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The Effectiveness of Acceptance and Commitment Therapy on Mental Health, Hopefulness and Meaningfulness in People with Cardiovascular Disease

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Abstract

Objective: Considering the possible role of psychological factors in the process of cardiovascular disease and also the fact that these factors interact with biological agents to produce effects on cardiovascular disease, the present study aimed at evaluation of the effectiveness of acceptance and commitment therapy on mental health, hopefulness and meaningfulness in people with cardiovascular disease.

Method: The present study was a semi-experimental research with pre-test, post-test and control group. The study population included all cardiovascular patients who were referred to Isfahan Cardiovascular Research Center between January to March 2017 and had a history of myocardial infarction or open heart surgery in the last month. Among them, 30 patients were selected to participate in the study. The subjects were randomly assigned to the case and control groups. Data were obtained using Snyder Hope Questionnaire, Meaning-seeking Questionnaire, and General Health Questionnaire and analyzed by repeated measure ANOVA and SPSS.22.

Results: The results indicate that there is a significant difference between the mean scores of acceptance and commitment therapy and control group on physical symptoms (F=355.21, P<0.0001), anxiety (F=183.51, P<0.0001), social functional dysfunction (F=77.42, P<0.0001), depression (F=233.32, P<0.0001), hopefulness (F=28.59, P<0.0001) and meaningfulness (F=134.92, P<0.0001) in people with cardiovascular disease.

Conclusion: In acceptance and commitment therapy, acceptance of psychological inflexibility and avoidance of accepting annoying feelings and thoughts, leads to the strengthening of these feelings and their further thoughts and annoyances. In this approach, patients are helped to focus on the present and identify their values instead of living in the past and future, and to act in accordance with their values and goals, even in spite of annoying thoughts and feelings.

Keywords: Acceptance and Commitment Therapy, Mental Health, Cardiovascular Disease, Hope.

Introduction

Nowadays, chronic diseases are the most important health problem in all countries of the world, including Iran. The most important chronic diseases include heart disease, especially hypertension, cancer, diabetes, and so on. Not only do these diseases have no definitive cure, they also have significant effects on one's mind, behavior, and style (Halliburton, & Cooper, 2015). Having a healthy heart is essential to human life, and cardiovascular disease is not specific to any age or sex, and everyone of any age and sex may be may be affected. However, effective measures can reduce the risk or complications of cardiovascular disease (Shawyer et al., 2017). A study showed that people with cardiovascular disease experience higher levels of stress and depression than others (Smout, 2012) and often lose the meaning of life. Meaning-seeking is the most important motivation of human that distinguishes him from other beings (Hayes, 2016). In critical situations and incurable

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illnesses, Meaning-seeking plays a very important role. Meaning-seeking makes life meaningful to the person and thus helps the individual to cope with stressful situations. Meaning can increase the ability to deal with problems in life by creating meaning and responsibility in the individual (Twohig, & Crosby, 2010).

Cardiovascular disease causes mental, physical, and mental imbalances and imbalances. Cardiovascular disease has a higher impact on hope than other chronic illnesses, and most of the time in this period, the patient feels hopeless. The hopelessness in this disease is probably because a person with cardiovascular disease has a feeling of anxiety, fear and mistrust of the outcome of treatment (Hayes et al., 2013). Hope is a very important factor in the lives of cardiovascular patients. Hope can promote mental and physical well-being and is a vital factor in coping with stress and enhancing quality of life in stressful times. In realistic hope, the patient overcomes the existing problems in an effective and efficient manner by being aware of the problem (Peterson, & Eifert, 2011).

Psychological factors may play a key role in the process of cardiovascular disease. Results from previous studies confirm that these agents interact with biological agents to produce effects on cardiovascular disease (Ciarrochi et al., 2010). For example, when the mind becomes overwhelmed by stress, discomfort, or anxiety, it sends the body a message to reduce energy consumption to cope with the disease; this increases the vulnerability to the disease. According to the World Health Organization (WHO), mental health is a state of complete physical, mental, and social well-being (not just absence of illness or weakness and disability) (Petkus, & Wetherell, 2013). Symptoms of mental health include having interpersonal resources that enable the individual to continue their maladaptive growth and maintain their mental health despite adverse conditions and negative consequences. Therefore, reducing mental health in the individual, in addition to reducing the level of personal and social adjustment, also undermines the safety and mental health of the family and other social groups (Veehof et al., 2011).

