The Effect of Acceptance and Commitment Therapy on Postpartum Depression

Kabul ve Kararlılık Terapisinin Doğum Sonrası Depresyona Etkisi

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ABSTRACT

Background and purpose: Postpartum depression is one of the most important psychological problems of mothers in postpartum period, which may disrupt the relationship between the mother and newborn. Therefore, this study has been conducted aimed to investigate the effect of acceptance and commitment therapy on postpartum depression.
Materials and methods: The present study was a clinical trial with a pre-test, post-test, and two-month follow-up. 52 postpartum women referring to comprehensive health centers of Arak with moderate depression scores were selected by convenience sampling and randomly assigned to one of two groups of intervention (n = 26) and control (n = 26). Data collection tool was demographic questionnaire and Beck Depression Inventory. Beck Depression Inventory was completed before, immediately and two months after the intervention by the groups. For the intervention group, 8 sessions of 90-minute acceptance and commitment therapy were held once a week. The data were analyzed using software SPSS24 and Chi-square and Mann-Whitney U tests.
Results: Depression score immediately after the intervention in the intervention group (17.3 ± 4.2) and control (26.5 ± 3.1), two months after the intervention in the intervention group (12.4 ± 3.8) / 12 and control (25.61 ± 3.4) showed a significant difference (p-v <0.05).
Conclusion: The results showed that acceptance and commitment therapy significantly reduced postpartum depression compared with the control group.

Keywords: Acceptance and commitment therapy, postpartum depression.

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ÖZET

Giriş ve amaç: Doğum sonrası depresyon annelerin doğum sonrası dönemdeki en önemli psikolojik sorunlarından biridir ve anne ile yenidoğan arasındaki ilişkiyi bozabilir. Bu nedenle bu çalışma, kabul ve kararlılık terapisinin doğum sonrası depresyon üzerindeki etkisini araştırmak amacıyla yapılmıştır.
Gereç ve yöntemler: Bu çalışma, ön test, son test ve iki aylık takipten oluşan bir klinik çalışmaydı. Arak'ın kapsamlı sağlık merkezlerine başvuran orta düzeyde depresyon puanına sahip 52 doğum sonrası kadın, uygun örnekleme yöntemiyle seçilmiş ve müdahale (n=26) ve kontrol (n=26) olmak üzere iki gruptan birine rastgele atanmıştır. Veri toplama aracı demografik anket ve Beck Depresyon Envanteri idi. Beck Depresyon Envanteri, gruplar tarafından müdahaleden önce, hemen ve iki ay sonra doldurulmuştur. Müdahale grubuna haftada bir kez 8 seans 90 dakikalık kabul ve kararlılık terapisi uygulanmıştır. Veriler SPSS24 yazılımı ve Ki-kare ve Mann-Whitney U testleri kullanılarak analiz edildi.
Bulgular: Müdahale grubunda (17.3 ± 4.2) ve kontrolde (26.5 ± 3.1) müdahaleden hemen sonra depresyon skoru, müdahaleden iki ay sonra müdahale grubunda (12.4 ± 3.8) / 12 ve kontrolde (25.61 ± 3.4) önemli fark (p-v <0.05).
Sonuç: Kabul ve kararlılık terapisinin kontrol grubuna kıyasla doğum sonrası depresyonu önemli ölçüde azalttığını göstermiştir.

Anahtar Sözcükler: Kabul ve kararlılık terapisi, doğum sonrası depresyon.

