

# Effectiveness of Emotionally-Focused Therapy on Depression of Patients with Coronary Heart Disease

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## Abstract

**Objective:** The present study was conducted with the aim of examining the effectiveness of Emotionally Focused Therapy (EFT) on depression of heart disease patients in Tehran city in 2019.

**Method:** The research method was semi-experimental with pretest-posttest and control group. The statistical population of the study consisted of all heart disease patients in Tehran city, among whom 30 individuals were selected through available sampling method and randomly assigned to experimental and control groups (15 in each group). The experimental group received Emotionally Focused Therapy training in nine 60-minute sessions, and the control group remained in the waiting list. The research instrument was depression questionnaire (Beck, Steer & Braun, 1996) which was conducted in two stages of pretest and posttest. The analysis was performed through SPSS v24 in two descriptive and inferential statistical sections.

**Results:** The results indicated that intervention used in this study could significantly decrease depression in heart disease patients ( $p < 0.05$ ).

**Conclusion:** Based on the results of this research, Emotionally Focused Therapy can be an effective intervention in reducing depression in heart disease patients.

**Keywords:** Depression, Emotionally Focused Therapy, Coronary Heart Disease.

## Introduction

With social, cultural and industrial changes, the pattern of diseases has changed and chronic diseases are the most important causes of physical and mental problems in people (Lee, Park & Lee, 2020). Therefore, the chronic diseases are considered as major sources of stress and impose great economic costs in the society. Artery coronary disease is a serious and highly growing disease (Jinnouchi,

Kolodgie, Romero, Virmani & Finn, 2020), which has been associated with high epidemics and prevalence in both developed and developing countries (Rooney & Colleagues, 2020) and is considered as one of the main causes of mortality in people. (Gola, Erdmann, Moller, Myhosk Schonkert & Konig, 2020). Due to this high prevalence and mortality, this disease has received a lot of attention in the recent decades and many studies have been conducted on the pathophysiology, causes of prevalence, and risk factors affecting the incidence artery coronary disease (Behzad, Zakeri, & Vafaei, 2019). Classic and well-known risk factors for coronary heart disease include age (Van De Hoef et al., 2020); race, positive family history and gender (Drissa, Madiouni & Habiba, 2020); high blood pressure (Kim et al., 2020); diabetes (Christle et al., 2020); hypercholesterolemia (Nadro et al., 2020); lack of physical activity (Thomas et al.,

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2020); unhealthy diet and life style (Bos et al., 2020); and smoking (Mirbolouk et al., 2020), all of which are remediable except age, gender, race, and family history. Among these factors, body mass index of obesity is the most important risk factor which plays an important role in the occurrence and persistence of artery coronary disease in people (Holt et al., 2019). Coronary heart disease is also one of the diseases that leads to increased mortality, lack of self-reliance, increased depression, and high anxiety in people with the disease. So according to some research, depression is a risk factor for coronary heart disease (Chang et al., 2020). Depression is an emotional or mood disorder that affects the individual's performance in different aspects of life. Depression is a chronic, recurrent, and potentially threatening disease for the people's life, which is characterized by a diagnostic and statistical manual of mental disorders (5<sup>th</sup>ed) with the expression of presence of sad, empty, and irritable mood that affect the person's social and occupational functions, and other important performances (American Psychiatric Association, 2013).

Based on the results of a research, depression is one of the factors that exposes people to artery coronary disease and causes depressed people to experience more diseases such as coronary heart disease (Caney et al., 2019). Dryden (2019), with the purpose of examining chest pain and depression in patients with artery coronary disease, showed that chest pain is associated with depressive symptoms in patients with coronary artery disease, and depressive symptoms could predict chest pain in patients with artery coronary disease. Meyer et al. (2019), with the purpose of examining symptoms of depression and cardiovascular problems in patients with artery coronary disease, showed that patients with this problem suffer from symptoms of depression. Low physical activity is also associated with depressive symptoms in patients with artery coronary disease. Due to the problems of patients with artery coronary disease, various interventions have been used to solve their problems; however, Emotionally Focused Therapy has not been studied in the previous

related research. Emotionally Focused Therapy is a combination of systemic, humanistic, and attachment theory perspectives (Zwak & Greenberg, 2020), which is more effective than other approaches due to being structured and having a step-by-step treatment plan with the lower chance of recurrence. This treatment, in the first step, assesses communication style and after the responses are revealed, this style is identified to the person and its consequences are shown so that people can gradually be successful in recognizing and improving the repressed and subtle emotions that perpetuate the negative cycle of communication. Emphasis of Emotionally Focused Therapy is on adaptive and secure attachment methods through care, support, and mutual attention to the needs of oneself and others (Ghaznavi, Khezrabadi, & Niknam, 2019). According to a study, Emotionally Focused Therapy plays an important role in improving the coronary artery bypass patients (Nekounam, Etemadi & Pournaghash Terhrani, 2018).

