

# The Effectiveness of Acceptance and Commitment Therapy on Mood Status in Women with Postpartum Depression

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### ABSTRACT

**Objective:** The present study aimed to investigate the effectiveness of acceptance and commitment therapy (ACT) on mood status in women with postpartum depression.

**Methods and Materials:** This applied quasi-experimental study was conducted using a pretest-posttest design with a control group among women with postpartum depression who referred to psychological clinics in Tehran during 2023–2024. From a population of 80 women, 40 participants who met the inclusion criteria were selected through purposive sampling and randomly assigned into experimental and control groups (20 participants in each group). Data were collected using the Beck Depression Inventory and the Profile of Mood States (POMS) questionnaire. The experimental group received eight 120-minute sessions of acceptance and commitment therapy based on Hayes' protocol, while the control group received no intervention. Data analysis was performed using descriptive statistics, Kolmogorov–Smirnov test, univariate analysis of covariance (ANCOVA), and multivariate analysis of covariance (MANCOVA) in SPSS version 23.

**Findings:** The results demonstrated a significant reduction in mood status scores in the experimental group following the intervention compared with the control group. ANCOVA results indicated that the effect of group membership on overall mood status was statistically significant ( $F = 6095.615$ ,  $p < 0.0001$ ,  $\eta^2 = 0.994$ ). Furthermore, MANCOVA findings revealed significant differences between the experimental and control groups in the subcomponents of mood status, including anxiety ( $F = 24.136$ ,  $p < 0.001$ ), depression ( $F = 13.869$ ,  $p = 0.001$ ), fatigue ( $F = 7.807$ ,  $p = 0.008$ ), confusion ( $F = 27.566$ ,  $p < 0.001$ ), anger ( $F = 20.662$ ,  $p < 0.001$ ), and vigor ( $F = 30.461$ ,  $p < 0.001$ ).

**Conclusion:** Acceptance and commitment therapy was effective in improving mood status among women with postpartum depression. The intervention reduced anxiety, depression, anger, fatigue, and confusion while enhancing positive mood and psychological flexibility.

**Keywords:** Acceptance and commitment therapy, mood status, postpartum depression, women, psychological flexibility, emotional regulation.

## 1. Introduction

Postpartum depression is one of the most prevalent psychological disorders occurring during the perinatal period and is recognized as a major public health concern due to its extensive psychological, emotional, and social consequences for mothers, infants, and families. This disorder commonly emerges during the first weeks or months after childbirth and is characterized by persistent sadness, emotional instability, hopelessness, anxiety, fatigue, and impaired maternal functioning. The postpartum period is accompanied by substantial biological, hormonal, psychological, and social changes that may increase women's vulnerability to mood disturbances and depressive symptoms. Research has shown that postpartum depression negatively affects maternal well-being, marital relationships, parenting quality, and infant emotional development, thereby creating long-term adverse effects on family functioning and child mental health (Burke, 2023; Johansson et al., 2020). In addition, postpartum depression has been associated with increased parenting stress, impaired emotional bonding between mother and infant, and reduced maternal self-efficacy, all of which can interfere with healthy family adjustment after childbirth (Missler et al., 2020; Sylven et al., 2017).

The prevalence of postpartum depression has increased considerably in recent years due to psychosocial stressors, economic instability, lifestyle changes, and inadequate emotional support during pregnancy and after childbirth. Women experiencing postpartum depression frequently report emotional dysregulation, persistent rumination, anxiety sensitivity, sleep disturbance, fatigue, and diminished positive affect. Psychological distress during the postpartum period is often intensified by concerns related to childcare responsibilities, physical recovery after delivery, fear of inadequacy in the maternal role, and changes in interpersonal relationships. Several studies have emphasized that postpartum depression is not merely an individual psychological problem but rather a multidimensional condition influenced by cognitive, emotional, environmental, and relational factors (Freeman, 2019; Miller Lj, 2021). Furthermore, maternal depression has been linked to disruptions in family communication patterns and increased conflict within marital relationships, highlighting the broader psychosocial implications of untreated postpartum mood disorders (Burke, 2023).