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INTRODUCTION

Today, depression is one of the most common psychiatric disorders and the common problem of the human life, and is seen in almost all countries and cultures (1). The postpartum period is tense enough to cause mental diseases (2). One of the most common postpartum mental disorders is postpartum depression (3). Postpartum depression is the most common post-natal psychological complexity and refers to depression that starts in the postpartum period or continued depression during pregnancy, which continued into postpartum period (4), along with reduced interest and pleasure in activities, with simultaneous occurrence of five symptoms including anorexia, inability to make decisions, crying or flushing, fatigue, and disorder of the physical order, for at least 2 weeks and more often continuously (5). One of the most prominent characteristics of postpartum depression is the rejection of a baby, which is often due to excessive anger of the mother. An important and prominent problem is the presence of psychological symptoms such as suicide and confusion in the pattern of sleep, which affects all aspects of the quality of life of the mother (6). The prevalence of postpartum depression is between 13% and 20% in the first few weeks after childbirth (7). In a meta-analytic study on 41 Iranian papers, the prevalence of post-partum depression was reported 25.3% (8). Postpartum depression has devastating effects on mother, child and family (9). The symptoms may include changes in mood, sleep and appetite disturbance, psycho-motor disorders, fatigue, reduction in concentration, sense of guilt and lack of enjoyment of work and activity (10); as a result, the mother is not able to play a role as a mother and spouse and in severe cases and without treatment, this leads to suicide and killing child (11). Postpartum depression should be distinguished from the transient symptoms of postpartum mourning, which is characterized by crying, irritability, lack of sleep and emotional reactions of the mother (12). To date, there is no general agreement on the main cause of postpartum depression, but several factors such as hormonal, biological, psychological, social and cultural factors provide a basis for the development of this disorder (13). There are medicinal and non-medicinal treatments for this disorder (14). The medicinal treatment that is welcomed in the breast feeding period is sertraline, which usually does not have much effect on this (15), but since mothers are afraid of taking psychiatric medications during pregnancy and postpartum, they usually stop treatment arbitrarily (16). Today, psychotherapy methods such as cognitive-behavioral and acceptance and commitment therapies are used for the treatment of various types of mental diseases such as anxiety, depression, post-event stress disorder, postpartum depression, and etc. (17). Mindfulness and acceptance-based treatments are known as the third cognitive-behavioral wave. Mindfulness and acceptance-based interventions with empirical support include Acceptance and Commitment Therapy (ACT), Dialectical Behavior Therapy (DBT), Mindfulness-Based Cognitive Therapy (MBCT) and Mindfulness-Based Stress Reduction (MBSR) (18 and 19). The purpose of Acceptance and Commitment Therapy is to help the authorities to reach a worthwhile, complete and satisfying life through psychological flexibility (20). In this treatment, psychological flexibility is to increase the ability of referred to connect with experience at the present time, choose according to what is possible for the person at the moment and act in a manner consistent with the chosen values (21). In other words, the ability to communicate with the present completely and as an aware person, and the change or continuity of behavior serves the worthy goals of the individual (22). Psychological flexibility in ACT is created through the six main and underpinning processes of acceptance, defusion, self as the context in the present, values and the committed action. These processes are interconnected and affect each other to reinforce psychological flexibility (23). The six main processes of acceptance and commitment therapy include:

1. Cognitive defusion: Learning that we should not be controlled by our thoughts, but recognize thoughts without engaging with their content, and accept that our thoughts are separated from us and are nothing more than temporary private events.
2. Acceptance: Letting thoughts coming without fighting them and creating a space for emotions, senses, desires and other unpleasant private experiences without trying to change, escape from them, and re-focus on them.
3. Contact the moment: Mindfulness and awareness of here and now and bringing awareness into an experience here and now with openness, interest, acceptance, focus on it, and full engagement with what's going on.
4. Self as a Context: Learning to achieve continuity of consciousness that is not changed, and constant awareness of self that is not changed and is always present and resistant to injury. From this perspective, the experience of thoughts, feelings, memories, desires, senses, images, roles, and / or even the physical body is something different from the person himself. These phenomena are changing, but the person himself is constantly fixed.
5. Values: Definition of things that are important to the person and are his goals.
6. Commitment: Setting goals based on values and commitment to them, with the presence of disturbing thoughts or emotions that might arise.

The six above processes are the basis for acceptance and commitment therapy, which are described below (24).

