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Effectiveness of Combination of Cognitive-Behavioral Therapy and Resilience Training Based on Islamic Spirituality and Cognitive Flexibility on Postpartum Depression, Fear of Labor Pain and Quality of Life

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Abstract

Background: High-risk pregnancy, as a traumatic event, could cause postpartum disorders; thus, these women need psychological therapy.
Objectives: This study aimed to determine the efficacy of combination of cognitive-behavioral therapy and resiliency training based on Islamic spirituality instructions and cognitive flexibility on postpartum depression, fear of labor pain, and quality of life.
Methods: This was a semi-experimental study with a pretest-posttest design and a control group. It was performed among 40 pregnant women who had visited Bandar Abbas health centers. The participants were placed in two groups of control and experimental. Data collection was carried out using quality of life: SF12, postpartum depression by Edinburg, and fear of labor pain (FPQ-111) in the three stages of before, after and two months after the intervention. Data were analyzed using descriptive statistics and analysis of variance test.
Results: We found that the effect of combination of cognitive-behavioral therapy and resiliency training based on Islamic spirituality instructions and cognitive flexibility on postpartum depression ($P < 0.01$), fear of labor pain ($P < 0.01$), and the quality of life ($P < 0.01$) was significant, and the difference between the two groups was significant ($P < 0.01$).
Conclusions: Trainings based on Islamic instructions were effective on reducing postpartum traumatic symptoms.

Keywords: Fear of Labor Pain, Quality of Life, Pregnancy

1. Background

Pregnancy as a psychological phenomenon has an extraordinary effect on mothers and their family members' mental and social health, such that it can have deleterious effects on neonatal development and women's relationship with their spouses and children (1, 2). They consider the situation as a catastrophe and consider pain as a cognitive factor associated with the fear and pain experienced by it (3). Also, according to postpartum studies, this condition declines women's quality of life (4, 5). Quality of life is a multi-dimensional concept that includes physical, psychological, social and spiritual aspects (6).

Studies have shown that a high percentage of women suffer from postpartum depression and its consequences (7, 8). Depression or a loss of pleasure and activity are usually observed two weeks following delivery (9). Zong et al. found patients suffering from depression have lots of negative thoughts and cognitive bias, and they perceive stressful events to be irresistible (10).

Today, cognitive-behavioral therapy is considered as the best treatment for depression, which has been experimentally tested and validated. It seems that this type of therapy reduces depression by increasing cognitive flexibility. Cognitive-behavioral therapy has been found effective in postpartum depression in several situations (11). Considering that depressed people tend to ruminate and immerse in their own inner world and reinforce their depression, those who do not have cognitive flexibility tend to ruminate when they feel sad; thus, they can be hardly released from their sentimentalities and use coping strategies instead (12). In general, the ability to change the cog-

nitive affiliation stimulus defined to adapt to changing environments, cognitive flexibility and led to a change in cognitive assessments and excitement in different situations, and if this intervention is in accordance with the religious and cultural context of the community, it will be more effective (13). Hayward et al. stated that those who have strong religious beliefs always consider God to be present in their lives; therefore, they cope with problems and anticipate their occurrence. These individuals consider afflictions, troubles and misfortunes as divine examinations, demands, judgments, and discretion, consequently, they evaluate them and hopefully, resolve these problems and see the future bright (14). Weisman de Mamani et al. in their research emphasized on the combination of cognitive-behavioral therapy with spirituality (15).

Therefore, in this study we sought to have a comprehensive effect on the emotions and behaviors of the community based on religious beliefs. To date, limited interventions have been conducted during pregnancy that have evaluated postpartum outcomes as they were mostly focused on outcomes during and long-term effects have not been followed during postpartum period. Therefore, using interventions based on religious beliefs of the community that have a comprehensive impact on feelings and behaviors can be influential. In religious therapy, cognitive and intellectual changes are considered.

