THE EFFECTIVENESS OF MINDFULNESS-BASED COGNITIVE THERAPY (MBCT) ON RESILIENCE, QUALITY OF LIFE AND ANXIETY IN PATIENTS WITH ANXIETY DISORDERS

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Abstract

The aim of this study was to determine the effectiveness of mindfulness-based cognitive therapy (MBCT) on resilience, quality of life and anxiety in patients with anxiety disorders. The research method is quasi-experimental with a pretest-posttest design with a control group. The statistical population of the present study included patients with anxiety disorders referred to the counseling clinic in Yazd in 2019, from which 40 patients with anxiety disorders were selected by available sampling method and 20 people were in the experimental group and 20 people were in the control group. The Conner and Davidson Resilience Scale, the WHO Summary Quality of Life Questionnaire and the Beck Anxiety Inventory were data collection tools. The experimental group underwent mindfulness-based cognitive therapy (MBCT) intervention in eight 2-hour sessions, but the control group did not receive any intervention. The results of analysis of covariance show that the observed differences between the mean scores of resilience, quality of life and anxiety of experimental group participants in the post-test stage are significant compared to the pre-test. As a result, mindfulness-based cognitive therapy (MBCT) has a significant effect on resilience, quality of life and anxiety in patients with anxiety disorders.

Keywords: Mindfulness Based Cognitive Therapy (MBCT), Resilience, Quality of Life, Anxiety, Patients with Anxiety Disorders.

Introduction

Anxiety disrupts the lives of millions of people each year and is one of the causes of disability worldwide (1). Anxiety disorders are one of the most common types of mental disorders in individuals that are associated with functional disorders such as dropout, social isolation, alcohol addiction and suicide attempts and increased risk of other mental disorders (2). Anxiety is also a negative emotion that occurs in response to perceived danger, which can be from an external or internal source and be real or imaginary (3). According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (2013), anxiety is an unpleasant emotional experience and also has physical symptoms. Anxiety unlike depression (which is a reaction to the lack of awareness and it is about the past) is a reaction to a threat and it is about the future. Threats can involve danger, lack of support, and unfamiliar stimuli. Stress is also the process by which environmental events threaten or challenge the organism's well-being, and the organism responds to this threat. Anxiety can also increase the likelihood of people becoming more irritable, which in turn increases the likelihood of developing various disorders in people (4).

Anxiety is an extremely widespread and pervasive trait that greatly disrupts a person's life, depriving him or her of all human contact and destroying his or her hope for a peaceful life (5). Anxiety is the fear of an unknown and unfamiliar factor that causes mental distress and sometimes, symptoms of feeling danger, including heart palpitations and paleness. Our minds and psyches are always listening to the alarm signs that exist around us and alert us to the occurrence of unpleasant or damaging events. The mind of all natural human beings is equipped with a mechanism (system) of "foresight" and "abstinence" that protects us as much as possible from the damage of various factors. In the event of an unpleasant accident, the first event is a "feeling of danger" that causes the heart to beat, blood pressure to rise, the skin vessels to constrict (in the form of facial pallor), the respiratory rate to accelerate, and the muscles of the limbs to contract. Together, it prepares the body for the second stage, namely

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"escape" or "struggle" (6). Anxiety is a general, vague, and very unpleasant exciting emotion of worry that is accompanied by one or more physical sensations such as shortness of breath and palpitations. Although it is believed that low anxiety is necessary for daily life, high anxiety also causes serious damage to the body, mind, social relationships, profession and education and deprives a person of having an acceptable quality of health in life. (7).

Resilience is recognized as a factor for successful adaptation to change and the ability to withstand problems (8). Resilience is an individual, family, and social ability to cope with and seek out uncomfortable situations or stresses in life that are not immediately effective, but lead to increase the ability to cope with future difficulties. In other words, resilience is confrontation and positive compromise in response to abnormal conditions (9). Of course, resilience cannot be considered just a passive state of stability and steadfastness in the face of dangers or problems in life. Rather, the company is active and constructive in its environment. In other words, resilience is the ability of a person to establish bio-psychological balance in critical situations (10).

