regression lines slopes test was used to homogeneity regression lines slopes. The result were not significant in distress

tolerance (P= 0.13), difficulty in emotion regulation (P = 0.62) and anxiety sensitivity (P = 0.15) variables. Wilks` Lambda use to assess whether the means of variables differ across two groups. The results of Wilkes`s Lambda multivariate analysis showed that the linear composition of the dependent variables (P= 0.0001, F = 472.42, Wilks` Lambda = 0.016) was significant. Table 3 presents the Mean and standard deviation and results of MANCOVA.

The results of Table 1 showed that there was a significant difference between the two groups in the variables of distress tolerance (F = 240.36, P = 0.0001), difficulty in emotion regulation (F = 688.90, P = 0.0001), and anxiety sensitivity (F = 185.70, P = 0.0001). In other words, CFT had a significant effect on research variables in the experimental group.

Table 3. Mean of distress tolerance, emotion regulation and anxiety sensitivity at pretest and posttest

Variables	Groups	Pretest		Posttest		F	P	Effect size
		Mean	SD	M	SD			
Distress tolerance	CFT	35.53	5.79	51.60	6.79	240.36	0.0001	0.90
	Control	33.13	5.18	32.80	7.47			
Difficulty in emotion regulation	CFT	128.60	10.72	89.73	10.45	688.90	0.0001	0.96
	Control	133.53	8.50	132.67	9.56			
Anxiety sensitivity	CFT	67.27	4.38	49.33	5.26	185.70	0.0001	0.88
	Control	64.93	6.64	64.40	7.40			

Discussion

The aim of this study was to investigate the effectiveness of CFT on the distress tolerance, the difficulty in emotion regulation and the anxiety sensitivity in patients with the CVD. The results showed that this treatment was effective on the distress tolerance, difficulty in emotion regulation and anxiety sensitivity in people with this disease. The results of the present study showed that this treatment, like other psychotherapies, was effective in increasing the tolerance of anxiety (18), modifying the difficulty in emotion regulation (9, 16, 17) and reducing anxiety sensitivity (9) in people with CVD. Furthermore, in line with the study of Adibizadeh and Sajjadian (22), this study showed that CFT was effective on emotion regulation strategies in people with the CVD. Finally, the results of the present study were consistent with the findings of Keshavarz Mohammadi and Khalatbari (25) on the effectiveness of CFT on the distress tolerance, the difficulty in emotion regulation and the anxiety sensitivity. However, their study was performed on a group of divorced women, but the present study was performed on a group of people with CVD.

Explaining the results of this study, it can be said that CVD can reduce the tolerance of people to the anxiety due to the pharmaceutical and non-pharmaceutical demands caused by the disease, psychological and economic consequences (4, 5, 8); In other words, people who do not have the ability to experience and resist the negative psychological states caused by the disease experience less distress tolerance. In this regard, Alizadeh et al, (6) showed that people with heart disease have less distress tolerance than healthy people. Simmons and Gahr (11) believe that emotion regulation in people with low distress tolerance is characterized by more effort to avoid negative emotions and the use of quick tools to reduce these emotions. Bahremand et al, (8) showed that people with heart disease use more maladaptive emotion regulation strategies. Finally, people with chronic illnesses, including CVD, are afraid of anxiety-related symptoms. Their fear stems from the belief that anxiety-related sensations have harmful consequences. Anxiety can lead to the development or exacerbation of medical symptoms through fear of medical symptoms, pathophysiological and mechanical changes, avoidance of healthy activities that increase fear symptoms, and engaging in unhealthy activities that reduce fear symptoms (14).

CFT helps people reduce their symptoms by increasing self-compassion. This increase in compassion is enhanced by sensitivity, empathy, well-being, lack of judgment, distress tolerance, increased skills in imagery, reasoning, behavior, feeling and attention focusing (19). In this approach, by explaining how the mind functions and how it malfunctions, explaining compassion, thinking about compassion for others, focusing on compassion, compassion thinking, compassion behavior, compassion imagery, increasing warmth and energy, mindfulness, acceptance, wisdom and power, warmth and non-judgment, practice of consciousness, mindfulness, examining beliefs related to useless of emotions, its advantages and disadvantages, practicing the color of compassion, the sound and image of compassion and writing based on compassion, compassionate writing, practicing anger and compassion and practicing fear of compassion (30), the therapists helped people with CVD to increase their ability to experience and resist negative psychological states, thereby better enduring distress. It also increases awareness, understanding and acceptance of emotions, control of impulsive behaviors, behavior in accordance with the intended goals and flexible use of emotion regulation strategies, and thus helps to better control their emotions. Finally, it helps them reduce their fear of anxiety-related symptoms.

