http:// ijp.mums.ac.ir
Original Article (Pages: 8261-8273)

Investigating the Effect of Counseling Based on Family Support on Mother-Child Bonding at 4-6 Weeks of Postpartum in Primiparous Women: A Randomized Clinical Trial

Fatemeh Moghaddam Tabrizi[1], *Homeira Nournezhad[2]

[1]Reproductive Health Research Center, Urmia University of Medical Sciences, Urmia, Iran.
[2]Nursing and Midwifery Department, Student Research Committee, Urmia University of Medical Sciences, Urmia, Iran.

Abstract

Background
Emotional bonding between mother and neonate is an extremely sensitive process in postpartum. Therefore, one of the important processes in the postpartum period is the development of maternal and neonatal bonding. This study was aimed to investigate the effect of family-based counseling on mother-child bonding at 4-6 weeks of postpartum in women referred to selected health centers of Urmia in 2017.

Materials and Methods
This clinical trial study was conducted on 330 women and their families who were selected in health care centers of Urmia in 2017. Data collection tools were personal information form, General Health Questionnaire (GHQ), Multidimensional Scale of Perceived Social Support (MSPSS), and Postpartum Bonding Questionnaire. The women were randomly divided into two groups: intervention (n = 165) and control (n =165). The intervention group received 4-6 counseling sessions based on family support and the control group received routine care. Data analysis was performed using SPSS software (version 20), non-parametric Mann-Whitney test, Wilcoxon and parametric t tests. P value less than 0.05 was considered significant**.**

Results
Findings revealed a significant reduction in mean ± SD of total mother-child bonding (41.17± 33.37), general bonding difficulties (19.17± 18.04), threatened rejection (11.95±9.86), infant-focused anxiety (6.77± 5.70) and incipient abuse (3.27± 2.90).

Conclusion
According to the obtained results, family-based counseling has deeply positive effect on mother-child bonding that can arise physical and mental health benefits originated from this bonding in childhood period and in all stage of puberty.

Key Words: Children, Counseling, Family support, Mather-child bonding, Postpartum.

*Please cite this article as: Moghaddam Tabrizi F, Nournezhad H. Investigating the Effect of Counseling Based on Family Support on Mother-Child Bonding at 4-6 Weeks of Postpartum in Primiparous Women: A Randomized Clinical Trial**.** Int J Pediatr 2018; 6(9): 8261-73. DOI: **10.22038/ijp.2018.30194.2656**

Corresponding Author:

Homeira Nournezhad, Nursing and Midwifery Department, Student Research Committee, Urmia University of Medical Sciences, Urmia, Iran.

Email: homeiran.nournezhad@gmail.com

Received date: Feb.14, 2018; Accepted date: Mar. 22, 2018

1- INTRODUCTION

Emotional bonding between mother and neonate is an extremely sensitive process in postpartum. (1). Therefore, one of the important processes in the postpartum period is the development of maternal and neonatal bonding (2). The mothers' emotional bonding and loving attitudes towards the neonate creates an effective attachment system which is a warm and friendly relationship between mother and child that is both satisfactory and facilitates mother-child interactions (3). The interaction of mother and child has a profound effect on the behavior and reduction of child anxiety, and impairment of mother-child relationships is the cause of child's mental disorder in the future years (4). In fact, the mother-child bonding is the emotion of intimacy, leniency, protection, and mother's concern for the health of the child and is characterized by the mother's behaviors including looking, smiling, touching, and talking with the child (5). Attachment increases with the interaction between the mother and child, and changes the behavior of the mother. This process increases the mother's motivation and confidence to care of the child and reduces maternal stress and anxiety, makes the mother more in tune with excitement and tension, thereby reduces the child's anxiety (6).

Many specialists have considered the relationship between mother and child as adaptive and bio-accumulative (7). This transplant is affected by factors associated with the child including post-mature births, physical disorders and restlessness, breastfeeding, and factors associated with parents, especially the mother including attachment style, social support network, physical illness and postpartum depression, as well as other problems of mental health (8). Most mothers immediately show a wave of emotion and sense of humor after birth, and they feel that the child is exclusively theirs. However, some mothers are also delayed at the onset of such an emotional response to their child, which its reason can be birth problems and associated pain, as well as stress, anxiety and postpartum depression (9). Stress and anxiety in the postpartum period can increase the risk of depression (10). Therefore, maternal depression can affect the quality of mother-child bonding (11), and depressed mothers have lower social interactions and less communication with their child (9). Maternal attachment is one of the most important factors related to the growth and mental, social and emotional health of the child, and has a major impact on postpartum function, including increasing resistance to stress, increasing self-esteem, reducing behavioral and psychological problems, and improving the quality of relationships between couples (12).