Mood status is among the most important psychological dimensions associated with postpartum depression. Mood

status refers to a relatively stable emotional state that influences an individual's perception, cognition, behavior, and interpersonal functioning. Negative mood states, such as anxiety, anger, fatigue, confusion, and depression, are commonly observed among women with postpartum depression, whereas positive emotional states, including vigor and psychological vitality, are often reduced. Emotional dysregulation and maladaptive cognitive processing are believed to play a central role in the development and maintenance of depressive symptoms during the postpartum period (Asnaani et al., 2020; Del Palacio-Gonzalez A, 2018). Women experiencing postpartum depression frequently demonstrate heightened sensitivity to stress and negative emotions, which may intensify maladaptive coping mechanisms and repetitive negative thinking. Studies have shown that psychological vulnerability factors such as neuroticism, anxiety sensitivity, and cognitive inflexibility significantly contribute to the severity of postpartum depressive symptoms (Hovenkamp-Hermelink Jh, 2019; Hu, 2024).

Recent psychological models have increasingly emphasized the role of psychological flexibility in emotional adjustment and mental health. Psychological flexibility refers to the ability to remain in contact with the present moment while accepting difficult internal experiences and engaging in behaviors that are consistent with personal values. In contrast, psychological inflexibility is characterized by experiential avoidance, cognitive fusion, emotional suppression, and rigid behavioral patterns that contribute to psychological distress. Emerging evidence suggests that reduced psychological flexibility is strongly associated with depression, anxiety, and impaired emotional functioning among postpartum women (Hu, 2024; Rutschmann et al., 2024). Women with postpartum depression often attempt to suppress unpleasant emotions, avoid distressing thoughts, and disengage from emotionally meaningful experiences, which may paradoxically intensify depressive symptoms and emotional suffering. Consequently, interventions targeting psychological flexibility and emotional acceptance may play an important role in improving mood and reducing postpartum psychological distress (Anusuya & Gayatri Devi, 2025; Rad et al., 2025).

Acceptance and Commitment Therapy (ACT) is considered one of the most prominent third-wave behavioral therapies developed to enhance psychological flexibility and reduce experiential avoidance. ACT focuses on helping individuals accept unpleasant thoughts and emotions rather

than attempting to control or eliminate them. Through mindfulness-based techniques, cognitive defusion, acceptance exercises, value clarification, and committed action, ACT aims to increase adaptive emotional regulation and promote value-oriented behavior (Anusuya & Gayatri Devi, 2025; Twohig, 2018). The theoretical foundation of ACT suggests that many psychological problems arise from individuals' attempts to avoid or control internal experiences, including negative emotions, intrusive thoughts, and painful memories. By encouraging individuals to develop a different relationship with their thoughts and feelings, ACT facilitates emotional acceptance and psychological resilience (Rad et al., 2025; Rutschmann et al., 2024).

In recent years, considerable attention has been directed toward the application of ACT for mood and anxiety disorders. Meta-analytic and systematic review studies have demonstrated the effectiveness of ACT in reducing depressive symptoms, anxiety, emotional dysregulation, and repetitive negative thinking across diverse clinical populations (Lopez-Pinar et al., 2024; Torres-Gimenez, 2024; Zou et al., 2025). Research findings indicate that ACT improves emotional functioning by increasing mindfulness, acceptance, and psychological flexibility while decreasing experiential avoidance and cognitive fusion. Studies conducted on individuals with depression and anxiety disorders have consistently reported significant reductions in negative emotions and maladaptive cognitive patterns following ACT interventions (Ruiz et al., 2020; Twohig et al., 2018). Moreover, ACT has shown effectiveness in reducing work-related rumination, emotional exhaustion, and fatigue among occupational groups exposed to chronic stress, further supporting its role in emotion regulation and mental health promotion (Fattah Moghaddam et al., 2024).

The application of ACT within perinatal mental health has also gained increasing scientific attention. Researchers have suggested that ACT may be particularly suitable for postpartum women because it addresses emotional suffering without encouraging emotional suppression or excessive cognitive control. Pregnancy and motherhood involve numerous uncontrollable emotional experiences, including fear, uncertainty, anxiety, and feelings of inadequacy, all of which can contribute to psychological distress if individuals respond with avoidance or self-criticism. ACT encourages women to acknowledge and accept these emotional experiences while continuing to engage in meaningful maternal and interpersonal roles (Grunberg et al., 2022; Waters et al., 2020). Studies investigating ACT-based

interventions during pregnancy and the postpartum period have demonstrated promising outcomes regarding reductions in depression, anxiety, stress, and parenting distress (Heller et al., 2020; Witteveen et al., 2020).