Acceptance and commitment therapy takes its name from the main message, accept what is beyond the control of a person, and commit to a practice that enriches life. The purpose of acceptance and commitment therapy is to help the referred to create a rich, complete and meaningful life while accepting the suffering that life itself inevitably has (25). In general, therapists, with an emphasis on acceptance and commitment therapy, encourage the referred in addition to identify, have a beneficial fight with psychological content with a higher acceptance position in order to be able to move in a valuable direction for their treatment (26). The study results on applications of acceptance and commitment therapy have shown that interventions that reduce the avoidance of experience and help individuals to recognize and commit themselves to pursuing valuable goals are useful for solving various problems in life (27). In the application of acceptance and commitment therapy to anxiety disorders teaches the referred to end their struggle with anxiety-related discomfort and control their engagement in activities that bring them closer to the chosen goals of life (values). Acceptance and commitment therapy instead of teaching more and better strategies for change by reducing unwanted thoughts and feelings, teaches the referred to acquire skills for awareness and observance of unpleasant thoughts and feelings as they are (28 and 29).

Recent studies based on acceptance and commitment therapy have shown that this treatment can be used as a suitable treatment for depression, post-event stress disorder, panic disorder, chronic pain, job stress, obsessive compulsive disorder, breast cancer and diabetes (30).

Studies have shown that mindfulness education to patients with mood and anxiety disorders can significantly improve mental health and reduce depression. It has also been shown to be useful as an interventional method for a wide range of chronic psychiatric disorders (31). In a study by Tabrizi et al. (2017) about acceptance and commitment therapy with marital adaptation, the results were positive and effective (32).

Studies on acceptance and commitment therapy for depression disorders show a significant effect of this method. However, no study has been yet conducted on the effectiveness of this treatment on postpartum depression in the country; therefore, we attempted to study the effect of acceptance and commitment therapy for postpartum depression.

MATERIALS and METHODS

The present study was a clinical trial with a pretest-posttest design with two-month follow-up and the control group. The research population composed of women with postpartum depression referred to the health centers of Arak during the period of 2-6 months since delivery.After obtaining permission from the Research Council and Ethics Committee of Arak University of Medical Sciences and coordinating with the health center of Arak, demographic information and Beck depression questionnaires were provided to the women referred to the health centers after delivery with the study inclusion criteria, such as age 18-45 years, the period of 2 to 6 months since delivery, at least Diploma degree, no mental disease such as psychosis, not taking psychiatric medicines, according to the mother, the absence of medical conditions, no previous history of depression and satisfied with the study. The women who were satisfied with the study according to Beck Depression Inventory (score 20-28) (33 and 34) were selected by convenience sampling method. The sample size was estimated using the formula "sample size for two independent groups"; according to the sample size formula, with a 10% chance of sample drop, and $\alpha = 0.05$ and $\beta = 0.2$, the sample size was estimated for each group of n = 26; 52 participants were randomly divided into two groups of n = 26.

Before the onset of the coordination sessions, a briefing was made between the samples and a detailed description of the research objectives was given. The number of participants in the intervention group was considered n = 26 (two groups of n = 13), 8 acceptance and commitment therapy sessions of 90 minutes once a week. At the end of the eighth session, the questionnaire was given to the participants and two months after the last session, the level of depression was measured. After the completion of the briefing sessions, a brief summary of the sessions was provided to the intervention and control groups. It should be noted that the study exclusion criteria were: being absent in 1 session or and more, unpredictable events that exacerbated depression such as a relative's grief, a history of depression and an unwillingness to continue to participate in a study that did not occur in the present study. Beck Depression Inventory was first introduced by Beck in 1961, then used by *Mendelssohn* and Muck. It was revised in 1971 and published in 1978. In the recent form, the questions of the questionnaire were clearer, but this form has a correlation more than 0.94. In 1996, a fundamental revision was made to cover a wide range of symptoms in this test. The questionnaire consisted of 21 questions, designed to measure the feedback and symptoms of depressed patients, and mainly based on the observation and presentation of common attitudes and symptoms among depressed mental patients. The content of this questionnaire was a comprehensive semantics of depression and emphasized cognitive content. Beck Depression Inventory was completed in 5 to 10 minutes, with 21 questions, and the subjects responded 0-3 on 4-option Likert scale. By examining the researches using this tool, Beck et al. found that the coefficient of validity was varied from 0.48 to 0.86 using re-test in terms of the interval between running times and the type of population tested. The minimum score of this test was 0 to 3, and the maximum score was 63. By gathering scores of a person, his score was achieved directly. The following scores were used to show the overall level of depression:
0-19: Mild depression
20-28: Moderate depression
29-63: Severe depression (34 and 35).