Studies have shown that there is a negative relationship between stress and anxiety and postpartum depression and mother-child bonding. In fact, stress, anxiety and depression are the predictors of mother-child bonding (10, 13-15). Mothers who have stress, anxiety and postpartum depression have less positive interactions with their children. Therefore, the quality of mother-child bonding affects the child's mental, psychological, social and emotional well-being and the weak relationship between mother and child affects the cognitive development of the child (16). Studies have also shown that less social support in the postpartum period has an adverse effect on the mother-child bonding (17-19). Social support is one of the effective factors in improving the health of mothers in the postpartum period, including support from family members, friends, neighbors, colleagues, relatives, relatives and health care groups that support mothers with psychosocial and informational support (20). In addition, mothers who have received spousal and family support in the

postpartum period, are more confident in providing a mother role and are more satisfied with their motherhood (21). Family support by warm, intimate and continuous bonding with the mother, not only improves the child's mental health, but also increases the skills of care of the child and self-confidence in the mother (22). Family support is the most effective coping force for the successful conflict with stressful conditions and facilitates the suffering of individuals (23, 24). Among the various types of social protection, family support is the most important component of support And plays a vital role in improving the mother-child's transplantation after childbirth (25, 26).

Family support from mothers leads to strengthening the ability of mothers to cope with new stressors in postpartum life and to strengthen the relationship between mother and child (27, 28). Various studies have identified the spouse as the most important source of support in crises and stressful life conditions, which plays a full-color role during pregnancy and postpartum (25, 29). According to what has been written it can be said that one of the important processes in the postpartum period is the development of mother-child bonding, and despite the probability of postpartum problems and the stress caused by it and its effect on women's health and mother-child boding and significant role of family support in improving postpartum mother-child bonding, there is no consensus or interventional program to improve the development of the mother-child bonding in the health system programs. Therefore, the present study was designed to determine the effect of family-based counseling on mother-child boding in postpartum period in women referred to health care centers of Urmia in 2017.

2- MATERIALS AND METHODS

2-1. Study Design and Population

The present study was an experimental and clinical trial with IRCT2017031720778N18 code. After obtaining the necessary permissions from the university deputy of research and the ethics committee as well as the health department, the researcher referred to the selected research settings. Firstly, a list of all urban health centers in Urmia was prepared from the health center of Urmia. Then, urban health centers, according to experts from the health center of Urmia, were divided into three groups (high socioeconomic and cultural status, middle socioeconomic and cultural status and low socioeconomic and cultural status) and from each group three centers were randomly selected. Sample size was determined based on a study conducted by Osman et al. (2014) (30), with a confidence interval of 95% and a power of 80% and obtained 132, considering 20% attrition in sample, 165 individuals in each group was calculated using the following formula:

$$n = \frac{\left(z_{1-\frac{\alpha}{2}} + z_{1-\beta}\right) 2(s1^2 + s2^2)}{(\mu 1 - \mu 2)^2}$$

Where, X1 =15.86, S1 =6.81, X1 =18.93, S2 =7.31, Z1-a/2=1.96, Z1-b=1.64 and finally n=132.

2-3. Inclusion criteria

Inclusion criteria were including: primiparous women aged 20-35 years old who were in Urmia during 1-6 weeks postpartum, familiar with Farsi, no history of admission to psychiatric ward, non-use of psychotropic drugs and alcoholic beverages, lack of any systemic illnesses such as diabetes, cardiovascular disease, blood pressure, lack of experience of stressful incident in the last 6 months, score less than 23 from the general health questionnaire (GHQ and hospitalization due to complications of delivery, neonatal anomalies, early delivery and unwanted pregnancy.