Several empirical investigations have specifically examined the feasibility and effectiveness of ACT among women experiencing perinatal psychological symptoms. Waters et al. demonstrated that ACT-based interventions significantly improved mood and reduced anxiety symptoms among women with perinatal mood disorders (Waters et al., 2020). Similarly, Grunberg et al. developed an acceptance-based intervention for postpartum women and reported improvements in emotional regulation and psychological adjustment following participation in the treatment program (Grunberg et al., 2022). Howard et al. also found that ACT interventions were feasible and acceptable for women experiencing fear of childbirth, suggesting that ACT techniques may improve emotional coping and resilience during the perinatal period (Howard et al., 2023). Furthermore, digital and internet-based ACT interventions have shown considerable potential in preventing and reducing postpartum depressive symptoms by increasing accessibility to psychological care (Rizzi, 2025; Witteveen et al., 2020).

Despite these promising findings, many women with postpartum depression continue to experience substantial emotional difficulties due to limited access to specialized psychological interventions and insufficient preventive mental health services. Although pharmacological treatments may reduce depressive symptoms, concerns regarding medication side effects, breastfeeding safety, and treatment adherence often limit their acceptability among postpartum women (Freeman, 2019; Miller Lj, 2021). Consequently, there has been growing interest in non-pharmacological and psychologically oriented interventions capable of improving emotional functioning without imposing additional physical risks on mothers and infants. Contextual and mindfulness-based interventions such as ACT may represent effective alternatives because they target emotional processes underlying postpartum distress rather than focusing solely on symptom reduction (Torres-Gimenez, 2024; Zou et al., 2025).

Moreover, studies examining postpartum depression have emphasized the importance of addressing emotional regulation and negative affective states as core treatment targets. Women with postpartum depression frequently experience persistent anxiety, emotional confusion, anger, and fatigue, which may interfere with their capacity to adapt

to maternal responsibilities and maintain healthy interpersonal relationships. ACT may improve these emotional states by teaching individuals to observe emotions nonjudgmentally, reduce attachment to distressing thoughts, and increase engagement in meaningful behaviors aligned with personal values (Ruiz et al., 2020; Rutschmann et al., 2024). The therapeutic emphasis on mindfulness and present-moment awareness may also help postpartum women reduce rumination and catastrophic thinking patterns associated with depressive symptoms (Asnaani et al., 2020; Fattah Moghaddam et al., 2024).

Although previous studies have provided evidence supporting the effectiveness of ACT for anxiety, depression, and emotional dysregulation, relatively limited research has specifically investigated its influence on mood status among women with postpartum depression. Existing studies have primarily focused on general depressive symptoms, psychological flexibility, or parenting stress, while fewer investigations have examined changes in multidimensional mood states such as anxiety, fatigue, anger, confusion, and vigor in postpartum populations (Torres-Gimenez, 2024; Waters et al., 2020). Additionally, many prior studies have concentrated on preventive interventions during pregnancy rather than therapeutic interventions targeting women already diagnosed with postpartum depression (Heller et al., 2020; Missler et al., 2020). Therefore, further research is needed to clarify whether ACT can effectively improve mood status and emotional functioning in women experiencing postpartum depressive symptoms.

Given the growing prevalence of postpartum depression, the negative consequences of impaired mood status on maternal and family functioning, and the increasing empirical support for ACT as an effective contextual therapy, examining the impact of acceptance and commitment therapy on mood status among women with postpartum depression appears necessary. Therefore, the present study aimed to investigate the effectiveness of acceptance and commitment therapy on mood status in women with postpartum depression.