2. Objectives

We aimed to examine the effect of an integrated program of cognitive-behavioral therapy and resilience training based on Islamic spirituality teachings and cognitive flexibility on postpartum depression, fear of labor pain and the quality of life.

3. Methods

This semi-experimental study with pretest-posttest design and a control group was performed among all pregnant women who visited Bandar Abbas health centers during September and November in 2017. The inclusion criteria consisted of gestational age of 24 - 25 weeks, willingness to participate in the study, non-use of psychiatric drugs, lack of any specific psychiatric disorders, and not having a high-risk pregnancy. Overall, 40 women were selected and randomly divided into experimental and control groups.

3.1. Tools

3.1.1. Quality of Life Questionnaire

To assess the quality of life, SF12 questionnaire was used which is the moderated form of SF36. The questionnaire consists of 12 items that are divided into physical and psychological subscales. Its content validity was 95%, and test-retest method was used to determine the reliability of the questionnaire (6).

3.1.2. Postpartum Depression Questionnaire

To assess postpartum depression, Edinburg questionnaire was used, which includes 10 items and makes depression detection possible after the sixth month of pregnancy. The Edinburg scale scores range between 0 and 30, where a score of 12 or higher signifies postpartum depression (5).

3.1.3. Fear of Labor Pain Questionnaire

The fear of pain questionnaire was designed by Rainwater and McNeil. It includes 24 items and three subscales of severe pain, mild pain and medical pain. McNeil et al. reported its reliability to be 93% (16).

3.1.4. Cognitive Flexibility Questionnaire

This scale was devised by Denis Vander, which is a brief self-report tool with 20 questions. It is used to assess the kind of cognitive flexibility needed to challenge and replace inefficient thoughts with more efficient ones. Dennis and Vander Wal showed that this questionnaire has factual structure, convergent validity, and narrative simultaneously (17).

3.2. Study Design

From among those who met the inclusion criteria, 90 patients were selected and screened for cognitive flexibility. Forty women who had lower scores than the mean score were selected as the sample group and were randomly divided into experimental and control groups. The intervention was performed in the form of 90 to 110-minute training sessions twice a week for six weeks in an educational institution in Bandar Abbas. The intervention was an integrated program based on the cognitive-behavioral religious-based therapy introduced by Richards and Bergin studies and resilience based on Islamic teachings and explained by Bakhshizadeh et al. (18).

The training schedule was as follows. First session: Taking pre-test, providing general familiarity with the concept of resilience, introducing the characteristics of resilient people including happiness, wisdom, sense of humor, sympathy, rational sufficiency, purposeful life and stability, and introducing effective factors on resilience and the role of spirituality in promoting resilience. Second session: Checking assignments, training progressive muscle relaxation with divine illustration, and conducting spiritual self-review. Third sessions: Teaching types of irrational

thoughts, explaining realistic goals and expectations, familiarizing with incompatible cognitions, and giving assignments. Fourth sessions: Getting to know and discuss the ways to create resiliency such as goal-orientedness and hopefulness in life. Fifth session: Teaching A-B-C Principles to understand irrational emotions, beliefs and behaviors. Sixth session: Introducing repentance and acceptance of weaknesses, the importance of perfectionism, relationship between perfectionism and repentance, identification of unrealistic beliefs and expectations, and incompatible cognitions. Seventh Session: Introducing destiny, appreciation and guidance to encourage patients to set goals and values in life. Eighth Session: Assessing the assignments of the previous session, introducing the concept of forgiveness and the consequences of forgiveness, teaching how to seek forgiveness from oneself and others, giving cognitive tasks in the field of forgiveness and seeking forgiveness. Ninth Session: Providing correct beliefs about practical modeling of spiritual leaders' lives, teaching appreciation, and practicing forgiveness. Tenth session: Checking assignments, cognitive restructuring of inefficient thoughts, and teaching writing spiritual letters. Eleventh session: Teaching how to record spiritual events and practical exercises. Twelfth session: Understanding the concept of praying, discussing trust and the effect of trusting on life events and teaching and discussing the effects of praying and trust on emotions and thoughts and the process of problem solving. In order to increase the effectiveness of resilience interventions based on Islamic spirituality, different learning methods were used such as Islamic and religious interventions (the use of stories, verses in Quran, narrations).