There are many treatments for mental health, hope, and meaning-seeking so far, and one of the important new therapies is acceptance and commitment therapy. Instead of changing cognitions, these therapies try to enhance a person's psychological connection to his thoughts and feelings. The main purpose of treatment is to provide mental flexibility and the ability to choose the appropriate response among the various options (Twohig, & Levin, 2017). The simultaneous use of verbal and cognitive processes and its interaction with nonverbal elements used in this treatment will make this treatment more effective and better. This therapy includes exposure-based exercises, language metaphors, and methods such as mental care (Cederberg et al., 2016). This treatment seeks to increase one's mental acceptance of mental experiences (thoughts, feelings) and reduce ineffective control. This treatment teaches the patient to completely eliminate past negative experiences without any internal or external reaction. Acceptance and commitment based therapy is a situational intervention based on communication system theory (Hayes, 2016).

The need for this study is that given the increasing number of people with cardiovascular disease in society and of course the possibility of increasing the number of patients with cardiovascular disease, it seems that cardiovascular disease is an important health problem, especially among people. Therefore, it is necessary to know the current situation of caring for people with cardiovascular disease for proper planning to control cardiovascular disease in society. Based on the results of previous studies on the efficacy and improvement of acceptance and commitment based treatment for a wide range of clinical problems, the present study aimed at evaluation of the effectiveness of acceptance and commitment based therapy on the mental health, hope and meaning-seeking of patients with

cardiovascular diseases.

Method

Participants and Procedure

The present study was a semi-experimental research with pre-test, post-test and control group. The study population included all cardiovascular patients who were referred to Isfahan Cardiovascular Research Center between January to March 2017 and had a history of myocardial infarction or open heart surgery in the last month. The study sample consisted of 30 patients with cardiovascular disease who were willing to participate in the study and met the inclusion criteria. Inclusion criteria included: Patients with a diagnosis of coronary heart disease including stable angina (SA), unstable angina (USA), myocardial infarction (MI), over 70% involvement in at least one coronary artery based on angiography, one month pass through the acute phase of the disease and not being in the acute inflammatory phase, up to the age of 80 years, minimum literacy for reading and writing, normal listening ability, and informed consent to attend therapy sessions; and the exclusion criteria include: acute and autoimmune diseases, serious psychiatric disorders requiring urgent treatment, disrupting the normal course of treatment, failure to cooperate, two consecutive absences during the intervention, and severe physical disability. The subjects were randomly assigned to the case and control groups (each group consisting of 15 subjects). Study participants were asked to complete the research questionnaires in the pretest and posttest stages. The training was conducted in a group setting.

The criterion for the diagnosis of cardiovascular disease in this study was the diagnosis contained in the patient's medical record by a cardiologist. The case group was treated with acceptance and commitment based training in addition to receiving rehabilitation programs for 9 sessions of 90 minutes weekly. Patients in the control group received only rehabilitation programs during this period. Patients in both groups responded to the Hope, meaning in Life, and general health questionnaire both at the time of the intervention and immediately after the intervention. All subjects answered all research questionnaires and demographic characteristics questions before and after the treatment sessions. At the end of the study, the researcher was obliged to perform this intervention for the control group in order to adhere to ethical principles. Ethical considerations of the present study included: 1. All participants received oral information about the research and participated in the research if they wish; 2. Subjects were assured that all information was confidential and would be used for research purposes; 3. For the sake of privacy, the participant's name and surname were not recorded; 4. To ensure the answers, all questionnaires were administered by the researcher.

Measures

Snyder Hope Questionnaire

This twelve-question scale was first developed by Snyder and comprises two subscales of passage and motivation (Pahnke et al., 2014). To answer each question, alternatives were considered completely wrong to completely correct. In this questionnaire, higher scores indicate higher hope and lower scores indicate lower hope. Reliability of this scale has been investigated in the Iranian version by internal consistency method and Cronbach's alpha has been reported 0.89 (Morris et al., 2013). The reliability of this scale was also assessed by internal consistency in this study and Cronbach's alpha was 0.84.

Meaning in Life Questionnaire

The Meaning in Life Questionnaire was first developed by Steger, Frazier, Oishi, and Kaler in 2006. The questionnaire consists of 10 questions with 7 Likert scoring (from completely false to completely true). The questionnaire had 44 items at first, and then, using exploratory factor analysis, the two factors of meaning in life and meaning search in life reached a total of 17 items. Then, in a confirmatory factor analysis, by eliminating 7

items, the final questionnaire reached to 10 items. The sum of the scores of questions 2, 3, 7, 8 and 10 indicates the extent of the individual's effort to find meaning, and the sum of the scores of questions 1, 4, 5, 6 and 9 determine the meaningful level of one's life. There was a slight negative correlation between the two factors of existence and the search for meaning in life (r = -0.19) (Hughes et al., 2017). The validity and reliability of this scale were 0.73 and 0.81, respectively.