### Method

The present study is applied in terms of purpose and semi-experimental in terms of research method with pretest and posttest design with control group and follow-up phase with a time interval of 3 months. The statistical population of this study is all patients with artery coronary disease who had referred to Shahid Rajaee Heart Hospital in Tehran city in 2019. With available voluntary sampling, 30 patients with artery coronary disease were selected as research sample based on inclusion and exclusion criteria (Non-random selection and random replacement). Inclusion criteria included: 1) Conscious consent to participate in the research, 2) Age range between 35 and 70 years, and 3) Lack of a history of physical and mental diseases. Exclusion criteria included: 1) Consumption of psychiatric and psychotherapy medications, and 2) Absence in more than two therapy sessions. The treatment group received Emotionally Focused Therapy training in nine 60-minute sessions. It should be noted that in this study the privacy and

confidentiality of the collected data were observed. In order to observe the ethical considerations, the control group received Emotionally Focused Therapy training after the study. Summary of the Emotionally Focused Therapy training sessions is shown in Table 1.

### Ethical considerations

Initially, informed consent was obtained from patients. The participants were assured that their information would be kept confidential. The participants were briefly explained about the study process and its objectives. It was explained that if participants are unwilling to continue, they could stop taking part in the study at any time.

### Research Tools

*Beck, Steer and Braun's (1996) Revised Depression Inventory (BDI-II)*: This questionnaire consists of 21 questions and measures two somatic-affective and cognitive components. Its scoring is based on a 4-point Likert scale (0 to 3). Total score ranges from zero to 63, with the scores of 0 to 9 for lack of depression, scores 10 to 18 to indicate mild to moderate depression, scores 19 to 29 for moderate to major depression, and scores 30 to 63 to indicate major depression. The cut-off point of this questionnaire is greater than or equal to 10, and in another study the cut-off point was set above 13 (Meinitzer et al., 2020).

**Table 1. Emotionally Focused Therapy sessions by Johnson (2019)**

Sessions	Sessions Contents
1	Familiarity and establishing a therapeutic relationship, familiarity with the general rules of treatment, assessing nature of the problem and relationship, assessing people's goals and expectations of treatment and performing pretest.
2	Identifying negative interaction cycle and creating conditions for people to reveal their negative interactive cycle. Assessing the relationship and attachment bonding, introducing the principles of Emotionally Focused Therapy and role of emotions in interpersonal interactions, reconstructing interactions and increasing flexibility.
3	Achieving unrecognized emotions that underlie interactive situations, focusing more on the emotions, needs, and fears of attachment, validating their experiences, attachment needs and desires, focusing on the secondary emotions that are revealed in the interactive cycle and exploring it to achieve basic and unknown emotions, discussing initial emotions, processing them and raising people's awareness of primary emotions and hot cognitions.
4	Re-framing problem in terms of the underlying feelings and needs of attachment, emphasis on clients ability to express emotions and showing attachment behaviors, understanding the impact of fear and its defense mechanisms on cognitive and emotional processes, describing cycle in the context and field of attachment.
5	Encouraging to identify rejected needs and aspects of self-denial, drawing people's attention to how they interact with each other and reflecting their interactive patterns with respect and empathy, expressing attachment needs and identifying denied needs, and increasing acceptance of corrective experience.
6	Informing people about underlying emotions and revealing each person's position in the relationship, emphasizing acceptance of the individual's experiences and new ways of interacting, tracing known emotions, highlighting and re-describing needs of attachment and pointing to their health and naturalness.
7	Facilitating expression of needs, desires, expectations and creating emotional conflict, developing early emotional experiences in the field of attachment and recognizing internal needs and relationships, creating new attachments with secure bonds between spouses.
8	Creating new interactive situations between people and ending old interactive patterns, clarifying interactive patterns, recalling attachment needs.
9	Strengthening changes that have taken place during treatment, highlighting the differences between current and old interactions, forming a relationship based on a secure link so that discussing about problems and searching solutions does not harm them, evaluating changes and performing posttest on the group.

In Iran, reliability and validity of depression inventory have been investigated in a study and Cronbach alpha was used to examine its reliability, which was reported 90% for women, 91% for men, and 81% for the whole inventory (Karami, Bagian, Moemeni, & Elahi, 2018). In one research, Neff's (2003) self-compassion scale (SCS) was used to investigate the simultaneous validity of Beck's depression questionnaire, whose correlation

## Results

Table 2 shows the mean and standard deviation of research variables.