Prior to performing the study, the research objectives and procedure were explained to the participants and informed consent was obtained from them.

3.3. Data Analysis

Mixed-design analysis of variance (ANOVA) was used to analyze the data. Data were analyzed by using SPSS version 23.

4. Results

Demographic data are presented in Table 1, which include gravidity, age and educational level.

The means and standard deviations of the research variables in the pre-test, post-test and follow-up phases are presented in Table 2. As it is observed in Table 2, there was no significant difference between the two groups in the pre-test stage in terms of the variables. However, in the post-test and follow-up stages, all the three indices showed a significant change compared to the control group ($P < 0.01$).

Table 1. Descriptive Statistics Based on Group[a]

Variable	Group	
	Experimental	Control
Age		
< 25	4 (20)	5 (25)
26 - 40	9 (45)	6 (30)
> 40	1 (5)	4 (20)
Education		
Diploma	2 (20)	2 (20)
Associate's degree or bachelor's degree	6 (30)	7 (35)
Master's or PhD	7 (35)	6 (30)
Gravidity		
One	6 (30)	7 (35)
Two	5 (25)	5 (25)
Three and more	4 (20)	3 (15)

[a]Values are expressed as frequency (%).

Therefore, it can be concluded that integrated cognitive-behavioral therapy and resilience training based on the Islamic spirituality teachings and cognitive flexibility has been effective in improving the quality of life and reducing fear of pain and postpartum depression in the post-test stage. This improvement continued in the follow-up stage as well. One of the important assumptions is the normal distribution of the variables, which is shown above. In addition, the use of the Levene's test showed the homogeneity of variance of the dependent variable.

The estimation of multivariate effects showed significant overall effects on psychological factors (quality of life, fear of pain and postpartum depression) ($\eta 2p = 0.28$, $P = 0.0001$, $F(2, 37) = 6.77$). Also, there was a significant effect on the time agent ($\eta 2p = 0.76$, $P = 0.0001$, $F(2, 37) = 15.99$). Significant effects were observed for the interaction between the psychological factor × group ($\eta 2p = 0.15$, $P = 0.0001$, $F(2, 37) = 6/037$). Significant effect was observed for the interaction between the psychological factor × time ($\eta 2p = 0.73$, $P = 0.0001$, $F(4, 37) = 8/32$). Finally, a significant effect was observed for the three-way interaction of the psychological factor × time × group ($\eta 2p = 0.68$, $P = 0.0001$, $F(4, 37) = 24/15$). In order to examine more precisely, simple effects were evaluated by using Bonferroni's test and a separation was given for each of the desired psychological factors. The mixed ANOVA test results are given in Table 3.

Table 2. Results Regarding the Quality of Life, Fear of Labor Pain and Postpartum Depression Based on Group

Indexes	Stage	Mean ± SD
Quality of life		
Experimental	Pre-test	26.10 ± 2.73
	Post-test	32.10 ± 2.63
	Follow-up	32.30 ± 3.02
Control	Pre-test	26.10 ± 2.73
	Post-test	25.90 ± 2.33
	Follow-up	25.40 ± 2.70
Fear of labor pain		
Experimental	Pre-test	69.95 ± 5.66
	Post-test	59.75 ± 8.57
	Follow-up	58.60 ± 8.24
Control	Pre-test	58.60 ± 7.31
	Post-test	58.69 ± 2.12
	Follow-up	58.00 ± 1.86
Postpartum depression		
Experimental	Pre-test	24.30 ± 1.58
	Post-test	21.00 ± 1.86
	Follow-up	20.75 ± 2.04
Control	Pre-test	20.90 ± 1.13
	Post-test	22.30 ± 2.04
	Follow-up	22.12 ± 1.12