The World Health Organization defines the quality of life as the feeling and perception of one's life situation in the form of a value and cultural system based on one's ideals, expectations, standards and interests, which have physical aspect, mental aspect, independence level, social relations, and personal environment and beliefs (11). Quality of life includes life satisfaction, self-esteem, health and hygienic factors, functional, social and economic and cultural issues. It can also be said that quality of life is a person's mental sense of health status that arises from previous and current experience in life (12). Quality of life is a broad multidimensional concept that usually involves subjective evaluation of both the positive and negative aspects of life (13).

Mindfulness-Based Cognitive Therapy (MBCT) is a therapeutic approach that teaches people how to change the spontaneous thoughts, habits, mental rumination, negative thoughts and feelings and become aware of them and see their thoughts and feelings in a wider perspective. Mindfulness or presence of mind means awareness of thoughts, behaviors, emotions and motivations so that we can better manage and regulate them. In other words, mindfulness means paying attention in a certain way. That is, attention and focus in which three elements are involved: being present, purposeful, without judgment (14).

In this regard, the results of Rahmani and Salehi research in a study have investigated the effect of mindfulness training on reducing anxiety in patients with anxiety disorders. The results of data analysis showed the effectiveness of mindfulness training based on stress reduction in reducing anxiety symptoms in people with generalized anxiety disorder, but its effectiveness was not significant for anxiety symptoms. Mindfulness based on stress reduction by reducing anxiety symptoms, will play an important role in reducing the consequences of generalized anxiety disorder for the patient and their families and can be used as one of the adjunctive, supportive and rehabilitation therapies along with medication (15). Also, Isa Nejad and Azadbakht in a study examined the effectiveness of two approaches of acceptance and commitment and cognitive therapy based on mindfulness on resilience and quality of life of spouses of veterans with post-traumatic stress. Findings of this study showed that mindfulness-based acceptance, commitment and cognition therapy increased resilience and quality of life in veterans' spouses. The results of a one-month follow-up also showed that the effectiveness has been remained. Comparing the two approaches, ACT treatment was reported to be more effective than MBCT treatment.

Discussion: Mindfulness-based acceptance, commitment and cognitive therapy training interventions are effective in improving the quality of life and resilience of spouses of veterans with post-traumatic stress disorder (16).

In line with the research, the main issue of the present study is whether mindfulness-based cognitive therapy (MBCT) has an effect on resilience, quality of life and anxiety of patients with anxiety disorders?

Research method

The research method is quasi-experimental with a pretest-posttest design with a control group. The statistical population of the present study included patients with anxiety disorders referred to the counseling clinic in Yazd in 2019, from which 40 patients with anxiety disorders were selected by available sampling method and 20 people were in the experimental group and 20 people were in the control group. The experimental group underwent mindfulness-based cognitive therapy (MBCT) intervention in eight 2-hour sessions, but the control group did not receive any intervention.

Research tools

Connor & Davidson Resilience Scale

This questionnaire consists of 25 questions and the answers to each question are in the form of a 5-point Likert scale, and for each option, the scores of 0-4 are: completely incorrect (score zero), rarely correct (score 1), sometimes correct (score 2), often correctly (score 3) and always correct (score 4). The score range is between 0 and 100, and the closer the score is to 100, the more resilient it is. Overall resilience score is classified to four levels (0-25), (26-50), (51-75) and (76-100). Cronbach's alpha reliability coefficient of this tool has been reported as 0.87 and also Jafarzadeh et al. In their research have reported the reliability of this scale as 0.92 (17).

Short scale of the World Health Organization on life quality assessment
This scale asseses dimensions related to 1) mental health, 2) physical health, 3) social relationships, and 4) living environment. The questionnaire consists of 26 items with a score of 1 to 5 for each item. The first two questions are related to overall quality of life and health, and the rest of the questions cover four areas of quality of life. Questions (3, 4, 10, 15, 16, 17, 18) physical dimension, questions (5, 6, 7, 11, 19, 26) mental health dimension, questions (20, 21, 22) social relations dimension and finally, questions (8, 9, 12, 13, 14, 23, 24, 25) measure the dimension of the living environment. This tool has been translated and standardized in Iran and its validity has been confirmed for use in Iranian society. Its reliability with intra-cluster correlation index in the field of physical health is 0.77, mental health is 0.77, social relations is 0.75, and in the field of living environment is 0.84. Internal adjustment using Cronbach's alpha test between four domains is 0.77 in the patient group and is 0.73 in the healthy group (18).