In general, as it is observed, the means of depression of control group are close to each other in the pre-test, post-test, and follow-up phases. On the other hand, the mean of depression in the post-test and follow-up stages decreased in the experimental group. Univariate

**Table 2.** Mean and standard deviation of research variables in pre-test, post-test and follow-up

Research variables	Group	Pre-test		Post-test		Follow-up	
		Mean	SD	Mean	SD	Mean	SD
<b>Depression</b>	Control	28.35	2.43	28.07	2.89	28.64	2.09
	Experimental (Emotion-focused therapy)	27.21	4.26	13.35	3.82	13.5	3.04

coefficient was obtained -0.20 at the significance level of 0.01, which shows the convergent validity of the questionnaire. In abroad, the reliability and validity of Beck's depression inventory has been investigated and its coefficient was obtained 0.91 (Um, Hershberger, & Cyders, 2019) Analysis of the information obtained from the implementation of the questionnaires was done through SPSS v24 software in two descriptive and inferential sections.

analysis of covariance was used to evaluate the significance of decrease in depression scores. Before the analysis of covariance, its assumptions were tested. In order to observe the assumptions, Shapiro-Wilk test was used to check the normality, and Leven was used to check the homogeneity of variances and the homogeneity of the regression line slope.

As can be seen in Table 3, the significance level of Shapiro-Wilk and the Leven test for depression is

**Table 3.** Results of Shapiro-Wilk, Leven and regression line slope homogeneity test to test the assumptions

variable	Shapiro-Wilk Test		Leven Test	
	F	P	Statistics	P
Depression	0.934	0.09	0.972	0.38

**Table 4.** Results of ANKOA analysis on mean post-test scores and follow-up of depression with pre-test control

	Indices	Sum Squares	df.	Mean Squares	F	P	Eta coefficient	Test
								power
<b>Pre-test</b>	Group	75/1877	2	87/938	02/75	0001/0	78/0	1
	Error	56/475	38	51/12				
	Total	97/2676	41					
<b>Follow-up</b>	Group	07/1989	2	54/994	53/85	0001/0	79/0	1
	Error	83/441	38	63/11				
	Total	98/2766	41					

more than 0.05; therefore, the assumption of normal distribution of the research variable and homogeneity of variance were confirmed.

Another assumption of analysis of covariance is that regression lines should be the same for each group in the study. If the regression lines are heterogeneous, then covariance will not be a good analysis method. It should be noted that in this hypothesis, post-test of depression was considered as dependent variable and its pre-test was considered as supplementary variable. The assumption of slope homogeneity is established when there is equality between supplementary variable and dependent variable at all factor levels (experimental and control groups). The results showed that there was equality between supplementary variable and dependent variable at all factor levels (experimental and control groups) ( $p > 0.05$ ). There is also a non-significant interaction between dependent and supplementary variables. Table 4 shows the results of univariate analysis of covariance (ANCOVA) on the mean of post-test scores and the follow-up of depression in the study groups with pre-test control.

As it can be seen in Table 4, the results obtained for depression in pre-test ( $F=75.02$ ,  $P \leq 0.01$ ) and follow-up ( $F=85.53$ ,  $P \leq 0.01$ ) show that there is significant difference between the depression scores of research groups in both pre-test and follow-up stages. In addition, the effect size indicates the effect of intervention, which has a significant impact on depression in the post-test (0.78) and follow-up (0.79) stages.

In general, after controlling depression scores in the pretest stage, depression in the posttest and follow-up in the two research groups after Emotionally Focused Therapy was significantly different ( $F(4,76) = 64.21$ ,  $P < 0.001/n^2$ ). In addition, the results of analysis of covariance in table 4 shows that the difference between depression in the posttest step was statistically significant, meaning that the Emotionally Focused Therapy was effective in reducing anxiety symptoms of coronary heart patient. In addition, the effect size indicates therapy effect which has a significant effect

on depression in the posttest (0.93) and follow-up (0.94) stages.