2-4: Exclusion criteria

Exclusion criteria were included the occurrence of any stressful incident, such as death and serious illness disease for the patient or first-degree family, and the diagnosis of mental illness and psychiatric disorders such as severe anxiety disorder and depression during the study, the dissatisfaction and lack of interest in cooperation, the absence of more than two sessions during counseling sessions by delivered women, her wife or her family. From the designated centers, the number of samples was determined and selected. After referring to the relevant centers and coordinating with the authorities of those centers, the researcher after expressing the goals and method of the study, invited to participate in the study. The first meeting with nulliparous women was taken 3-4 days after delivery for the screening of the thyroid, and in case of no referral, midwife was met during a phone call and fter satisfication of them, they were visited at home. The confidentiality of the responses were given to obtain their trust and written informed consent were obtained. At first, GHQ-28 questionnaire was used to screen the general health of women.

Of a total of 474 women who filled the questionnaire, 330 women who had scored less than 23 in this questionnaire, were included in the study and 144 women received more than 23 scores that did not enter into study. In this regard, 330 prenatal women were randomly selected and classified into two groups of intervention (n = 165) and control (n = 165). The demographic questionnaire for mothers, social support questionnaire, mother-child bonding questionnaire were described for the samples. The questionnaires were completed by face-to-face interviews for both intervention and control groups. In the first session of the intervention group, the researcher explained the reasons why the family was present at the counseling session after explaining the research objectives as well as the method of esearch and all women weekly met in groups of 6-10 subjects. Finally, from 330 women entered in the intervention group, 16 women were lost, and in the control group, 20 cases were lost. The data collection tool included a personal and social information form such as age, level of education, type of housing, family type, duration of marriage, and clinical information that included the number of pregnancies, the history of abortion, the type of delivery, and the sex of the fetus. The general health questionnaire of Goldberg (GHQ-28) was used to assess the mental status of women. This tool was first developed in 1979 by Goldberg, which consists of 4 subscales and 28 questions, and each subscale has 7 questions related to physical symptoms, anxiety and sleep disorders, and impaired social function and severe depression.

The scoring of this tool is done in two ways: traditional and Likert type (0-3 score) which is used in this study. The score range of each domain is 0 to 21 and the total score is between 0 and 84. The higher the score, the lower the general health, and the cutoff score is diagnosed 23. Lower score shows better mental health (31). The Cronbach's alpha for this tool was obtained 0.87 by Ebrahimi et al. in Iran. Also, in the study of Malakouti et al., it was 0.94. Yaghubi et al. declared a sensitivity of 86.5%, a specificity of 82%, and 88% reliability for this questionnaire (32-34). Multidimensional Scale of Perceived Social Support (MSPSS) was used to assess the amount of family support. This questionnaire was developed by Zimet et al. in 1998 to measure the perceived social support of the family, friends and most important individuals in life. This scale has 12 dimension and has 3 subscales, including the subscale of family social support (items 3, 4, 8, 11), friends (items 7, 6, 9, 12) and important people of life (Items 1, 2, 5, 10) in the range of 1-5

(1=completely disagree to 5= completely agree). In this study, the social support received by the family was used to measure family support (35). Salimi et al. calculated the validity and reliability of this scale in Iran, so that the reliability coefficient of Cronbach's alpha for each dimension was 0.86, 0.86 and 0.82, respectively using factor analysis method (36). Postpartum bonding questionnaire was developed by Brockington et al. for the primary diagnosis of mother-child bonding disorder (37). This questionnaire has 25 questions with four components: defect mother-child bonding (12 questions such as: wishing for days when I had no children), rejection and anger (7 questions such as I love to hug my child), care anxiety (4 questions such as: the only solution way I see is that someone takes my son and grows it up) and incipient abuse risk (2 questions like: I feel I've hurt my child). These questions based on 6-point Likert have 0-5 score. Therefore, the range of score is from 0- 125 and a high score indicates a problem in mother-child bonding. The cutoff point of the defect bonding component is 12, the component of rejection and anger is 13, care anxiety is 10, the risk of child abuse is 3, and the cutoff point of the total scale is considered 38. Aflakseir and Jamali (38) have achieved the validity and reliability of this scale in Iran, so that the reliability coefficient of Cronbach's alpha was 0.52, 0.67, 0.77 and 0.74, respectively for bonding defect, rejection and anger, anxiety care and incipient abuse, and its validity has been appropriate with factor analysis. Also, in the study of Galeshi et al., Cronbach's alpha for tool was 0.78 and for bonding defect, rejection and anger, anxiety care, and incipient abuse risk were 0.63, 0.75, 0.71, 0.70, respectively (15). As **Table.1** shows, there is necessary information about the established sessions in this study.