One of the limitations of the present study was that it was performed on a group of people with CVD, so the results of this study can't be generalized to other groups. Also in future research, more homogeneous groups can be used, such as patients with coronary heart disease. The second limitation of this study was the lack of a follow-up test to evaluate the persistence of the therapeutic intervention. Therefore, it is suggested that follow-up courses be used in future research to evaluate the durability of this work. The third limitation of this study was the use of paper pencil questionnaires to examine research variables; consequently, research data can be influenced by factors such as distortion or social desirability of participants.

In general, results showed that CFT is effective on distress tolerance, difficulty in emotion regulation and anxiety sensitivity in people with CVD. Based on the results, this therapeutic approach can be used to increase distress tolerance and reduce difficulty in emotion regulation and anxiety sensitivity in cardiovascular patients.

Conflict of interest

The authors declare no conflict of interest.

Acknowledgments

References

1. Ramanathan N, Tan E, Loh LJ, Soh BS, Yap WN. Tocotrienol is a cardioprotective agent against ageing-associated cardiovascular disease and its associated morbidities. Nutr Metab (Lond). 2018;15:6. doi: 10.1186/s12986-018-0244-4. [PMID: 29387138]. [PMCID: PMC5775572].

2. Karunathilake SP, Ganegoda GU. Secondary prevention of cardiovascular diseases and application of technology for early diagnosis. Biomed Res Int. 2018;2018:5767864. doi: 10.1155/2018/5767864. [PMID: 29854766]. [PMCID: PMC5964583]

3. Sarrafzadegan N, Mohammadifard N. Cardiovascular disease in Iran in the last 40 years: Prevalence, mortality, morbidity, challenges and strategies for cardiovascular prevention. Arch Iran Med. 2019;22(4):204-10. [PMID: 31126179].

4. Raghfar H, Sargazi N, Mehraban S, Akbarzadeh M A, Vaez Mahdavi M R, Vahdati Manesh Z. The economic burden of coronary heart disease in Iran: A bottom-up approach in 2014. J Ardabil Univ Med Sci. 2018;18(3):341-56. doi: 10.29252/jarums.18.3.341.

5. Chaddha A, Robinson EA, Kline-Rogers E, Alexandris-Souphis T, Rubenfire M. Mental health and cardiovascular disease. The American journal of medicine. 2016;129(11):1145-8. doi: 10.1016/j.amjmed.2016.05.018. [PMID: 27288855]

6. Alizadeh S, Pazoki M, Akhlaghi Z, Behroznejad S. Comparsion of distress tolerance and affective maturation in people with and withought heart disease. The national conference on osychology and management of social pathology. Chabahar: Chabahar Branch, Islamic Azad University; 2016.

7. Chavanon M-L, Meyer T, Belnap BH, Huang Y, Abebe KZ, Rollman BL, Herrmann Lingen C. Emotion regulation in patients with heart failure: Its relationship with depressive symptoms and rehospitalization. J Psychosom Res. 125:109811. doi:10.1016/j.jpsychores.2019.109811. [PMID: 31450124]. [PMCID: PMC6752733].

8. Bahremand M, Alikhani M, Zakiei A, Janjani P, Aghaei A. Emotion risk-factor in patients with cardiacdiseases: The role of cognitive emotion regulation strategies, positive affect and negative affect (A case- control study). Glob J Health Sci. 2016;8(1):173-9. doi: 10.5539/gjhs.v8n1p173. [PMID: 26234976]. [PMCID: PMC4804021].

9. Hatamian P, Babaei A, Rasoolzadeh Tabatabaei SK. Effectiveness of meta-cognitive based-training on emotion regulation and anxiety sensitivity in elderly with history of cardiovascular disease living in elderly care homes in Tehran city. IHC. 2020;21(4):319-29. doi: 10.29252/jhc.21.4.319.

10. Farris SG, Bond DS, Wu W, Stabile LM, Abrantes AM. Anxiety sensitivity and fear of exercise in patients attending cardiac rehabilitation. Ment Health Phys Act. 2018;15(1):22-6. https://doi.org/10.1016/j.mhpa.2018.06.005.

11. Simons J, Gaher R. The Distress Tolerance Scale: Development and validation of a self-report measure. Motiv Emot. 2005;29:83-102. doi: 10.1007/s11031-005-7955-3.

12. Gratz KL, Roemer L. Multidimensional assessment of emotion regulation and dysregulation: Development, factor Structure, and initial validation of the difficulties in emotion regulation scale. J Psychopathol Behav Assess. 2004;26(1):41-54.

