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Comparison of the effectiveness of cognitive-behavioral therapy and acceptance and commitment-based therapy on emotion regulation and psychological flexibility in depressed individuals

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Abstract

Introduction: Since cognitive emotion regulation and psychological resilience play an important role in dealing effectively with life problems, disturbing them can lead to emotional disturbances, including major depression; Therefore, the present study aimed to compare the effectiveness of cognitive-behavioral therapy and therapy based on acceptance and commitment on emotion regulation and psychological resilience of depressed people.

Methods: The present study is applied in terms of purpose and semi-experimental in terms of method with pre-test and post-test design with control group. The statistical population of this study included all people with major depressive disorder who referred to the counseling center of Islamic Azad University, Isfahan Branch. A total of 40 people were selected by available sampling method and randomly assigned to experimental and control groups (20 people in each group). Each group underwent cognitive-behavioral therapy and acceptance and commitment-based therapy in 8 sessions of 90 minutes. Using clinical diagnostic interview, Garnfsky and Legerstimord Cognitive Emotion Regulation Questionnaire and Dennis and Vanderwall Psychological Flexibility Questionnaire. Were evaluated. Data were analyzed using independent t-test.

Results: The results showed that cognitive-behavioral therapy and therapy based on acceptance and commitment are effective on emotion regulation and psychological resilience of depressed people in the post-test.

Conclusion: Acceptance and commitment therapy is more effective than cognitive-behavioral therapy on emotion regulation and psychological resilience of depressed people in post-test and follow-up.

Keywords: Acceptance and Commitment Based Therapy, Cognitive Behavioral Therapy, Emotion Regulation, Psychological Flexibility

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Introduction:

Mood depression includes boredom and avoidance of activity or apathy and reluctance and can affect a person's thoughts, behavior, feelings and happiness and well-being. Depressed people can also feel sadness, anxiety, emptiness, hopelessness, helplessness, worthlessness, shame, or restlessness. They may lose interest in activities they once enjoyed, become averse to food, lose their concentration, have trouble remembering details and making decisions, and experience problems in their relationships. and think about suicide, have the intention of it and even commit suicide. Depressive disorder may cause insomnia, excessive sleep, feeling tired and exhausted, digestive problems, or decreased body energy (1). Depression is one of the characteristics of some mental disorders, including major depressive disorder; But it may be a natural reaction to life events, such as the death of a loved one, the effects of physical illnesses or the side effects of certain medications and medical treatments, as long as this condition does not remain for a long period of time. A Diagnostic and Statistical Manual of Mental Disorders diagnosis distinguishes depression as a habit—which a person can experience as part of their life (2). One of the most important depression disorders, especially in an advanced state, is the loss of the ability to think healthy, comfortable, creative, or even concentrate correctly, which in higher levels and in acute depressions, the disorder is aggravated and causes things like madness. Also, depression can be a result of weakening the mind to solve problems, presenting philosophies, etc., to cope with the problems of the soul, so that the mind gives up and has no more hope, resulting in depression (3).

Cognitive regulation of emotion is a kind of cognitive coping strategy that is the reservoir of a person's response and includes all internal and external processes that are responsible for monitoring, evaluating, and correcting emotional reactions, especially its intense and fleeting states (3 and 1). In fact, emotion regulation is the processes through which people can influence what emotions they have and when they express them (4). Cognitive emotion regulation strategies help a person to control and regulate negative emotions, and this method of regulation has a direct relationship with the development and development of mental disorders (4). Past researches have distinguished between 9 cognitive coping strategies, and among these 9 strategies, 5 are adaptive strategies, which are; Acceptance, positive refocusing, refocusing on planning, positive reappraisal, coping with perspective, and 4 strategies are incompatible, which include self-blame, rumination, catastrophizing, and blaming others (3). Today, theorists are of the opinion that the cognitive regulation of incompatible emotions is related to various forms of psychopathology, including anxiety and depression, and for this reason, it should be considered in treatment programs (2).