This study's Ethics code was IR.Arakmu.Rec.1396.175 from Arak University of Medical Sciences Research with IRCT20180118038424N1 Clinical Trial Registration No. The introduction letter was received for Arak Health Center. All women participating in the project completed the consent form and participated fully in the project. At each stage of the study, the participants could withdraw from the company. At the first training session, the importance of confidentiality was recalled according to the groups, and problems of the members of the groups' members, and it was explained that if the symptoms of depression increased and there is a need for a psychiatrist, they would be excluded from the study and treated. The present study showed no sample drop. After completing the forms and assigning the code, the data were entered *software* spss24. For the quantitative data, central and dispersion (mean and standard deviation) indicators were used, and for the qualitative data we used frequency. Chi-square and Mann-Whitney U tests were used. The error rate of the first type was considered .05%.

Session	Session heading and topic of discussion
1	Introduction and explanation of goals and plan of treatment (acceptance and commitment therapy) and importance in the present
2	The creative disappointment of control strategies to deal with depression, short and long term strategies
3	Control is a problem not a solution
4	New way to live with depression
5	Thoughts' separation (defusion)
6	Observe self (self as a context)
7	Identify the important values of life and move towards them
8	Commitment and relapse prevention

Ethical considerations

In this study, all the principles of ethics have been respected.

Results

In the present study, 52 participants (26 participants in the intervention group and 26 participants in the control group) completed the study and did not have any sample drop.

According to Table 1, Mann-Whitney U test and mean comparison, in terms of age no significant difference was found in two groups (p-v>0.05).

Table 1 - Comparison of demographic information of mothers with postpartum depression between the intervention and control groups

Demographic information	Group: Intervention M SD	Group: Control M SD	p-value
The mother's age (year)	27.9 (± 4.7)	28.5 (±5.6)	0.6
Time interval from last delivery (month after delivery)	3.8 (0±0.7)	3.9 (±0.6)	0.6

According to Table 2, a similar frequency was found in terms of occupation and educational level in two groups (p-v>0.05).

Table 2 - Frequency distribution of education and occupation in the studied groups

Education / Occupation	Group: Intervention % (No.)	Control % (No.)	p-value
Diploma	%69.2 (18)	%50 (13)	0/2
Associate degree	% 3.8 (1)	%15.4 (4)	
B.A.	%26.9 (7)	%34.6 (9)	
Housewife (n)	%81(21)	%81(21)	
Employee (n)	%19 (5)	%19 (5)	

According to Table 3, no significant difference was found between the mean scores of postpartum depression before the intervention in the intervention and control groups (p-v <0.05).

After the intervention, a significant statistical difference was found in the mean score of postpartum depression between two the intervention and control groups and in the intervention group, the mean score of depression after intervention was reduced compared to control group (p-v<0.05).

Table 3 - Comparison of postpartum depression mean in intervention and control groups

	Group: Intervention Mean depression score SD	Control Mean depression score SD	p-value
Before the intervention	24.3 (± 4.2)	26.5 (± 3.1)	0.6
Immediately after the intervention	17.3 ±4.2	26.5 (±3.1)	0.03
2 months after the intervention	12.4 (±3.8)	25.61 (±3.4)	0.001

According to Table 4, the severity of depression was significantly different in comparison to immediately and two months after the intervention (p-v<0.05).