13. Mansouri A, Nejat H, Mansouri N. The mediating role of emotion regulation difficulties in the relationship between the brain behavioral systems and the severity of insomnia. RBS. 2017;15(4):501-7. URL: http://rbs.mui.ac.ir/article-1-571-en.html.

14. Horenstein A, Potter CM, Heimberg RG. How does anxiety sensitivity increase risk of chronic medical conditions? Clin Psychol, 2018;25(3):e12248. https://doi.org/10.1111/cpsp.12248.

15. Babaei L, Fakhri M, Jadidi M, SalehiOmran M. The impact of dialectical behavior therapy on emotion regulation and perceived social support in patients with coronary heart disease. JBUMS. 2015;17(11):21-27. URL: http://jbums.org/article-1-5391-en.html

16. Sheibani H, Aerab Sheibani Kh, Nezhad Amreei N, Javedani Masrour M. An investigation of the effects of the acceptance and commitment therapy in groups on the cognitive strategies of emotion regulation and self-control in coronary heart disease patients. J Med Life. 2019;12(4):361-7. doi: 10.25122/jml-2019-0035. [PMID: 32025254]. [PMCID: PMC6993306].

17. Rahbar Karbasdehi E, Abolghasemi A, Rahbar Karbasdehi F. The effectiveness of schema therapy integrated with rehabilitation on cognitive emotion regulation and existential anxiety in patients with congestive heart failure. J Contemp Psychother. 2018;48(1):233-9. https://doi.org/10.1007/s10879-018- 9390-2.

18. Shirali S, Dasht Bozorgi Z. Effect of existential group therapy on distress tolerance, existential anxiety, meta-worry and health worry in elderly women with cardiovascular disease. Iran Cardiovasc Res J. 2019;7(4):24-33. URL: http://journal.icns.org.ir/article-1-579-en.html

19. Craig C, Hiskey S, Spector A. Compassion focused therapy: A systematic review of its effectiveness and acceptability in clinical populations. Expert Rev Neurother. 2020;20(4):385-400. doi: 10.1080/14737175.2020.1746184. [PMID: 32196399].

20. Gilbert P. The origins and nature of compassion focused therapy. Br J Clin Psychol. 2014;53(1):6-41.

21. Horwood V, Allan S, Goss K, Gilbert P. The development of the compassion focused therapy therapist competence rating scale. Pschol Psychoter T. 2020;93(2):387-407. doi: 10.1111/bjc.12043.[PMID: 24588760].

22. Adibizadeh N, Sajjadian I. The effectiveness of compassion focused therapy on depression, anxiety and emotion regulation in patients with coronary heart disease. Medical Journal of Mashhad University ofMedical Sciences. 2019;61(11):103-15. doi: 10.22038/mjms.2019.13769

23. Shojaei Vazhnany F, Sohrabi A, Azizi A, Mohammadi Rayegani M, Nasiri Hanis G. The Effectiveness of compassion-focused therapy on couple's marital intimacy and emotion regulation. Rooyesh-e-Ravanshenasi Journal (RRJ). 2020;8(12):11-20. URL: http://frooyesh.ir/article-1-1670- en.html.

24. Dashtbozorgi Z. Effectiveness of self- compassion therapy on loneliness and emotion regulation of damaged women from marital infidelity. Knowledge & Research in Applied Psychology. 2018;18(4):72- 9.

25. Keshavarz Mohammadi R. Effectiveness of self-compassion on distress tolerance, emotion regulation and anxiety sensitivity in divorced women. Family Pathology, Counseling and Enrichment Journal. 2018;4(1):17-32. URL: http://fpcej.ir/article-1-170-en.html.

26. Sarmad Z, Bazargan A, Hejazi E. Research methods in behavioral sciences. Tehran: Agah; 2019.

27. Azizi A, Mirzaei A, Shams J. Correlation between distress tolerance and emotional regulation with students smoking dependence. Hakim Health Sys Res. 2010;13(1):11-18.

28. Reiss S, Peterson RA, Gursky DM, McNally RJ. Anxiety sensitivity, anxiety frequency and the prediction of fearfulness. Anxiety sensitivity, anxiety frequency and the prediction of fearfulness. Behav Res Ther. 1986;24(1):1-8. doi: 10.1016/0005-7967(86)90143-9. [PMID: 3947307].

29. Moradimanesh F, MirJafari SA, Goudarzi MA, Mohammad N. Examine the psychometric properties of the anxiety sensitivity index revised. Journal of Psychology. 2007;11(4):426-46.

30. Gilbert P. Introducing compassion-focused therapy. Adv Psychiatr Treat. 2009;15:199-208. doi:https://doi.org/10.1192/apt.bp.107.005264