Many studies (5-7) have confirmed the correlation between cognitive flexibility and depression. Many researches have been done on the concept of cognitive flexibility, but currently there is no consensus on how to define this concept or measure it. Cognitive flexibility, which has attracted the attention and interest of researchers for about four decades (5), grew in the mid-80s at the same time as the theory of schemas, which was rooted in the knowledge of memory, was formed (6). According to the theory of cognitive flexibility, mental health means acceptance of one's own

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internal and external environments and commitment to activities that are stable in terms of value. Different forms of psychopathology are also described based on cognitive flexibility by excessiveness in incompatible behavioral and emotional rules or by value-based behaviors and sensitivity to possibilities related to the future (7). Cognitive flexibility can adapt a person's thinking and behavior in response to changes in environmental conditions (8). Based on this, there is evidence that shows that cognitive flexibility is related to psychological well-being and vulnerability in a wide range of disorders, including depression, anxiety, and general mental disorders (7). Considering that depressed people use rumination to delve into their inner world and reinforce their depression, those who lack cognitive flexibility tend to ruminate when feeling sad because they can hardly find ways to get rid of such feelings. find an alternative confrontation (9). In this regard, Zong, Guo, Guo and Shi, Wang et al. (10) found that students with depressive symptoms experienced a large number of negative events compared to other students, these students perceive stressful events as uncontrollable. Some researches, including Sarapas and Dickstein and Nelson, Maccher, Grimley et al. (11) investigated the relationship between cognitive flexibility and depressive symptoms and found that between the severity of depression and cognitive flexibility, cognitive deficits in attention They have processing speed and long-term verbal memory, there is a relationship. In cognitive-behavioral therapy, the person is encouraged to consider the relationship between their negative thoughts and their feelings of depression as hypotheses that must be tested, and the behaviors that result from their negative thoughts as a place to evaluate the validity or Take advantage of the correctness of those thoughts. This therapy provides a person with extensive information and new experiences of past and present events, so the person has more options to change their mood. Accordingly, CBT therapeutic interventions teach assessment skills and a range of standard cognitive behavioral coping skills that are a guide for flexibility in choosing strategies appropriate to the situation (12). The basic premise of traditional cognitive-behavioral therapies is that disorder or bias in thinking causes psychological disorders and emphasizes the central role of ineffective beliefs and cognitive distortions.

Acceptance and Commitment Therapy attempts to change the goal from avoiding unpleasant emotions to fully experiencing them. These experiences serve to achieve valuable personal goals (13). Recently, researches have examined the effects of acceptance strategies for emotion regulation and psychological flexibility. Acceptance is an important feature of treatment based on acceptance and commitment and is defined as follows: active and conscious acceptance of negative thoughts, emotions and physical sensations that have been created during a person's life; without unnecessary efforts to change their frequency or form, especially when applying such a change causes psychological harm (14). Acceptance and Commitment Therapy has been shown to be beneficial in depressive disorders (15). Acceptance and Commitment Therapy operates on the assumption that avoidance of specific unpleasant experiences (thoughts, feelings, physical sensations) is pervasive, this may be pathogenic and lead to treatment withdrawal (16). In the research (15), the effectiveness of group therapy based on acceptance and commitment on the emotional regulation of depressed people was investigated. In this research, 30 depressed people who visited residential or outpatient treatment centers in Tehran and were in the recovery phase

were selected. The results of the research showed that group acceptance and commitment therapy can significantly and effectively improve emotional regulation and psychological flexibility scores (15).

Research method:

The current research is practical in terms of its purpose and in terms of method, it is a semi-experimental type with a pre-test and post-test design with a control group. The statistical population of this research included all people with major depressive disorder who referred to the counseling center of Islamic Azad University, Isfahan branch. A total of 40 people were selected by available sampling method and randomly divided into two experimental and control groups (20 people in each group). Each group underwent cognitive behavioral therapy and therapy based on acceptance and commitment during 8 sessions of 90 minutes, and using clinical diagnostic interview, Garnofsky and Legerstimord's cognitive regulation questionnaire (17) and psychological flexibility questionnaire of Dennis and Vanderwaal (18). were evaluated. Data were analyzed using independent t-test.