Speilberger Anxiety Questionnaire
This questionnaire was developed by Speilberger. This questionnaire consists of two parts: measuring personality anxiety and situational anxiety. This questionnaire contains 40 short questions that are set positively and negatively and each question has 4 options. The options of this test have very low, low, medium and high scales, which are given a score of 1 to 4, respectively. In this test, the score of anxiety can be obtained between 20 and 80. Hosseini has calculated the reliability of this test desirable by Cronbach's alpha method by examining 244 people and he has reported 0.79 for the personality section and 0.94 for the situational section and he has confirmed the validity of its content with the help of some experts in the field of statistics and psychology. In total, scores between 40 and 160 are recorded for each person. Cronbach's alpha coefficient of State and Trait Anxiety Scales reported 0.92 and 0.90, respectively. Also, the retest coefficients of the State and Trait Anxiety Scales were 0.62 and 0.068, respectively (19).

Findings
Descriptive analysis
Table 1 shows the average of research variables in the experimental and control groups and in the two sections of pre-test-post-test. According to the results, the scores of anxiety and depression in the experimental group in the post-test are lower than the pre-test.

Table 1: Mean of research variables in pre-test and post-test

Standard Deviation	Mean	Group	Variables
8.15	49.34	Control	Resilience (Pre-test)
9.85	48.15	Experiment	
8.37	59.57	Control	Quality of Life (Pre-test)
8.38	56.36	Experiment	
6.74	59.45	Control	Anxiety (Pre-test)
6.66	57.68	Experiment	
7.15	47.82	Control	(Post- Resilience test)
7.82	59.37	Experiment	
8.73	57.64	Control	Quality of Life (Post-test)
8.68	70.84	Experiment	
10.97	58.45	Control	Anxiety (Post-test)
10.87	45.68	Experiment	

Table 1 shows the average of research variables in the experimental and control groups and in the two sections of pre-test-post-test. According to the reported results, resilience and quality of life scores in the experimental group in the post-test are higher than the pre-test. Also, the anxiety score in the experimental group in the post-test is lower than the pre-test.

Inferential analysis

Table 2: Kolmogorov-Smirnov test to ensure normal distribution of scores

Significance level	Z Smirnov	Variable
0.060	0.738	Resilience
0.058	0.623	Quality of life
0.062	0.689	Anxiety

As shown in Table 2, the data obtained from the questionnaire have a normal distribution (Kolmogorov-Smirnov test is not significant in any of the variables); therefore, the presumption of normal distribution of data has been observed.

Hypothesis 1: Mindfulness-based cognitive therapy (MBCT) affects the resilience of patients with anxiety disorders.

Based on the results, the effect size was 0.86, which shows that 86% of individual differences in post-test scores are related to the effect of cognitive-behavioral intervention.

Table 3: Covariance analysis of mean scores of depression in experimental and control groups with pretest control

The statistical power	The size of the effect	p	F	The mean of the squares	DF	The sum of the squares	Variable
1	0/78	0/001	151/27	658/45	1	658/45	**Resilience**

As it can be seen, the effect of pre-test is significant and by removing the effect of pre-test, it is observed that there is a significant difference between the control and experimental groups in terms of (resilience) and it increases the resilience of patients with anxiety disorders considering the average of cognitive therapy based on mindfulness.

Hypothesis 2: Mindfulness-based cognitive therapy (MBCT) affects the quality of life of patients with anxiety disorders.

Table 4: Analysis of covariance mean depression scores of experimental and control groups with pre-test control

The statistical power	The size of effect	p	F	The mean of squares	DF	The sum of squares	Variable
1	0/63	0/001	149/67	524/85	1	524/85	**Quality of life**

As it can be seen, the effect of pre-test is significant and by removing the effect of pre-test, it is observed that there is a significant difference between the control and experimental groups in terms of (quality of life) and it increases the quality of life of patients with anxiety disorders considering the mean of mindfulness-based cognitive therapy.

Hypothesis 3: Mindfulness-based cognitive therapy (MBCT) has an effect on reducing anxiety in patients with anxiety disorders.

Table 5: Results of covariance analysis of mean scores of anxiety in experimental and control groups with pretest control

The statistical power	The size of effect	p	F	The mean of squares	DF	The sum of squares	Variable
1	0/65	0/001	83/54	2897/29	1	2897/29	**Anxiety**

As it can be seen, the effect of pre-test is significant and by removing the effect of pre-test, it is observed that there is a significant difference between the control and experimental groups in terms of (anxiety) and it reduces the anxiety in patients with anxiety disorders considering the mean of mindfulness-based cognitive therapy.