5. Discussion

The purpose of this study was to investigate the effectiveness of the integrated program of cognitive-behavioral therapy based on Islamic spirituality teachings and cognitive flexibility on postpartum depression, fear of labor pain, and the quality of life in pregnant women. The results of this study showed that the impact of the integrated program of cognitive-behavioral therapy based on Islamic spirituality teachings and cognitive flexibility on quality of life was significant in the experimental group, and the difference was significant between the two groups. According to former studies, labor has a great impact on mothers, and their quality of life is influenced by its medical, psychological, social and midwifery aspects (19). Women experience great physiological, psychological, and social changes in the postpartum period and require more attention in this period (6). This study, consistent with previous studies such as the one by Lee et al. showed improvement in the quality of life through training health-promoting behaviors (20). To explain the results, it should be noted that delivery is an important experience in women's lives, and labor pain is one of the most severe pains they experience. Also, stressful conditions such as looking after the child and the problems posed to women after delivery reduce women's quality of life. Thus, improving the mental status and increasing the psychological flexibility of these women based on their religious foundations will improve their adaptability with this situation and improve their quality of life.

The other findings of the present study showed that the effect of the integrated program of cognitive-behavioral therapy based on Islamic spirituality teachings and cognitive flexibility on postpartum depression was significant in the experimental group, and the difference was significant between the two groups. This finding is consistent with the results of previous studies, including the study by Loughnan et al. who showed a decrease in depression due to cognitive-behavioral therapy (13). Unsal Atan et al. (7) and Urech et al. (21) showed depression improvement due to intervention therapy. Tanoue et al. showed that psychological flexibility is effective in treatment results. They also showed how to acquire skills for cognitive restructuring during cognitive-behavioral therapy for depression and anxiety (22). To explain the results, it should be noted that those who lack cognitive flexibility tend to ruminate when they feel sad and they can be hardly released from their sentimentalities. Considering that depressed people ruminate and immerse in their own inner world and reinforce their depression, those who do not have cognitive flexibility tend to ruminate when they feel sad, and they can be hardly released from their sentimentalities and use coping strategies instead.

Finally, the present study showed that the integrated program of cognitive-behavioral therapy and resiliency based on the teachings of Islamic spirituality for cognitive flexibility has significant impact on fear of labor pain. This finding is consistent with previous reports. For instance, Dencker et al. presented that the most important reason for anxiety and fear of pain was childbirth (23). Wang believed that fear of labor pain plays an important role in performing elective cesarean section, because the cognitive processes and negative thoughts of these people consider the situation as a catastrophe and consider pain as a cognitive factor associated with the fear and pain experienced by it (3). Foureur et al. in their survey of 196 childbirths found that fear of pain is common during delivery. People feel more pain and distress due to catastrophic thinking that could hamper them from making the right decisions (24). To explain the results, it should be noted that women who consider cognitive processes and negative thoughts consider as a disaster and consider pain as a cognitive factor correlated with the fear and pain experienced by it. Consequently, they predict or imagine more fear of pain for deliv-

Table 3. Tests for Multivariate Effects: Repeated Measurement Plan of Research Indicators Based on Measurement and Group

Effect	F	DF 1	DF 2	Sig	η2p	Power
Time	15.99	2	37	0.0001	0.76	0.99
Psychological factor	6.77	2	37	0.0001	0.28	0.96
Psychological factor × group	6.03	2	37	0.01	0.15	0.72
Psychological factor × time	8.32	4	35	0.0001	0.73	1
Psychological factor × group × time	24.15	4	35	0.0001	0.68	1

ery, they accept challenging situations or stressful events by treatment on the basis of flexibility and have more resilient psychologically, consider events realistic and know problems temporary and limited.

Supplementary Material

Supplementary material(s) is available here [To read supplementary materials, please refer to the journal website and open PDF/HTML].

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Footnotes

Authors' Contribution: Training and analysis of the results was done by Sayeh Narjes Zamani, theoretical foundations were conducted by Eghbal Zarei, and the study supervised by Kobra Haji Alizadeh and Abdul Zahra Naami.