## 2. Methods and Materials

### 2.1. Study design and Participant

The present study was an applied quasi-experimental investigation conducted using a pretest-posttest design with a control group. The statistical population consisted of all women with postpartum depression who referred to psychological clinics in Tehran during 2023 and 2024. A

total of 80 women were initially identified. Based on Morgan's sample size determination table, 66 participants were considered sufficient for the study; however, after screening according to the inclusion and exclusion criteria, 40 eligible participants remained and were selected through purposive sampling. These participants were randomly assigned into two equal groups consisting of an experimental group and a control group, with 20 participants in each group. The study was conducted in the Masir-e Sabz and Varesh psychological counseling centers located in Districts 5 and 2 of Tehran. The inclusion criteria included a diagnosis of postpartum depression based on the Beck Depression Inventory, obtaining a score higher than 40 on the inventory, being between 25 and 40 years of age, having at least two weeks elapsed since childbirth, and possessing at least a high school diploma. Women with a history of severe psychiatric or physical disorders, participation in psychological interventions during the previous six months, absence from more than two treatment sessions, or unwillingness to continue participation were excluded from the study. After obtaining informed consent, all participants completed the pretest assessments before the intervention began.

### 2.2. Measures

The Beck Depression Inventory (BDI) was used to assess the severity of postpartum depression among participants. This instrument was originally developed by Beck and colleagues in 1961 and was later revised in 1994 and 1996 to achieve greater consistency with the diagnostic criteria of depressive disorders outlined in the DSM-IV. The questionnaire consists of 21 items scored on a four-point scale ranging from 0 to 3, with total scores ranging from 0 to 63. Higher scores indicate greater depressive symptom severity. Each item measures one specific symptom of depression, including sadness, hopelessness, guilt, fatigue, and sleep disturbance. Previous studies have reported satisfactory psychometric properties for the inventory, with test-retest reliability coefficients ranging from 0.48 to 0.86 and an average reliability coefficient of 0.86. In Iranian samples, Cronbach's alpha has been reported as 0.87, while the test-retest coefficient was reported as 0.74. The instrument has also demonstrated strong concurrent validity with the first edition of the Beck Depression Inventory.

Mood status was evaluated using the short form of the Profile of Mood States (POMS) questionnaire. The instrument contains 37 items measuring six mood dimensions, including anxiety, depression, fatigue,

confusion, anger, and vigor. Participants were asked to rate their emotional experiences using a five-point Likert scale ranging from 0 (“not at all”) to 4 (“extremely”). The anxiety subscale includes 9 items, depression 15 items, anger 12 items, vigor 8 items, fatigue 7 items, and confusion 7 items. Additional filler items were included to enrich the questionnaire but were not included in the scoring procedure. To calculate the total mood score, the scores of the negative mood dimensions, including anxiety, depression, anger, fatigue, and confusion, were summed and the vigor score was subtracted from the total. Consequently, lower total scores indicated more favorable mood status. Previous studies have confirmed the reliability and validity of the POMS questionnaire in both clinical and nonclinical populations. In the present study, Cronbach’s alpha coefficients for the subscales ranged from 0.95 to 0.98, indicating excellent internal consistency.

### 2.3. Intervention

The intervention consisted of acceptance and commitment therapy (ACT) based on Hayes’ group psychotherapy protocol. Participants in the experimental group attended eight weekly sessions, each lasting approximately 120 minutes, while the control group did not receive any psychological intervention during the study period. The sessions focused on increasing psychological flexibility through acceptance, mindfulness, cognitive defusion, value clarification, and committed action. During the initial sessions, participants became familiar with the structure of therapy and explored concepts related to meaning in life, values, freedom, and personal responsibility. Subsequent sessions addressed experiential avoidance, cognitive fusion, mindfulness skills, self-awareness, and emotional acceptance. Participants were encouraged to identify maladaptive thought patterns and develop healthier responses to emotional distress. The intervention also incorporated exercises targeting existential concerns such as loneliness and death anxiety while promoting value-based living and interpersonal connectedness. Homework assignments, mindfulness

exercises, and self-observation practices were used throughout the treatment process to reinforce therapeutic learning and facilitate the application of ACT principles in daily life.