Table 4 - Comparison of the severity of postpartum depression in the intervention and control groups

	Group: Intervention Mild depression % (frequency)	Control Mild depression % (frequency)	Intervention Moderate depression % (frequency)	Control Moderate depression % (frequency)	p-value
Depression before the intervention	0% (0)	0% (0)	100% (26)	100% (26)	0.99
Depression after the intervention	80.8% (21)	0% (0)	19.2% (5)	100% (26)	0.001
Depression 2 months after the intervention	88.5% (23)	11.5% (3)	11.5% (3)	88.5% (23)	0.001

DISCUSSION

The present study was conducted aimed to investigate the effect of acceptance and commitment therapy on postpartum depression. The mean score of depression in the intervention group indicated that acceptance and commitment therapy was effective on postpartum depression. Two months after the intervention, in order to evaluate the sustainability of the treatment, the mean score of postpartum depression was evaluated in the intervention and control groups, which the mean score of depression immediately after the intervention reduced about 5 points, indicating the sustainability of the treatment. No significant difference was found in the mean score of postpartum depression in the intervention and control groups before the intervention, but after intervention, a significant difference was found in the mean score of postpartum depression score between the intervention and control groups.

The results of the present study were consistent with the study result conducted in 2017 on the efficacy of acceptance and commitment therapy on anxiety and depression in pregnant women by uterine fertilization. The results indicated that this method was effective and reduced the rate of depression and anxiety (33). The factor that distinguishes this study from the present study is the difference in sample selection that pregnant women with artificial fertilization pregnancy have been included and simultaneously intervened on their anxiety and depression, but in the present study, we intervened on postpartum depression, but both studies indicated effective acceptance and commitment therapy, and on the other hand, the study results based on the effectiveness of acceptance and commitment therapy on the treatment of postpartum depression and psychological flexibility of mothers indicated that acceptance and commitment therapy significantly reduced depression and increased psychological flexibility. This therapeutic approach was recommended for those with postpartum depression disorder (29). In a study entitled "The Effectiveness of Group Therapy based on Meta-cognitive Pattern of Mindfulness on Postpartum Depression", in 2012, researchers, after two-month follow up, concluded that throughout the sessions, the continuation of the exercises for patients and the role of exercises in the long run had been emphasized to maintain their effect, and patients fulfilled in this regard, which led to a continuation of their improvement that is consistent with the results of the present study after two-month follow-up of treatment (34). Depending on the areas, Beck Inventory was evaluated. The results of a study that was conducted in 2017 entitled "The Effect of Acceptance and Commitment Therapy for Perinatal Anxiety Disorders" showed that mindfulness sessions focused on acceptance processes, cognitive imagery, awareness of the present moment, identification of values, and goal setting, and the intervention result was significant (35). This study was with the acceptance and commitment therapy the level of depression reduced.

CONCLUSION

It seems that acceptance and commitment therapy can be effective on reducing depression as a non-medical, low-cost, and low-complication treatment. In acceptance and commitment therapy, training of acceptance, defusion, awareness, the need to move toward oneself as a context and debate about values, goals of the individual, and commitment, all reduced the postpartum depression. In this treatment, the mothers were taught how to abandon their avoidance strategies and accept instead of trying to control it. Although avoiding an experience is effective in the short term, it is not effective in the long term and can lead to a lack of flexibility and more distress and anxiety. using acceptance and cognitive defusion they learned to experience negative thoughts in a new way, and they were helped to recognize the values of their life. On the contrary, their previous behaviors, which were avoidable, began to move in the direction of their values, despite their unpleasant thoughts and feelings, as the effect of thoughts on their life diminished. During the treatment, we had mindfulness exercises and the need for moving toward self as a context with those who experienced unpleasant inner events in the present, simply and without judgment, were able to separate themselves from unpleasant thoughts and memories. And they were helped to strengthen their self-observer rather than conceptualized themselves.Acceptance and commitment therapy should be studied and compared with other depression treatments in women with postpartum depression. Acceptance and commitment therapy on couples' postpartum depression should be done either as a group or individual.

Due to the time limit, it was not possible to study the effect of acceptance and commitment therapy on the outcome of depression over a longer period of time and its effect on couples' relationships. Therefore, it is recommended to study the effects of the above approach on the results of marital relationships in future research. It is suggested that health centers should be provided with a psychotherapy and counseling department to provide mothers with psychological counseling along with medical examinations. Additionally, the introduction of training courses on acceptance and commitment therapy approach is recommended for officials and staff in health centers.

Conflict of interest
No conflict of interest was declared by the authors.

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