### Discussion and Conclusion

The aim of this study was to determine the effectiveness of Emotionally Focused Therapy on depression in patients with coronary heart disease. The results showed that Emotionally Focused Therapy is used to reduce depressive symptoms in patients with coronary heart disease. In general, depression is high in heart patients (Lee et al., 2020). Regarding the effectiveness of psychological interventions, the results of the present study are in line with the study of Saki et al. (2019). Emotionally Focused Therapy is more effective than other approaches because it is structured and has a step-by-step treatment plan and is much less likely to recur. This treatment first assesses the communication style and, once the defenses are revealed, the style to the individual and outlines the consequences are revealed. As a result, people are increasingly able to recognize and improve the repressed and subtle emotions that perpetuate the negative communication cycle. The emphasis of Emotionally Focused Therapy is on the method of adaptive and safe attachments, through care, support and mutual attention for the needs of themselves and those around them (Ghaznavi Khezrabadi & Niknam, 1398). Emotionally focused therapy gives patients the ability to control negative emotions such as depression and increase their adjustment by increasing emotional awareness. Emotionally focused group therapy method attempts to encourage patients during the treatment to question their disturbing thoughts and eliminate alternative self-talk to deal with these emotions and mental rumination that could result in physical and mental confusion. Addressing these issues in emotionally focused group therapy sessions decrease depression in patients.

Emotionally Focused Therapy also modifies patients' disturbances caused by negative emotions and attachment disorders, resulted from inner needs and desires, negative interaction patterns, and inappropriate emotional experiences by replacing

the cycle of negative interactions with the cycle of positive interactions, which reconstruct sense of self-efficacy and secure attachment. In fact, emotion therapy attempts to identify emotions and turn them into understandable and constructive messages. This type of treatment affects people in such a way that their feelings of loneliness and inefficiency as well as insecure attachment turn into a feeling of safe attachment and self-efficacy and value, and therefore the symptoms of isolation and depression in these patients are reduced.

Depression in patients with coronary heart disease affects their sleep, mood and makes them feel lonely. Fear of helplessness and death causes negative feelings and mood in patients and further isolation in them. Feelings of inefficiency and insecure attachment often exacerbate anxiety and negative emotions in patients. Emotional therapy, as can be seen in this study, had a significant effect on depression in patients with coronary heart disease. This treatment psychologically helps patients to feel safe and secure attachment and have a higher sense of self-efficacy and self-confidence, and reduces feelings of depression and negative emotions.

The results showed that the emotion-focused therapy was effective in depression and was able to reduce depressive symptoms in heart patients. In general, depression is high in heart patients (Li & Colleagues, 2020), and in respect to the effectiveness of psychological interventions to reduce depressive symptoms, the present results are consistent with study of Saki et al. (2019). In some studies, it was shown that emotion-focused therapy has been more effective in reducing depressive symptoms compared to other treatments (Ghaznavid, Khezrabadi, & Niknam, 2019) due to being structured and having a step-by-step treatment plan and the lower chance of recurrence. Emotionally Focused Therapy is a communicative-based, empirical and humanistic approach. This treatment evaluates communication style in the first step and after the defenses are revealed, this style is identified by the person and its consequences

are determined, which is the reason why people gradually succeed in suppressing suppressed and obscure emotions, which, in turn, leads to know the communication negative cycle and improve this cycle. The emphasis of emotion-focused therapy is on the adaptive and safe attachments through care, support and mutual attention to needs of oneself and others (Ghaznavi Khezrabadi & Niknam, 2019, Basharpour, 2019).

Attachment insecurities are associated with a general vulnerability to mental health issues in general and to the development of depression disorder in particular. It is an almost impossible task to pinpoint the specific mechanisms that lead to specific disorders. The principle of multifinality (that is, many roads lead to the same destination) tells us that one individual with a particular attachment history and placement on the continuum of either anxious or avoidant orientations will develop one set of symptoms, while another similar individual will develop another set. Distal risk factors such as separation from parents, more proximal risk factors such as patterns of emotion regulation, and moderators such as the nature of present relationships and ongoing stress, all work together to determine the trajectory of dysfunction (Nolen-Hoeksema & Watkins, 2011). Attachment theorists do suggest (Ein-Dor & Doron, 2015) that avoidant attachment is more likely to be linked to so-called externalizing disorders, such as substance abuse and antisocial disorders, and that clear associations also exist between the distress and fear associated with attachment insecurity and internalizing disorders, including depression disorder. Based on multiple research, depression in Coronary heart patients has an effect on their sleeping schedule, causes mood swings and creates a sense of loneliness in these patients— fearing death and feeling inefficient is also seen among them which leads into having constant panic and anxiety attacks. It is mentioned in this research that ‘Emotion-focused therapy’ is one of the best solutions that helps reduce the signs of depression in coronary heart patients. This type of therapy psychologically helps the patients to

feel better about themselves and their surroundings, reduces the negative effects and symptoms of depressions and gains their self confidence.

Therefore, it is suggested that due to the characteristics of cardiovascular patients with depression, more attention be paid to the use of emotional therapy.

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