### 2.4. Data Analysis

Data analysis was conducted using SPSS software version 23. Descriptive statistics, including means and standard deviations, were calculated to summarize demographic characteristics and study variables. Before inferential analyses were performed, the normality of data distribution was examined using the Kolmogorov-Smirnov test. To evaluate the effectiveness of acceptance and commitment therapy on mood status and its dimensions, univariate analysis of covariance (ANCOVA) and multivariate analysis of covariance (MANCOVA) were employed while controlling for pretest scores as covariates. These analyses were used to compare posttest scores between the experimental and control groups and to determine the magnitude of the intervention effects on overall mood status as well as on the subcomponents of anxiety, depression, fatigue, confusion, anger, and vigor. Statistical significance was considered at the 0.05 level.

## 3. Findings and Results

The participants included 40 women with postpartum depression who referred to psychological clinics in Districts 2 and 5 of Tehran in 2023. Their mean age was 35.47 years. The highest frequency of educational level was high school diploma and lower, with 26 participants (65%). The highest age frequency was in the age range of 36 to 40 years, with 18 participants (45%). The highest frequency of postpartum depression among mothers was related to the second childbirth, with 18 participants (45%). The highest frequency of postpartum depression was observed among women whose newborns were male, with 23 participants (57.50%). Descriptive information on mood status in the experimental and control groups at the pretest and posttest stages is presented in Table 1.

**Table 1**

*Descriptive Information of Mood Status Scores by Measurement Stage in the Two Groups*

Variable	Index	Experimental Group (Acceptance and Commitment) Pretest	Experimental Group Posttest	Control Group Pretest	Control Group Posttest
Mood status	Number	20	20	20	20
	Mean	101.60	93.75	105.15	104.70

	Standard deviation	20.61	20.91	19.45	19.48
	Minimum	82.00	73.00	83.00	83.00
	Maximum	155.00	150.00	144.00	144.00
Anxiety	Number	20	20	20	20
	Mean	19.75	16.10	20.80	20.50
	Standard deviation	2.63	2.80	2.89	2.85
	Minimum	16	12	18	17
	Maximum	26	22	27	27
Depression	Number	20	20	20	20
	Mean	24.80	21.30	27.15	27.00
	Standard deviation	5.61	5.15	4.49	4.59
	Minimum	16	13	18	18
	Maximum	32	28	33	33
Fatigue	Number	20	20	20	20
	Mean	16.75	12.85	16.50	16.75
	Standard deviation	4.39	4.33	4.27	4.49
	Minimum	12	8	10	10
	Maximum	26	22	25	25
Confusion	Number	20	20	20	20
	Mean	15.35	11.25	17.65	16.85
	Standard deviation	2.71	2.89	3.61	3.78
	Minimum	12	8	13	11
	Maximum	21	19	24	25
Anger	Number	20	20	20	20
	Mean	24.60	19.65	27.05	27.25
	Standard deviation	4.41	5.49	5.19	5.06
	Minimum	18	10	18	18
	Maximum	34	31	35	35
Vigor	Number	20	20	20	20
	Mean	15.40	19.90	15.60	15.90
	Standard deviation	2.30	2.12	2.43	2.44
	Minimum	12	17	12	12
	Maximum	21	26	20	20

To determine the effectiveness of acceptance and commitment therapy on mood status, anxiety sensitivity, and

cognitive emotion regulation, univariate analysis of covariance (ANCOVA) was used.

**Table 2**

*Results of One-Way Analysis of Covariance (ANCOVA) Comparing Posttest Mood Status in the Experimental and Control Groups*

Source of Variation	Sum of Squares	df	Mean Square	F	Significance Level	Eta Squared	Power
Mood status	15373.795	1	15373.795	6095.615	0.0001	0.994	1
Group	23.451	1	23.451	9.298	0.004	0.205	0.843
Error	90.796	36	2.522				

As shown in Table 2, the effect of group on the combined mood status variable in women with postpartum depression was significant ( $F = 6095.615, p < 0.0001, \eta^2 = 0.994$ ). The results show that the difference between the two groups in terms of mood status was significant overall, and the magnitude of this difference in the population was 20%; that

is, 20% of the variance related to the difference between the two groups was due to the interaction effect of the dependent variable. Thus, the intervention had a significant effect on reducing mood status scores in women with postpartum depression.