Cognitive emotion regulation scale: The emotional cognitive regulation scale was prepared by Garnevsky and Legerstimord (17) in order to evaluate how to think after experiencing threatening or stressful life events. This scale has 36 items, and the method of answering these items is a five-point Likert scale ranging from 1 (never) to 5 (always). This questionnaire evaluates 9 subscales. These 9 subscales are: 1- blaming oneself; 2- blaming others; 3- Acceptance; 4- rumination; 5- Catastrophic thinking; 6- positive focus again; 7- Positive re-evaluation; 8- Focus on planning: 9- Broader perspective. Credits were reported according to Cronbach's alpha as follows: Positive refocusing 0.75, Positive reappraisal 0.65, Focusing on planning 0.71, Broader perspective 0.74, Blaming others 0.88, Self-blaming 0.85, Rumination 0.80, Catastrophizing 78.0 and acceptance 0.72. Samani and Sadeghi have obtained the alpha coefficient in the range between 0.71 and 0.81 and the factor validity of the construct has shown 0.70 (19).

Cognitive Flexibility Questionnaire (CFI): It was introduced by Dennis and Vanderwaal (18) and is a short 20-question self-report instrument used to measure a type of cognitive flexibility that is necessary for a person's success in challenging and replacing ineffective thoughts with more effective ones, based on a 7-point scale. A Likert scale is scored. This questionnaire is used to evaluate a person's progress in clinical and non-clinical work and to evaluate a person's progress in developing flexible thinking in the cognitive-behavioral treatment of depression and other mental illnesses. The concurrent validity of this questionnaire with Beck's depression (BDI-II) was equal to -0.39 and its convergent validity with Martin and Robin's cognitive flexibility scale was 0.75 (18). In Iran, share et al. (20) reported the retest coefficient of the whole scale as 0.71 and Cronbach's alpha coefficient as 0.90. Cronbach's alpha of the data of this questionnaire in this research was 0.75.

Cognitive behavioral therapy protocol: The treatment used in this study was designed based on the protocol Leahy in the form of 8 sessions and two sessions per week. The sessions were held

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for 90 minutes at the counseling center of Islamic Azad University, Isfahan branch. Each of these sessions included practical exercises. The basis of this training was the group activity of the subjects, which was practiced and evaluated during the training period. The contents of the meetings were as follows:

The first and second sessions focused on topics such as teaching to understand the role of thoughts and feelings, analyzing thoughts, and identifying thinking problems. In the third session, the characteristics of spontaneous thoughts, the techniques of identifying spontaneous thoughts, the difference between spontaneous thoughts and their change, identifying emotions, separating thoughts and emotions, distinguishing between emotions, naming emotions, grading emotions were discussed. In the fourth and fifth sessions, training on cognitive distortions and their identification and practicing cognitive distortions were dedicated, and in line with these goals, worksheets were given to people to do their homework at home. In the sixth and seventh sessions, the techniques of challenging cognitive distortions such as re-documentation, de-catastrophizing technique, circle technique, distance techniques, time machine, looking at the problem from the balcony, the benefit and loss technique of evidence testing were discussed. And in the eighth session, with the topic of evaluating concerns, characteristics of concerned people, identifying concerns, examining the benefits and harms of concerns, turning concerns into predictions, distinguishing between useful and unhelpful concerns, finally, it was dedicated to summarizing the discussion and getting feedback from the group members.