Discussion and conclusion

Hypothesis 1: Mindfulness-based cognitive therapy (MBCT) affects the resilience of patients with anxiety disorders.

The results show that the observed difference between the mean resilience scores of the experimental group participants in the post-test stage is significant compared to the pre-test. As a result, mindfulness-based cognitive therapy has a significant effect on increasing the resilience of patients with anxiety disorders. These results are consistent with the studies of Mansouri (20), Hadizadeh et al. (21) and McAllister (8).

In explaining these results, it can be said that resilience is a psychological issue that examines the individual's response to stressful, traumatic, and problematic life situations (9). People have learned by habit to deny many unpleasant experiences in life and in different situations. While in the conscious mind they are taught that instead of

denying and rejecting unpleasant experiences, they accept them as they are and be aware of themselves and their reactions to unpleasant experiences, and in fact the conscious mind teaches people, instead of trying to control or suppress their negative thoughts by force, they accept that there are thoughts and feelings (10).

Hypothesis 2: Mindfulness-based cognitive therapy (MBCT) affects the quality of life of patients with anxiety disorders.

The results show that the observed difference between the mean scores of quality of life of the participants in the experimental group in the post-test stage is significant compared to the pre-test. As a result, mindfulness-based cognitive therapy has a significant effect on increasing the quality of life of patients with anxiety disorders. These results are consistent with the findings of Abbasi (22), Hubert and Williams (23) and Valiani et al. (24)

Quality of life means a person's personal understanding of his health and position in life, which is in line with the culture and value system of society and is related to the ideals, expectations, standards and interests of the individual. This definition shows that quality of life is related to mental or personal evaluation and is rooted in cultural, social and environmental contexts. In other words, the basic concepts considered for this term include happiness and good life, level of satisfaction, satisfaction or dissatisfaction, level of happiness or unhappiness, well-being and satisfaction with life, mental well-being and overall quality of life (25). Mindfulness therapy is a good treatment to increase the quality of life. Mindfulness, which involves solving a cognitive-behavioral problem, real-time awareness of the emotions of mindfulness, and unconditional acceptance of the problem of the disorder, helps people to develop the skills needed to solve problems. Because these patients suffer from multiple cognitive impairments and dysfunctional thoughts, the activation of these thoughts not only causes the person to focus on himself, devalue and despair about the future and thus reduce mood, but also has a great impact on the aggravation of symptoms (26).

This therapy uses mindfulness techniques to help the person experience being in the present and, by breathing and being aware of the body, and accepting thoughts without judging them, realize that his thoughts are simple thoughts before they are a reflection of reality, and these negative and anxious thoughts are not necessarily correct (27).

Hypothesis 3: Mindfulness-based cognitive therapy (MBCT) has an effect on reducing anxiety in patients with anxiety disorders.

The results show that the observed difference between the mean scores of anxiety in the experimental group participants in the post-test stage is significant compared to the pre-test. As a result, mindfulness-based cognitive therapy has a significant effect on reducing anxiety in patients with anxiety disorders. These findings are consistent with the findings of Young (28), Turkestani (29) and Baradi (30).

Explaining the above findings, it can be stated that anxious people usually have an apparent state of concern. One of the important aspects of mindfulness therapy is that people learn to deal with negative emotions and thoughts and experience mental events in a positive way. Kabat Zain et al. stated that mindfulness training, combined with relaxation and mindfulness meditation, is one of the therapies based on reducing anxiety and psychotherapy in which the mental representation of objects in life that is immediately out of human control, is taught through breathing and thinking (31). On the other hand, the presence of the mind means paying attention in a certain way, in the present and without judgment. In the presence of the mind, one learns to be aware of one's mental state at every moment and to focus one's attention in different mental ways. As a result, by accepting their situations without judgment, the extent of this concern is reduced. Mindfulness therapy is an effective ability to reduce anxiety. Cognitive-behavioral stress management program has combined a variety of relaxation, imagery and other anxiety reduction techniques with common cognitive-behavioral approaches, such as cognitive reconstruction, effective coping training, assertiveness training and anger management (32).

Based on the research results, it can be suggested that mindfulness-based cognitive therapy is effective for patients referred to counseling clinics.