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Research Article

The Effectiveness of Acceptance and Commitment Group Therapy on the Improvement of Postpartum Moderate Depression

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Abstract

Background and Purpose: Postpartum depression is one of the most important psychological problems of mothers in the 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 group therapy on postpartum moderate depression.

Materials and Methods: The present study was a clinical trial with a pre-test and post-test. 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 intervention (n = 26) and control (n = 26). The data collection tool was a demographic questionnaire and Beck Depression Inventory. Beck Depression Inventory was completed before and immediately 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.

Ethical Considerations: In this study, all the principles of ethics are respected.

Results: Depression scores immediately after the intervention in the intervention group (17.3 ± 4.2) and control (26.5 ± 3.1) 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 Group Therapy; Postpartum Moderate Depression*

Introduction

Nowadays, depression is one of the most common psychiatric disorders and a common problem in human life and is seen in almost all countries and cultures [1]. The postpartum period is tense enough to cause mental diseases [2]. Maternal postpartum depression (PPD) is one of the most common forms of depression, affecting approximately one in nine women [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 the postpartum period [4]. Depression is a common complication of pregnancy and the postpartum period is defined as the period of pregnancy up to 12 months postpartum with approximately 15% of women meeting the diagnostic criteria for depressive disorders. The prevalence of depression varies greatly between countries and regions. The current version of the DSM-5 (American Psychiatric Association) defines postpartum depression (PPD) as a major depressive episode 'with per Partum onset' and specifies that the 'onset of mood symptoms occur during pregnancy or the 4 weeks following delivery. Postpartum depression symptoms in women can manifest as a sleep disorder, mood swings, sadness and crying, fear of injury, loss of appetite, serious concerns about their child, a lack of interest in daily activities, and even suicide and death. About 9% of women with PPD have suicidal thoughts [5]. One of the most prominent characteristics of postpartum depression is the rejection of a baby, which is often due to the 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 overall prevalence of PPD was 27.1% among mothers in southwestern Uganda [7]. In a meta-analytic study on 41 Iranian papers, the prevalence of postpartum depression was reported at 25.3% [8]. Postpartum depression has devastating effects on the mother, child, and family [9]. The symptoms may include changes in mood, sleep and appetite disturbance, psychomotor disorders, fatigue, reduction in concentration, sense of guilt, and lack of enjoyment of work and activity [10]. 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 [11]. 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 [12]. There are medicinal and non-medicinal treatments for this disorder [13]. The medicinal treatment that is welcomed during the breastfeeding period is sertraline, which usually does not have much effect on this [14], but since mothers are afraid of taking psychiatric medications during pregnancy and postpartum, they usually stop treatment arbitrarily [15]. 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, etc [16]. 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) [17-18]. The purpose of Acceptance and Commitment Therapy is to help the authorities to reach a worthwhile, complete, and satisfying life through psychological flexibility [19]. In this treatment, psychological flexibility is to increase the ability of referred to connect with experience at present, choose according to what is possible for the person at the moment, and act in a manner consistent with the chosen values [20]. In other words, the ability to communicate with the present completely and as an aware person, and the change or continuity of behavior serve the worthy goals of the individual [21]. Psychological flexibility in the 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 [22]. 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 come 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 [23-24].

Acceptance and commitment therapy takes its name from the main message, accept what is beyond the control of a person, and commits to a practice that enriches life. The purpose of acceptance and commitment therapy is to help the referred 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 identifying, to have a beneficial fight with psychological content with a higher acceptance position to be able to move in a valuable direction for their treatment [26-27]. 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 pursue valuable goals are useful for solving various problems in life [28]. 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 [29-30].

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 [31].

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 [32]. In a study by Tabrizi., *et al.* (2017) about acceptance and commitment therapy with marital adaptation, the results were positive and effective [33].

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 group treatment on postpartum moderate depression in the country; therefore, we attempted to study the effect of acceptance and commitment to group therapy for postpartum depression.

Materials and Methods

The present study was a clinical trial with a pretest and post-test design in the control group and intervention group. The research population was composed of women with postpartum moderate depression referred to the health centers of Arak 2 - 6 months after 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 (score20-28) [34-35] 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 held $n = 26$ (two groups of $n = 13$), 8 acceptance and commitment group therapy sessions of 90 minutes once a week.

At the end of the eighth session, the questionnaire was given to the participants, and the level of depression was measured. After the completion of the sessions, a 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 more, unpredictable events that exacerbated depression such as a relative's death, 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 correlates with 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 a 4-option Likert scale. By examining the research using this tool, Beck., *et al.* found that the coefficient of validity varied from 0.48 to 0.86 using a 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 the 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. 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 the problems of the members of the groups, 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 through software spss 24. 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 (0.05%).

Statistical analysis

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.

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	A 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

Table A

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

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

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

According to table 2, 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 the intervention was reduced compared to the control group (p-v < 0.05).