General Health Questionnaire

This questionnaire was first developed by Goldberg et al. In 1972. The questionnaire consists of 28 items that are scored on a four-point Likert scale (not at all, usual, more than usual, much more than usual). The questionnaire consists of four subscales of physical symptoms, anxiety, social functioning and depression. The total reliability coefficient of the test was 0.88 and the subscales reliability coefficient of 0.77, 0.81, 0.50 and 0.58, respectively (Smout et al., 2012). The questionnaire

Table 1. Content of Acceptance and Commitment Based Therapy Sessions (19)

Sessions	Objective	Content
1	Understanding the nature of anxiety and coping strategies based on questionnaire results or any other method	Introducing members, Describe the rules of group counseling; Set the main goals; Identify past efforts of clients to deal with anxiety; Describing thoughts and symptoms; The metaphor of hungry tiger; Introducing ineffective control system to clients; A reminder that self-control is problematic; Homework: How did I give up on anxiety?
2	Control as a problem / control of personal events	Explaining metaphor of man in the pit; presenting metaphor of chocolate cake; Paying attention to the passion of the patients; Homework: Mindful Worry
3	Addressing the patient's experience and reinforcing his recognition that self-control is a problem	Explaining and describing metaphor of drawing with a giant; Explanation of metaphor of liar; Emphasizing the importance of raising and nurturing mindfulness; Homework: What is the Concern Performance?
4	Creating an orientation for developing mindfulness skills, as an alternative to worry, and introducing the concept of faulting.	Description metaphor of polygraph; Practicing metaphor of lion, lion, lion; Passion as an alternative to controlling two-scale metaphor; Instructions for Passion; Transparent emotions against vague emotions; Introducing mindfulness through mindful breathing practice; Homework: Continuing Mindfulness Practice.
5	Introducing the importance of values and how to differentiate them in order to achieve specific values.	Introducing Values; Discuss the relationship between goals and values; Select values; Elections vs. Judgments and Decisions; Identify a valuable action (behavioral goal) to perform during the week; Homework: Identifying values and Performing a valuable action.
6	Continuing to develop a mindfulness orientation, and providing more practical ways to cultivate a faulting.	Identifying values; Explaining metaphor of tombstone; Mindfulness skills guidelines؛ Practicing Mindfulness; Homework: Identifying a valuable action (Behavioral goal to perform during the week)
7	Paying attention to the performance of emotions, Teaching the habit of behavioral avoidance, and distinguishing between clear and ambiguous emotions.	Provide instruction and discussion on the performance of emotions; Provide emotional cycle control instructions; Explaining emotional avoidance (hot stove metaphor); Explicit emotions against vague emotions; Homework: practicing mindfulness; Identifying a valuable action (Behavioral goal to perform during the week)
8	Introducing and describing the distinction between observer self and conceptual self, and identifying the relationship between concept making and anxiety and worry.	explanation of metaphor of chess board; Discussing the observer self against the conceptual self; Self observer practice; Identify a valuable action (behavioral goal) to perform during the week; Homework: Performing a valuable action.
9	Describing the idea of commitment, as a means of moving toward specific goals, and strengthening choices to achieve those goals.	Explain commitment as a process; Identify operational steps (smaller goals to serve larger goals); Presenting the metaphor of gardening; Identifying obstacles to achieving goals and aspirations in order to achieve them (Presenting metaphor of bubbles on the road); Presenting the metaphor of passengers on the bus; Presenting the metaphor of climbing the summit; Identify a valuable action (behavioral goal) to perform during the week; Homework: Performing a valuable action.

has sensitivity and specificity of 0.84-88 and 0.77-93 and classification error of 8.2%. The best score is 0, 1, 2, 3 and the best cut is 23 (Morris et al., 2013). The validity and reliability of this scale were 0.77 and 0.79, respectively.

After data collection, descriptive and inferential analyzes were performed using SPSS version 22. Descriptive statistics included frequency tables as well as central and dispersion indices such as mean and standard deviation and inferential statistics including repeated measures Anova.