Table-1: Counseling sessions on the mother-child bonding

Session	Objective	Tool	Strategy	Time of session
First	Strengthening relationship skills and examining postpartum injuries	Short lecture, focus group, discussion, white board, pamphlet	Familiarity with counselors and authorities, obtaining family trust and cooperation, and providing a safe setting for expressing feelings, enhancing relationship skills of family members, such as listening, involving family members to support recently delivered women and examining the challenges of episiotomy wounds and the necessary care in the form of discussion in small groups.	45-60 minutes
Second	Relationship with the child, breastfeeding and its challenges, and parenting	Short lecture, focus group, discussion, white board, pamphlet	Describe and explain the benefits of breastfeeding for the child and the mother, identify the facilitators and barriers to livelihood, seek family support to facilitate the necessary strategies for establishing a successful lactation, practical exercises aimed at training the correct lactation techniques, counseling for attachment behaviors in order to improve the mother-child bonding, including hugging the child, establishing skin contact with the child, talking and looking at the child, parenting, educational pamphlet.	45-60 minutes
Third	Relationship with the child, breastfeeding and its challenges	Short lecture, focus group, discussion, white board, pamphlet	To discuss the experiences of mothers about the symptoms of breastfeeding and the solution offered by the researcher and other families present at the meeting in the form of homework examinations, reviewing the current breastfeeding problems such as fissure and congestion of the breast, and strategies for dealing with it in the form of discussions group, presentation of educational pamphlet.	45-60 minutes

Fourth	Fatigue, home affairs, and future plans	Short lecture, focus group, discussion, white board, pamphlet	How to deal with fatigue and weakness feeling as one of the complications of postpartum and the role of family members in order to minimize its consequences and provide solutions to how to help and seek the assistance of family members in the management of home affairs during recovery, solutions for managing home affairs, while at the same time returning to work, discuss planning for the future.	45-60 minutes
Fifth	Physical and mental health, physical changes and relationships with the spouse	Short lecture, focus group, discussion, white board, pamphlet	Describing changes in the body mass index, discussing the concerns about changes in the mental image of the body, discussing mental changes in the recently delivered women emphasizing symptoms of sadness, how to deal with postpartum sadness, and the effect of supporting the spouse and family members in relieving symptoms, helping the new role of motherhood and at the same time preserving the role of femininity, helping the new role of fatherhood and at the same time preserving the role of husbandry as a husband, having individual counseling in the case of having concerns about sexual relations, providing educational pamphlets.	45-60 minutes
Sixth	Child health and child care	Short lecture, focus group, discussion white board, pamphlet	Describe and explain the healthy child and signs of neonatal illness, teaching how to care of the child in the form of discussion in small groups - teaching the role of the child in the bath, discussing the current experiences of the mothers and presenting the solution by the researcher and other family members participating at the meeting, presenting educational pamphlets.	45-60 minutes

2-4. Ethical Consideration

It must be mentioned that mothers had been briefed about objectives of the research. Moreover, written consent had been obtained from the mothers before they were included in the study.

2-5. Data Analyses

Data analysis was performed using SPSS software (version 20), non-parametric Mann-Whitney test, Wilcoxon and parametric t tests. P value less than 0.05 was considered significant**.**

3-RESULTS

The results of the study showed that the demographic characteristics of the recntly delivered women in the two groups of intervention and control regarding age and the number of children were homogeneous. Most women in the two groups were in the age group 20-24 and 25 - 29 years. In both groups, the majority of people had no history of abortion. The educational level of women in both groups was diploma and more than diploma. In both of the studied groups, almost half of the women were in the income equal to expenditure category regarding the economic tatus and more than 70% of women in both groups were housewives. Mean ± standard deviation of marriage duration in each intervention and control group was 3.20 ± 1.63 and 3.13 ± 1.14 years, respectively. Mean ± standard deviation of social support received by the family in each intervention and control group was 12.90 ± 5.46 and 12.51 ± 5.42, respectively. The observed difference was not significant for any of the studied variables (**Table.2**). The results of this study showed that there was no difference between the two groups according to the Mann-Whitney test between the two intervention and control groups regarding the scores of the questionnaire dimensions and the total score of the mother-child bonding before intervention. In other word, there was no significant difference between intervention and control group in the dimensions of the questionnaire and

the two groups were matched according to the variables of interest (**Table.3**). The results of the Mann-Whitney test indicated a statistically significant difference in the mean of each mother-child bonding component, including: mother-child bonding difficulties, threatened rejection and infant-focused anxiety, incipient abuse**,** total score of mother-child bonding before and after intervention in this group (P<0.001) (**Table.4**). This means that the use of intervention has been able to reduce mother-child bonding in the intervention group. There was no significant difference in the control group in the control group regarding family support scores (**Table.5**).