**Table 3***Results of Multivariate Analysis of Covariance on Posttest Scores*

Test Name	Value	F	Error df	Hypothesis df	Significance Level
Pillai's Trace	0.811	23.650	33	6	0.000

According to the results of multivariate analysis of covariance (Table 3), the significance level permits the use of MANCOVA. This indicates that there is a significant difference between the experimental and control groups in at

least one of the dependent variables. Table 6 shows the results of univariate analysis of covariance (ANCOVA) on the scores of anxiety, depression, fatigue, confusion, anger, and vigor in the experimental and control groups.

**Table 4***Results of Univariate Analysis of Covariance (ANCOVA) on Posttest Scores of Anxiety, Depression, Fatigue, Confusion, Anger, and Vigor in the Experimental Groups*

Variable	Sum of Squares	df	Mean Square	F	Significance	Eta	Statistical Power
Anxiety	193.600	1	193.600	24.136	0.000	0.388	0.998
Depression	324.900	1	324.900	13.869	0.001	0.267	0.952
Fatigue	152.100	1	152.100	7.807	0.008	0.170	0.777
Confusion	313.600	1	313.600	27.566	0.000	0.420	0.999
Anger	577.600	1	577.600	20.662	0.000	0.352	0.993
Vigor	160.000	1	160.000	30.461	0.000	0.445	1

Table 4 shows that, after removing the effect of the pretest as a covariate, there was a significant difference between the pretest and posttest means of the components of anxiety, depression, fatigue, confusion, anger, and vigor in the acceptance and commitment therapy experimental group and the control group. In other words, a significant difference was observed between the scores across stages, pretest and posttest, in these groups ( $P < 0.05$ ). The results indicate the effectiveness of acceptance and commitment therapy on anxiety, depression, fatigue, confusion, anger, and vigor in women with postpartum depression.

#### 4. Discussion

The present study aimed to investigate the effectiveness of acceptance and commitment therapy (ACT) on mood status in women with postpartum depression. The findings demonstrated that ACT significantly improved overall mood status among women with postpartum depression and reduced the severity of negative emotional states, including anxiety, depression, fatigue, confusion, and anger, while simultaneously increasing vigor and positive emotional functioning. These results indicate that ACT can effectively improve emotional adjustment and psychological well-being during the postpartum period. The observed improvements in mood status among participants in the experimental group are consistent with the theoretical assumptions of ACT,

which emphasize psychological flexibility, emotional acceptance, mindfulness, and value-based action as fundamental mechanisms underlying emotional health (Anusuya & Gayatri Devi, 2025; Rutschmann et al., 2024).

The findings of the present study are aligned with previous investigations that have reported significant effects of ACT on depression, anxiety, emotional regulation, and psychological functioning across various clinical populations. Meta-analytic evidence has shown that ACT is effective in reducing depressive symptoms and negative emotional experiences while enhancing psychological flexibility and adaptive coping mechanisms (Lopez-Pinar et al., 2024; Zou et al., 2025). Similarly, Ruiz et al. demonstrated that ACT-based interventions targeting repetitive negative thinking significantly reduced symptoms of depression and generalized anxiety disorder by modifying maladaptive cognitive and emotional processing patterns (Ruiz et al., 2020). In addition, systematic reviews have confirmed the effectiveness of contextual therapies, including ACT, for improving emotional functioning in individuals experiencing perinatal depression and anxiety (Torres-Gimenez, 2024). The consistency between the present findings and previous studies suggests that ACT may effectively address the emotional and cognitive processes contributing to postpartum psychological distress.

One explanation for the effectiveness of ACT in improving mood status among women with postpartum depression is that this intervention directly targets experiential avoidance and emotional suppression, which are common among individuals experiencing depressive symptoms. Women with postpartum depression often attempt to avoid painful emotions, suppress distressing thoughts, and control internal experiences associated with maternal stress and emotional vulnerability. However, such avoidance strategies frequently intensify emotional suffering and increase psychological inflexibility. ACT encourages individuals to accept unpleasant thoughts and emotions without judgment while remaining engaged in meaningful behaviors consistent with personal values (Anusuya & Gayatri Devi, 2025; Twohig, 2018). Through mindfulness and cognitive defusion exercises, participants learn to observe their emotions rather than becoming overwhelmed by them. This process likely contributed to the reduction in negative mood states observed in the present study.