Implementation protocol of ACT sessions: Session 1: welcoming and getting to know and introducing the group members to the therapist and to each other; Expressing people's feelings before coming to the meeting, the reason for coming to this meeting and what they expect from the treatment meetings; expressing previous similar experiences; Stating the rules that must be observed in the group, including: coming on time - not being absent (punctuality in doing homework, etc.); stating the principle of confidentiality and mutual respect among group members; stating the subject of the research and its goals, and stating that on The goals should be thought about; general presentation of educational materials about commitment and acceptance and the results of the pre-test implementation. Session 2: Explaining and stating the principle why the need for psychological interventions is felt? Creating hope and expectation of treatment in reducing these pressures; stating the principle of acceptance and Recognizing feelings and thoughts about problems, giving awareness in this field to accept thoughts as thoughts, feelings as feelings and memories as memories only; presentation of homework in the field of self-acceptance and feelings caused by illness. Session 3: Examining homework The previous session: talking about the feelings and thoughts of the members of the teaching group, so that the members accept them without judging whether their thoughts and feelings are good or bad; teaching and recognizing emotions and their difference from thoughts and feelings, presenting the task of how much self And how much do we accept our feelings and others' feelings? Session 4: Examining assignments, presenting mindfulness techniques and focusing on breathing; Presenting the technique of being in the moment and stopping thinking; Re-emphasizing the principle of acceptance in recognizing

feelings and thoughts, emphasizing recognizing feelings and thoughts with a different perspective, assignments: annoying life events) to look at it in a different way and not see addiction as the end of the work and think of it only as a disease. More. Session 5: Examining assignments; Educating and creating awareness about the difference between acceptance and submission and the awareness to accept what we cannot change; Recognizing the issue of judgment and encouraging members not to judge their feelings; Presenting this technique to be aware of the existence of their feelings by being aware at every moment, just witnessing them but not judging them; Provide mindfulness homework along with non-judgmental acceptance. Session 6: self-presentation and a short survey of the educational process, asking the group members to express their feelings and emotions regarding the assignments of the previous session, teaching and presenting the principle of commitment and its necessity in the process of education and treatment: (Education of commitment to action means next from choosing the valuable and right path regarding reaching peace or accepting any event in life, let's act on it and commit ourselves to doing it); offering the technique of selective attention for more relaxation regarding the influx of negative spontaneous thoughts; New mindfulness practice along with body scan. Session 7: providing feedback and looking for unresolved issues in group members; Identifying behavioral plans regarding accepted matters and creating a commitment to act on them, creating the ability to choose action among different options; In a way that is more convenient, not more practical. Session 8: Examining the assignments, summarizing the contents; Obtaining commitment from members to complete assignments after the end of the course; Introducing yourself to the group members, thanking them for their presence in the meetings.

Results :

The mean and standard deviation of the variables of emotion regulation and psychological flexibility of depressed people in two groups of cognitive behavioral therapy training and treatment based on acceptance and commitment and the control group, separated by pre-test and post-test, are shown in table (1).

Table (1): mean and standard deviation of emotional regulation variables and psychological flexibility

Variable	group	Average		Standard deviation	
		pre-exam	post-test	pre-exam	post-test
Excitement regulation	ACT	134.08	64.25	47.56	29.85
	CBT	148.21	112.35	28.45	22.38
	Control	68	151.47	9.78	21.42
Psychological flexibility	ACT	22.20	18.68	1.95	1.78
	CBT	22.84	20.56	2.15	1.86
	Control	23.68	21.66	1.75	1.87

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As can be seen in Table 1, there have been changes in the pre-test and post-test scores in the variables of emotion regulation and psychological flexibility in both acceptance and commitment-based therapy and cognitive behavioral therapy groups. In treatment based on acceptance and commitment and cognitive behavioral therapy, the mean and standard deviation of emotion regulation and psychological flexibility scores increased significantly in the post-test compared to the pre-test.