Results

The mean age (SD) in the acceptance and commitment therapy group was 57.73 (9.39), and in the control group was 53 (9.81).

According to the results presented in table 2 and also the significance level above 0.05, the three groups were similar in variables of sex and education distribution. The mean (standard deviation) age in the acceptance and commitment group was 57.73 (9.39) and in control group was 53 (9.81).

Repeated-measures analysis of variance was used to examine the significant difference between the hope score in the case and control groups. Prior to performing this test, M Box, Spearman's and Levin's tests were used to meet the defaults. Since the M Box test was not significant for any of the variables, so the homogeneity of variance-covariance matrices was correctly observed. Also, the non-significance of any of the variables in Levin test indicated that the equality of inter-group variances was observed and the error variance of the dependent variable was equal in all groups. Also, the results of the Mauchly's Test of Sphericity showed that this test is significant for the hope variable, and the assumption of equality of variances within the subjects (Sphericity assumption) was observed (Mauchly's W = 0.98, df=2, p>0.05).

According to the results presented in table 4, the significance levels of all tests were significant at the level of 0.0001. These results indicate that there is a significant difference between the mean scores of acceptance and commitment based therapy on hope improvement in the case and control groups. Also, the results of Wilks Lambda test with 0.14 and F = 77.57 showed significant differences between the scores of efficacy of acceptance and commitment based therapy on hope improvement in case and control groups at the significance level of 0.0001.

The results presented in Table 5 indicate that analysis of variance is significant for intra-group (time) factor; for the intergroup factor, only for the variables of somatic symptoms and social functional dysfunction were reported significant. These results indicate that regardless of group effect, the effect of time alone is significant. There was also a significant interaction between group and time (F = 12.84, df = 2/84) with an effect of 0.50.

Discussion and Conclusion

According to the findings of the present study, acceptance and commitment based therapy are effective in improving hope in patient with cardiovascular disease. The results of the present study are in line with the results of Bluett et al. (19),

Table 2. Frequency distribution and comparison of demographic characteristics of the studied variables

Variables		Experimental		Control		P-value
Frequency		Percent	Frequency	Percent		
Gender	Female	8	53.3	8	53.3	0.37
	Male	7	46.7	7	46.7	
Education	Under Diploma	9	60	8	53.3	0.12
	Diploma and Associate	4	26.7	4	26.7	
	Bachelor	2	13.3	2	13.3	
	Master	0	0	1	6.7	
Marital status	Single	1	6.7	2	13.3	0.26
	Married	14	93.3	13	86.7	

Table 3. Central indices and dispersion scores of the variables in the two case and control groups

Variables	Group	Pretest		Posttest		Follow up	
		Mean	SD	Mean	SD	Mean	SD
Physical symptoms	Experimental	14.27	3.08	10.33	3.08	10.13	2.92
	Control	13.73	2.08	13.27	2.08	13.27	2.08
Anxiety	Experimental	14.20	2.48	9.80	2.67	9.67	2.79
	Control	15.47	1.55	15	1.51	15.13	1.76
Social functional dysfunction	Experimental	14.33	2.82	9.93	3.10	9.93	3.10
	Control	15.33	1.75	14.67	1.63	14.67	1.63
Depression	Experimental	14.53	2.53	9.93	2.73	9.93	2.73
	Control	15.93	1.79	14.87	1.80	14.73	2.08
Mental health	Experimental	73.80	4.21	67.20	4.88	67.20	5.69
	Control	73.60	5.71	73.33	5.91	73.40	5.90
Hope	Experimental	20	1.81	24.73	1.66	24.60	1.29
	Control	19.60	1.76	20	2.03	19.73	2.12
Meaning-seeking	Experimental	14.53	2.29	18.67	2.16	19.47	2.16
	Control	14.67	1.87	14.87	1.92	15.47	1.88

Table 4. Results of Multivariate Analysis of Variance

Effect	Title of Test	Value	F	Df of hypothesis	Df of error	P	Eta^2
Time	Pillais Trace	0.85	109.68	2	27	0.0001	0.89
	Wilks Lambda	0.11	109.68	2	27	0.0001	0.89
	Hotelling's Trace	8.12	109.68	2	27	0.0001	0.89
	Roy's Largest Root	8.12	109.68	2	27	0.0001	0.89
Time*Group	Pillais Trace	0.85	77.57	2	27	0.0001	0.85
	Wilks Lambda	0.14	77.57	2	27	0.0001	0.85
	Hotelling's Trace	5.74	77.57	2	27	0.0001	0.85
	Roy's Largest Root	5.74	77.57	2	27	0.0001	0.85

and Jennings, Flaxman, Egdell, Pestell & Whipday (20).