Another important finding of the present study was the reduction in anxiety symptoms among participants receiving ACT. This finding is consistent with prior research demonstrating the effectiveness of ACT in reducing anxiety-related symptoms through the enhancement of emotional regulation and psychological flexibility (Asnaani et al., 2020; Twohig et al., 2018). Anxiety sensitivity and maladaptive emotional regulation strategies are recognized as major contributors to postpartum psychological distress. Women experiencing postpartum depression frequently report excessive worry regarding infant care, maternal competence, family responsibilities, and physical recovery after childbirth. ACT helps individuals disengage from catastrophic thinking patterns and promotes greater tolerance of emotional discomfort, thereby reducing anxiety and emotional reactivity (Hovenkamp-Hermelink Jh, 2019; Hu, 2024). The present findings suggest that ACT enabled participants to reinterpret stressful experiences more adaptively and respond to anxiety-provoking situations with greater emotional flexibility.

The reduction in depressive mood observed in the present study can also be explained through the central mechanisms of ACT. According to ACT theory, depressive symptoms are often maintained by cognitive fusion, rumination, experiential avoidance, and disconnection from meaningful life activities. Postpartum women may become trapped in cycles of self-criticism, hopelessness, and repetitive negative thinking, particularly when they perceive themselves as inadequate mothers or incapable of fulfilling

maternal expectations. ACT interventions focus on helping individuals detach from rigid thought patterns and reconnect with personally meaningful values and goals (Ruiz et al., 2020; Rutschmann et al., 2024). Through this therapeutic process, participants may have developed greater self-compassion and acceptance of emotional experiences, which consequently reduced depressive symptoms and improved overall mood status. Similar findings have been reported by Ebrahimi et al., who found that ACT reduced mood fluctuations and improved psychological functioning among women experiencing emotional difficulties (Ebrahimi et al., 2022).

The present findings regarding reductions in fatigue and emotional confusion are also noteworthy. Postpartum depression is commonly associated with chronic fatigue, emotional exhaustion, and cognitive overload due to the physical and psychological demands of motherhood. Women experiencing postpartum distress often report difficulties concentrating, regulating emotions, and maintaining psychological balance. ACT may alleviate these difficulties by reducing internal psychological struggle and encouraging present-moment awareness. Mindfulness-based exercises used in ACT promote attentional regulation and emotional clarity, enabling individuals to respond to stressors more consciously rather than automatically reacting to distressing emotions (Fattah Moghaddam et al., 2024; Rad et al., 2025). Furthermore, by reducing rumination and emotional suppression, ACT may help individuals conserve psychological energy and experience greater emotional stability. The reduction in fatigue observed in the present study is consistent with previous findings demonstrating that ACT can effectively reduce emotional exhaustion and improve adaptive functioning among individuals exposed to chronic stress (Fattah Moghaddam et al., 2024).

The increase in vigor and positive mood among participants in the experimental group may also be explained through the value-oriented framework of ACT. Unlike symptom-focused therapies that primarily aim to eliminate distress, ACT encourages individuals to identify meaningful life values and commit to behaviors aligned with those values despite the presence of emotional discomfort. This approach may increase motivation, psychological vitality, and emotional engagement by helping individuals reconnect with personally meaningful experiences and interpersonal relationships (Anusuya & Gayatri Devi, 2025; Rutschmann et al., 2024). For postpartum women, reconnecting with values related to motherhood, family relationships, personal

growth, and self-care may foster greater emotional resilience and improve mood. The observed increase in vigor suggests that ACT not only reduced negative emotional experiences but also enhanced positive emotional functioning and psychological well-being.

The findings of the present study are also consistent with emerging evidence regarding the effectiveness of ACT in perinatal and postpartum populations. Waters et al. found that ACT interventions significantly reduced symptoms of anxiety and depression among women with perinatal mood disorders while improving emotional coping abilities (Waters et al., 2020). Similarly, Grunberg et al. reported positive outcomes following an acceptance-based intervention designed specifically for women with postpartum mood and anxiety symptoms (Grunberg et al., 2022). Witteveen et al. and Heller et al. also demonstrated that ACT-based and mindfulness-oriented interventions during pregnancy and postpartum periods could improve resilience and reduce emotional distress (Heller et al., 2020; Witteveen et al., 2020). The present study extends these findings by specifically demonstrating improvements in multidimensional mood status among women diagnosed with postpartum depression.