Conflict of Interests: None declared.

Ethical Considerations: Code of ethics is specific to medicine and it is not necessary for Humanities and Basic Science in Bandar Abbas Islamic Azad University, but the proposal was evaluated by the board in the Department of Psychology of the university.

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References

1. MacKinnon AL, Yang L, Feeley N, Gold I, Hayton B, Zelkowitz P. Birth setting, labour experience, and postpartum psychological distress. *Midwifery*. 2017;**50**:110–6. doi: 10.1016/j.midw.2017.03.023. [PubMed: 28412526].
2. Drury SS, Scaramella L, Zeanah CH. The neurobiological impact of postpartum maternal depression: Prevention and intervention approaches. *Child Adolesc Psychiatr Clin N Am*. 2016;**25**(2):179–200. doi: 10.1016/j.chc.2015.11.001. [PubMed: 26980123]. [PubMed Central: PMC4794751].
3. Wang E. Requests for cesarean deliveries: The politics of labor pain and pain relief in Shanghai, China. *Soc Sci Med*. 2017;**173**:1–8. doi: 10.1016/j.socscimed.2016.11.032. [PubMed: 27914313].
4. Morin M, Vayssiere C, Claris O, Irague F, Mallah S, Molinier L, et al. Evaluation of the quality of life of pregnant women from 2005 to 2015. *Eur J Obstet Gynecol Reprod Biol*. 2017;**214**:115–30. doi: 10.1016/j.ejogrb.2017.04.045. [PubMed: 28525824].
5. Gökşin İ, Ayaz-Alkaya S. The effectiveness of progressive muscle relaxation on the postpartum quality of life: A randomized controlled trial. *Asian Nurs Res*. 2018;**12**(2):86–90. doi: 10.1016/j.anr.2018.03.003.
6. Van der Woude DA, Pijnenborg JM, de Vries J. Health status and quality of life in postpartum women: A systematic review of associated factors. *Eur J Obstet Gynecol Reprod Biol*. 2015;**185**:45–52. doi: 10.1016/j.ejogrb.2014.11.041. [PubMed: 25522118].
7. Unsal Atan Ş, Ozturk R, Gulec Satir D, Ildan Çalim S, Karaoz Weller B, Amanak K, et al. Relation between mothers' types of labor, birth interventions, birth experiences and postpartum depression: A multicentre follow-up study. *Sex Reprod Healthc*. 2018;**18**:13–8. doi: 10.1016/j.srhc.2018.08.001.
8. Shorey S, Chee CYI, Ng ED, Chan YH, Tam WWS, Chong YS. Prevalence and incidence of postpartum depression among healthy mothers: A systematic review and meta-analysis. *J Psychiatr Res*. 2018;**104**:235–48. doi: 10.1016/j.jpsychires.2018.08.001. [PubMed: 30114665].
9. DeMaris A, Mahoney A. The perception of fairness in infant care and mothers' postpartum depression. *Soc Sci Med*. 2017;**190**:199–206. doi: 10.1016/j.socscimed.2017.08.030.
10. Zong JG, Cao XY, Cao Y, Shi YF, Wang YN, Yan C, et al. Coping flexibility in college students with depressive symptoms. *Health Qual Life Outcomes*. 2010;**8**:66. doi: 10.1186/1477-7525-8-66. [PubMed: 20626865]. [PubMed Central: PMC2911409].
11. Kato T. Relationship between coping flexibility and the risk of depression in Indian adults. *Asian J Psychiatr*. 2016;**24**:130–4. doi: 10.1016/j.ajp.2016.09.008. [PubMed: 27931896].
12. Almarzooqi S, Chilcot J, McCracken LM. The role of psychological flexibility in migraine headache impact and depression. *J Contextual Behav Sci*. 2017;**6**(2):239–43. doi: 10.1016/j.jcbs.2017.04.004.
13. Loughnan SA, Sie A, Hobbs MJ, Joubert AE, Smith J, Haskelberg H, et al. A randomized controlled trial of 'MUMentum Pregnancy': Internet-delivered cognitive behavioral therapy program for antenatal anxiety and depression. *J Affect Disord*. 2019;**243**:381–90. doi: 10.1016/j.jad.2018.09.057. [PubMed: 30266030].