In explaining this finding it can be said that the goal of acceptance and commitment based therapy is to embrace unchangeable problems, and to commit to change against problems and behaviors that can be changed. Therefore, in this treatment, cardiovascular patients are advised to accept the existing conditions and to avoid unnecessary conflicts and unwanted thoughts associated with it. In this method, patients are also advised to strive for the realization of other values of life and to apply intangible aspects of life (McCracken, & Vowles, 2014). Therefore, in this treatment, negative attitudes toward self-efficacy are reduced by applying the intact aspects of life as well as by using the disrupted aspects of life and breaking down the avoidances that were once used as a strategy. Attitude towards empowerment is one of the most important aspects of human health that provides a harmonious and integrated relationship between internal forces (Crosby et al., 2012). This attitude is characterized by the characteristics of stability in life, peace, proportion and harmony, and a sense of close connection with self, God, society and the environment. When the attitude towards empowerment is seriously diminished, a person may have mental disorders such as feeling lonely, depressed, and loss of meaning in life (Rector, 2013). Attitude toward empowerment also plays a vital role in coping with stress. This attitude has a positive effect on enhancing life expectancy and quality of life and reducing negative attitude on

Table 5. Analysis of the results of repeated measures ANOVA for comparison of pre-test, post-test and follow-up in case and control groups

Variables	Source of effect	Sum of squares	Df	Mean of squares	F	Significance level	Eta^2
Hope	Time	59.82	2	29.91	66.58	0.0001	0.70
	Time*Group	25.68	2	12.84	28.59	0.0001	0.50
	Error	25.15	56	0.44	-	-	-
	Group	6.94	1	6.94	1.35	0.25	0.04
	Error	144.04	28	5.14	-	-	-
Meaning-seeking	Time	176.15	1.24	141.06	107.95	0.0001	0.79
	Time*Group	220.15	1.24	176.29	134.92	0.0001	0.82
	Error	45.68	34.96	1.30	-	-	-
	Group	100.27	1	100.27	0.91	0.34	0.03
	Error	3082.71	28	110.09	-	-	-
Physical symptoms	Time	643.88	1.10	580.97	355.21	0.0001	0.92
	Time*Group	599.35	1.10	643.88	355.21	0.0001	0.92
	Error	50.75	31.03	1.63	-	-	-
	Group	1173.61	1	1173.61	13.54	0.001	0.32
	Error	2425.77	28	86.63	-	-	-
Anxiety	Time	293.95	1.22	239.90	218.38	0.0001	0.88
	Time*Group	247.02	1.22	201.60	183.51	0.0001	0.86
	Error	37.68	34.30	1.09	-	-	-
	Group	86.04	1	86.04	0.73	0.39	0.02
	Error	3274.84	28	116.95	-	-	-
Social functional dysfunction	Time	383.02	1.05	362.43	82.35	0.0001	0.74
	Time*Group	360.08	1.05	340.73	77.42	0.0001	0.73
	Error	130.22	56	2.32	-	-	-
	Group	418.78	1	418.17	5.20	0.030	0.15
	Error	2248.31	28	80.29	-	-	-
Depression	Time	276.68	1.18	233.92	273.21	0.0001	0.90
	Time*Group	236.28	1.18	199.76	233.32	0.0001	0.89
	Error	28.35	33.11	0.85	-	-	-
	Group	388.54	1	388.54	3.54	0.07	0.11
	Error	30.6724	28	109.54	-	-	-

self-efficacy and reducing anxiety of patients.

In the acceptance and commitment based therapy, it is believed that psychological distress is usually caused by escaping from bad psychological experiences, becoming trapped in our own thoughts, and unable to live up to personal core values. This approach teaches people to quickly change their relationship with their inner troubling experiences and change their behavior, rather than waiting for those troubling thoughts to go away. This method seeks to increase psychological acceptance of mental experiences (thoughts and feelings) and to reduce ineffective control of the interaction (Wicksell et al., 2013). In this way, one is taught that any action to avoid or control unwanted mental experiences is ineffective, or reverses and intensifies them and must be accepted without any internal or external reaction. In the next stage of this training, one strives to increase mental awareness in the moment; in fact, patient learns about all mental states, thoughts, and behavior in the present moment. In the third stage, the patient tries to separate himself