Another important implication of the present findings relates to the role of psychological flexibility as a protective factor in postpartum mental health. Recent research has emphasized that psychological flexibility is associated with improved emotional regulation, adaptive coping, and reduced psychological distress across clinical populations (Rad et al., 2025; Rutschmann et al., 2024). Hu et al. reported that psychological flexibility moderates the relationship between stressful life events and postpartum depression, suggesting that women with higher flexibility are better able to cope with emotional challenges during the postpartum period (Hu, 2024). ACT interventions are specifically designed to strengthen psychological flexibility by helping individuals accept internal experiences and maintain value-consistent behavior. Therefore, the improvement in mood status observed in the present study may reflect increased psychological flexibility among participants following treatment.

The present findings also support the growing body of evidence suggesting that contextual and third-wave behavioral therapies are effective alternatives to traditional symptom-focused interventions. ACT differs from conventional cognitive-behavioral approaches by emphasizing acceptance rather than cognitive control and by encouraging individuals to alter their relationship with

thoughts and emotions instead of attempting to eliminate them. This therapeutic perspective may be particularly valuable for postpartum women, who often experience uncontrollable emotional fluctuations and situational stressors associated with motherhood (Torres-Gimenez, 2024; Twohig, 2018). By reducing emotional struggle and increasing self-awareness, ACT may provide postpartum women with adaptive tools for managing emotional distress and maintaining psychological functioning despite ongoing challenges.

## 5. Conclusion

In addition, the findings of the present study highlight the importance of integrating psychological interventions into postpartum healthcare services. Childbirth education and postpartum support programs frequently focus on physical health while neglecting emotional and psychological well-being. Previous studies have emphasized the need for preventive and therapeutic interventions targeting postpartum depression due to its widespread consequences for mothers, infants, and families (Freeman, 2019; Miller Lj, 2021). Given the positive outcomes observed in the present study, ACT-based interventions may represent a practical and effective strategy for addressing postpartum emotional problems within clinical and community settings. Furthermore, the flexibility of ACT allows it to be delivered in various formats, including group therapy, self-help programs, and digital interventions (Howard et al., 2023; Rizzi, 2025).

## 6. Limitations and Suggestions

One limitation of the present study was the relatively small sample size, which may limit the generalizability of the findings to broader populations of women with postpartum depression. Another limitation was the use of self-report questionnaires, which may be influenced by social desirability bias and subjective interpretation of emotional experiences. In addition, the absence of a long-term follow-up period prevented the evaluation of the stability and durability of treatment effects over time. The study was also conducted within a limited geographical area and included only women attending selected counseling centers in Tehran, which may reduce the external validity of the findings.

Future research is recommended to investigate the long-term effectiveness of acceptance and commitment therapy among women with postpartum depression by incorporating

follow-up assessments over several months after treatment completion. Future studies should also compare ACT with other evidence-based interventions, such as cognitive-behavioral therapy and mindfulness-based interventions, to determine relative effectiveness in improving postpartum mood status. Furthermore, researchers are encouraged to examine the role of mediating variables such as psychological flexibility, self-compassion, and emotional regulation in explaining therapeutic outcomes. Conducting studies with larger and more diverse samples across different cultural and socioeconomic contexts would also improve the generalizability of findings.

Considering the positive findings of the present study, mental health professionals, counselors, and clinical psychologists are encouraged to incorporate acceptance and commitment therapy techniques into postpartum mental health services. Healthcare providers working with postpartum women may benefit from implementing ACT-based group interventions aimed at improving emotional acceptance, reducing experiential avoidance, and enhancing psychological flexibility. It is also recommended that postpartum support programs include psychoeducational and mindfulness-based components to help mothers manage emotional distress more effectively. Expanding access to ACT interventions through community health centers, online platforms, and maternal healthcare services may contribute to reducing the psychological burden associated with postpartum depression and improving maternal emotional well-being.

### Authors' Contributions

Authors equally contributed to this article.

### Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

### Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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### Declaration of Interest

The authors report no conflict of interest.

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### Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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