14. Hayward RD, Owen AD, Koenig HG, Steffens DC, Payne ME. Religion and the presence and severity of depression in older adults. *Am J Geriatr Psychiatry*. 2012;**20**(2):188–92. doi: 10.1097/JGP.0b013e31822ccd51. [PubMed: 22273738]. [PubMed Central: PMC3266521].
15. Weisman de Mamani AG, Tuchman N, Duarte EA. Incorporating religion/spirituality into treatment for serious mental illness. *Cogn Behav Pract*. 2010;**17**(4):348–57. doi: 10.1016/j.cbpra.2009.05.003.
16. McNeil DW, Kennedy SG, Randall CL, Addicks SH, Wright CD, Hursey KG, et al. Fear of pain questionnaire-9: Brief assessment of pain-related fear and anxiety. *Eur J Pain*. 2018;**22**(1):39–48. doi: 10.1002/ejp.1074. [PubMed: 28758306]. [PubMed Central: PMC5730485].
17. Dennis JP, Vander Wal JS. The cognitive flexibility inventory: Instrument development and estimates of reliability and validity. *Cognit Ther Res*. 2009;**34**(3):241–53. doi: 10.1007/s10608-009-9276-4.
18. Bakhshizadeh SH, Afrooz GA, Beh-Pajooh A, Ghobari Bonab B, Shokoohi Yekta M. [The effectiveness of resiliency based on islamic spirituality training on mental health and spiritual resiliency among mothers of slow pace (mentally retarded) children]. *Armaghan Danesh J Yasuj Univ Med Sci*. 2016;**21**(5):492–510. Persian.
19. Chen YH, Huang JP, Au HK, Chen YH. High risk of depression, anxiety, and poor quality of life among experienced fathers, but not mothers: A prospective longitudinal study. *J Affect Disord*. 2019;**242**:39–47. doi: 10.1016/j.jad.2018.08.042. [PubMed: 30170237].
20. Lee CF, Huang YC, Chi LK, Lin HM, Lin CJ, Hsiao SM. Constructing and applying an exercise counseling model for pregnant women: A preliminary study. *Nurse Educ Pract*. 2018;**33**:77–83. doi: 10.1016/j.nepr.2018.09.003. [PubMed: 30261361].
21. Urech C, Scherer S, Emmenegger M, Gaab J, Tschudin S, Hoesli I, et al. Efficacy of an internet-based cognitive behavioral stress management training in women with idiopathic preterm labor: A randomized controlled intervention study. *J Psychosom Res*. 2017;**103**:140–6. doi: 10.1016/j.jpsychores.2017.10.014. [PubMed: 29167041].
22. Tanoue H, Yoshinaga N, Kato S, Naono-Nagatom K, Ishida Y, Shiraishi Y. Nurse-led group cognitive behavioral therapy for major depressive disorder among adults in Japan: A preliminary single-group study. *Int J Nurs Sci*. 2018;**5**(3):218–22. doi: 10.1016/j.ijnss.2018.06.005.
23. Dencker A, Nilsson C, Begley C, Jangsten E, Mollberg M, Patel H, et al. Causes and outcomes in studies of fear of childbirth: A systematic review. *Women Birth*. 2018. doi: 10.1016/j.wombi.2018.07.004. [PubMed: 30115515].
24. Foureur M, Turkmani S, Clack DC, Davis DL, Mollart L, Leiser B, et al. Caring for women wanting a vaginal birth after previous caesarean section: A qualitative study of the experiences of midwives and obstetricians. *Women Birth*. 2017;**30**(1):3–8. doi: 10.1016/j.wombi.2016.05.011. [PubMed: 27318563].