Table (2): Comparison of post-test and pre-test scores of emotional regulation and psychological flexibility in three groups of treatment based on acceptance and commitment and cognitive behavioral therapy and control

Source	Dependent variable	SS	DF	MS	F	P
group	Excitement regulation	47611/06	2	23805/53	23/70	0/001
	Psychological flexibility	1604/41	2	802/25	8/50	0/001
error	Excitement regulation	18262/52	37	493/58		
	Psychological flexibility	9/52	37	0/257		
Total	Excitement regulation	121421/35	40			
	Psychological flexibility	2105/22	40			

According to the results of Table 2, after adjusting the pre-test scores, the difference between the groups is significant at the alpha level of 0.01; Therefore, the research hypothesis based on the effectiveness of cognitive behavioral therapy and therapy based on acceptance and commitment on emotional regulation and psychological flexibility of depressed people and the difference between groups in the post-test is confirmed. Tukey's post hoc test was used to accurately check the mean of the groups. According to the results of Tukey's test, the average difference between the pre-test and post-test scores of emotion regulation in the cognitive behavioral therapy group was lower than the control group, and the average difference between the scores of the treatment group based on acceptance and commitment was lower than the control group (p 0.001. In other words, the group Cognitive-behavioral therapy and therapy based on acceptance and commitment have been effective on emotion regulation compared to the control group. However, no significant difference was found between the average pre-test-post-test scores of the group of cognitive-behavioral therapy and therapy based on acceptance and commitment. Also, based on the results Tukey's post hoc test, it can be said that there is no significant difference between the effectiveness of cognitive behavioral therapy and therapy based on acceptance and commitment in increasing psychological flexibility.

Discussion and conclusion

The present study was conducted with the aim of comparing the effectiveness of cognitive behavioral therapy and therapy based on acceptance and commitment on emotional regulation and psychological flexibility of depressed people. The results showed that cognitive behavioral therapy and therapy based on acceptance and commitment are effective on emotional regulation and psychological flexibility of depressed people in the post-test. This finding is in agreement with the findings of (21-25) is consistent. In explaining this finding, it can be said that the intervention of cognitive behavioral group therapy in depressed people because it has empowered them in mental dimensions and increased their recovery and mental health, and because the group therapy was implemented, the cognitive The individual and social aspects of the members were recognized more with the help of each other and were actually put to the test and these people recognized the correctness and severity of the dimensions of problems in socialization and individual life. In this treatment, people learned to improve their cognitions, feelings and reactions to the emotional state and communication with the society, and by looking at the bright side of the issues and realistic and positive evaluation due to their conditions, their tolerance and flexibility against Individual and social challenges will increase. Finally, it can be said that cognitive behavioral group therapy, through the detection of cognitive errors, challenges with them and behavioral testing, has changed the content of women's negative thoughts about illness, themselves and society, and this type of therapy has moderated negative emotions about themselves and society. And by discovering and correcting the negative thoughts and illogical thoughts of these people, through organizing the process of dysfunctional thoughts and beliefs such as the need for approval from others, high expectations of oneself, blaming oneself for being guilty of illness, emotional problems, worries associated with anxiety It reduced depression and helplessness towards change. It can also be said that the treatment based on acceptance and commitment, considering that during the intervention, it uses the skills of mindfulness, acceptance and cognitive breakdown to increase psychological flexibility, and the result of psychological flexibility is nothing but increasing the client's ability to connect with their experience in the present time and what is possible for them at that moment and to act in a way that is consistent with the chosen values. This present-tense experience helps clients experience change as it is, not as the mind constructs it. In fact, through treatment based on acceptance and commitment, it increases people's ability to respond adaptively and resiliently to life events in the presence of threatening thoughts and feelings that lead to psychological inflexibility, depression and lack of mental health in dealing with problems. Another explanation is that the main goal of treatment based on acceptance and commitment is to create and increase flexibility. It means creating the ability to choose an option from among different options that is more appropriate, which increases resilience, psychological well-being, and a sense of peace. Also, therapy based on acceptance and commitment helps people identify life tensions, which reduces psychological and emotional arousals, adaptive coping with sources of depression and stressful events, and getting help when needed and improving social skills. Therefore, treatment based on acceptance and commitment improves mental health and cognitive regulation of emotion.

Limitations: due to the corona situation, the opportunity to examine the long-term effects of the research was not provided. Among other limitations were the small number of subjects and their evaluation tools. Therefore, it is better to be cautious in generalizing the results.

Conflict of interest: The authors hereby declare that this work is the result of an independent research and does not have any conflict of interest with other organizations and persons.

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