from his mental experiences and act independently. In the fourth step, the patient is instructed to reduce the excessive focus on self-image or personal story (such as being a victim of other conditions) (Öst, 2014). In the sixth stage, the patient is attempted to be trained to engage in behavior for specific goals. The six stages of acceptance and commitment based therapy reduce the four components of emotion expressed (negative attitude, tolerance and expectation, disturbance and intervention, and emotional response). Separation from subjective experiences and reduced focus on self-esteem as sacrifices reduces one's level of expectation (Zettle, 2015). Identifying personal values and committed behaviors improves individual attitudes and reduces interventionist behaviors toward the individual, thereby increasing patients' hope (Bach, 2013).

According to the findings of the present study, acceptance and commitment based therapy are effective in improving cognition in patient with cardiovascular disease. The results of this study are in line with the findings of and Baruch et al. (2012).

In explaining this finding, it can be said that the goal of acceptance and commitment based therapy is to help patients achieve a more meaningful and satisfying life by increasing psychological flexibility. This treatment reminds patients that the problems that arise are just one aspect of life, and that the rest of life remains intact. While patients usually miss other aspects of life when faced with problems (Hayes et al., 2012). Acceptance and and commitment based therapy requires individuals to determine the values of their lives, and commit to moving towards them. Therefore, with regard to the techniques used in the and commitment based therapy, such as paradoxes, meditative exercises, experiential exercises, metaphors, and linguistic conventions (Hayes et al., 2011), meaning-seeking more facilitated and increased. On the other hand, acceptance and commitment based therapy, by incorporating the components of acceptance, teaches the patient to deal with their problem. This helps increase patients' motivation and meaning-seeking and affects treatment outcomes.

According to the results of this study, acceptance and commitment based therapy is effective in improving mental health in patient with cardiovascular disease. Given that cardiovascular disease requires strategies to enable patients to maintain adaptability to the treatment process, psychological training can play an effective role in achieving this goal. Acceptance and commitment based therapies believe that patients are never viewed as defeated, damaged, or hopeless. This approach makes life based on values, and meaningful accessible to all. Also in this way, pain is considered a part of life, not an external existence to get rid of it. In this way, progress is not defined by an absolute level of success, and involves the present and the step forward in a valuable life (Rezaei et al., 2020). In general, it can be said that acceptance facilitates the basic processes of acceptance and commitment based therapy. Commitment processes include the use of experiential exercises and metaphors to help patients express goals that are meaningful in their lives (ie, values), and commit to sustainable behavioral changes are based on these values (ie, committed action). In this therapy, the acceptance of personal thoughts, and emotions is designed to facilitate the process of commitment to values (Barghi Irani et al., 2018). Acceptance and commitment interventions, in addition to providing the conditions for emotion acceptance, help to liberate patients from the wretched struggle and eliminate negative emotions and experiences by employing techniques. This method encourages patients to pursue values and thereafter commit to acting on these values; As a result, it can be said that this leads to increased mental health in cardiovascular patients.

The present study, as with other studies, has limitations that may allow future researchers to take effective measures to counter the threat of internal and external validity of research projects. The main limitations of the present study include: limited results of the study to cardiovascular

patients; The present study was performed only on the cardiovascular population of Isfahan and should be cautious when generalizing the results to other areas and cities. It is suggested that this study be performed in another sample group and its results evaluated and compared with the results of this study. It is suggested that this study be conducted in other cities as well, and the results evaluated and compared with the results of the present study. It is recommended that this research be followed up individually after group training. Considering the impact of acceptance and commitment based therapy training on mental health, hope, meaning-seeking of patients, it is suggested that psychologists make extensive use of acceptance and commitment training. It is suggested that the ministry of health, welfare, hospitals, and the psychology and counseling organization, by conducting acceptance and commitment based therapy workshops, provide the opportunity for psychologists, physicians and nurses to become more familiar with the concepts of acceptance and commitment based therapy.

Concluding remarks

Overall, the results of the present study showed that acceptance and commitment based therapy is effective on mental health, hope and meaning-seeking in patient with cardiovascular disease. In acceptance and commitment therapy, acceptance of psychological inflexibility and avoidance of accepting annoying feelings and thoughts, leads to the strengthening of these feelings and their further thoughts and annoyances. In this approach, patients are helped to focus on the present and identify their values instead of living in the past and future, and to act in accordance with their values and goals, even in spite of annoying thoughts and feelings.

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