	Group		P-Value
	Intervention Mean depression score SD	Control Mean depression score SD	
Before the intervention	(4.2 ±) 24.3	(3.1±) 26.5	0.6
Immediately after the intervention	17.3 ±4.2	26.5 (±3.1)	0.03

Table 2

Discussion

The present study was conducted aimed to investigate the effect of acceptance and commitment group therapy on postpartum moderate depression. The mean score of depression in the intervention group indicated that group therapy was effective on postpartum moder-

ate depression as No significant difference was found in the mean score of postpartum depression in the intervention and control groups before the intervention.

The results of the present study were consistent with the study result conducted in The effect of acceptance and commitment therapy on anxiety and depression in patients with cancer in 2021. In this study, a total of 15 studies entered the final review with a total sample size of 965 of which 470, and 495 were in the ACT, and the comparison groups respectively. The results of the study showed that ACT in all studies reduced the mean score of anxiety and depression after treatment, as well as during follow-up. This reduction was significant in most studies. The present systematic review study showed that ACT can be used as an appropriate intervention in improving the psychological state of patients with cancer. In most studies that measured the effect size, the effect of the intervention on anxiety and depression was observed (36). In addition, the results of the present study are consistent with the results of a study conducted in 2021 entitled Peer-Delivered Cognitive-Behavioral Therapy for Postpartum Depression. In this study, A sample of 73 mothers living in Ontario, Canada, were randomized into experimental and waitlist control groups between March 2018 and February 2020. Participants were ≥ 18 years of age, had an infant < 12 months old, were fluent in English, and scored ≥ 10 on the Edinburgh Postnatal Depression Scale. The experimental group completed the 9-week group CBT intervention immediately after study enrollment, while the control group did so after a 9-week waiting period. All outcomes were assessed at enrollment (n = 54) and 9 weeks later (n = 38). Outcomes were assessed in the experimental group at 6 months to assess treatment stability. Peer-delivered group CBT for PPD led to clinically and statistically significant improvements in symptoms of depression ($F_{1,47} = 22.52$, $P < .01$) and anxiety ($F_{1,45} = 20.56$, $P < .05$) in the experimental group, and these improvements were stable at the 6-month follow-up. Perceptions of impaired mother-infant bonding ($t_{15} = 3.72$, $P < .01$) and rejection and pathological anger ($t_{15} = 3.01$, $P < .01$) also decreased at the 6-month follow-up in the experimental group. In conclusion, Peer-delivered group CBT for PPD effectively treats symptoms of PPD and anxiety and may lead to improvements in the mother-infant relationship. This intervention is an effective and potentially scalable means by which access to a treatment that meets the needs and wants of mothers with PPD can be increased [37]. Another research in 2021 this study aimed to determine the effectiveness of acceptance and commitment therapy on depression, anxiety, and stress in nulliparous pregnant women. The research method was semi-experimental with a pretest-posttest design with a control group. The statistical population of this study included all pregnant women referred to hospitals in Tehran in 2019, among whom 34 eligible volunteers were selected by convenience sampling method and randomly assigned to two groups acceptance and commitment, and the control group. The experimental group received acceptance and commitment therapy in 9 sessions of 120 minutes. Data were collected using depression, anxiety, and stress questionnaire. Data were analyzed. The significance level in this study was considered to be 0.05. The results showed that acceptance and commitment therapy intervention significantly decreased depression ($p < 0.001$), anxiety ($p < 0.001$), and stress ($p < 0.001$) in nulliparous pregnant women. It can be concluded that acceptance and commitment therapy was effective in reducing depression, anxiety, and stress in nulliparous pregnant women, and it can be used to improve the psychological problems of pregnant women [38].

Based on the review of the above articles, acceptance, and commitment-based therapy have been effective in the treatment of mental disorders. In our study, the effectiveness of group therapy based on acceptance and commitment to the improvement of moderate postpartum depression was evaluated and the result was consistent with the above-mentioned studies.

Conclusion

It seems that acceptance and commitment group therapy can be effective in reducing moderate depression as a non-medical, low-cost, and low-complication treatment. In this 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 group therapy, group members (mothers) were taught how to set aside their avoidance strategies. 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 depression. Mothers using accep-

tance and cognitive diffusion learned to experience negative thoughts in a new way, and they recognize the values of their life. 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.

Research and Applied Suggestions

Acceptance and commitment group 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 as individuals.

Limitations Due to Time Constraints

It was not possible to evaluate the effect of group therapy based on acceptance and commitment on the outcome of depression in the longer term and its effect on marital relationships. Therefore, it is suggested that in future research, the effect of the above approach on the results of marital relationships, relationships with the child, and the development of the child should be examined. It is recommended that health centers have a psychotherapy and counseling department so that in addition to medical examinations, psychological counseling is provided to mothers.

Gratitude

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