Table-2: Demographic and clinical characteristics in intervention and control group

Variables		Intervention		Control		P- value
		Number	%	Number	%	
Woman's age	20-24	91	55.5	94	56.6	0.43
	25-29	39	23.8	49	27.7	
	30-34	34	20.7	26	15.7	
Abortion	Yes	23	14	33	19.9	0.18
	No	141	86	133	80.1	
Satisfaction of fetal sex	Yes	144	87.8	158	95.2	0.01
	No	20	12.2	8	4.8	
Education status	Illiterate	25	15.2	21	12.7	0.39
	Under Diploma	49	29.9	61	36.7	
	Diploma and more	90	54.9	84	50.6	
Economic status	No money problem	29	17.7	39	23.5	0.4
	Fair	96	58.5	93	56	
	Not enough	39	23.8	34	20.5	
Business status	Employed	46	28	34	20.5	0.12
	Housewife	118	72	132	79.5	
Husband's age	20-24	24	14.6	27	16.3	0.97
	25-29	71	43.3	68	41	
	30-34	49	29.9	48	28.9	
	35-39	14	8.5	15	9	
	>40	6	3.7	8	4.8	
Husband's education	Illiterate	20	12.2	15	9	0.29
	Under diploma	58	35.4	72	43.4	
	Diploma and more	86	52.4	79	47.6	
Husband's job	Free	66	40.2	59	35.5	0.016
	Employed	45	27.4	55	33.1	
	Labor	35	21.3	31	18.7	
	Workless	18	11	21	12.7	
Housing status	Tenant	136	83	78	78.8	0.4
	Owner	28	17	35	21.2	

Table-3: Comparison of the mean scores of each dimension of mother-child bonding before intervention between two intervention and control groups

Variables	Mean (SD)	T-value	P-value
Mother-infant bonding Total Intervention Control group	 62.61± 39.26 65.57± 38.57	- 0.58	0.55
General bonding difficulties Intervention Control group	 29.02± 19.46 30.47± 19.46	- 0.51	0.61
Threatened rejection Intervention Control group	 18.07±11.11 18.98±11.56	- 0.63	0.52
Infant-focused anxiety Intervention Control group	 10.03± 6.27 10.46± 6.83	- 0.48	0.62
Incipient abuse Intervention Control group	 5.47± 3.16 5.67± 3.13	- 0.46	0.64

Table-4: Comparison of mother-child bonding and its dimensions after intervention in two groups of intervention and control

Variables	Before intervention Mean (SD)	After intervention Mean (SD)	T-value	P-value
Mother-infant bonding Total (0-125) Intervention Control group	 62.61± 39.26 65.57± 38.57	 41.17± 33.37 65.53± 40.59	 -7. 51 -0.48	 <0.001 0.63
General bonding difficulties (0-60) Intervention Control group	 29.02± 19.46 30.47± 19.46	 19.17± 18.04 30.49± 18.26	 -6.93 -0.40	 <0.001 0.68
Threatened rejection (0-35) Intervention Control group	 18.07±11.11 18.98±11.56	 11.95±9.86 18.98±11. 48	 -7.46 -0.15	 <0.001 0 .87
Infant-focused anxiety (0-20) Intervention Control group	 10.03± 6.27 10.46± 6.83	 6.77± 5.70 10.42± 6.46	 -5.23 0.04	 <0.001 0 .96
Incipient abuse (0-10) Intervention Control group	 5.47± 3.16 5.67± 3.13	 3.27± 2.90 5.60± 3. 3.64	 -7.45 0.05	 <0.001 0 .95

Table-5: Comparison of mean (SD) of family support before and after intervention in the two groups.

Family support	Before intervention Mean (SD)	After intervention Mean (SD)	T-value	P-value
Intervention group	12.90±5.46	17.00 ±4.45	- 2.65	<0.001
Control group	12.51±5.42	12.62±5.37	-1	0.97

4- DISCUSSION

The purpose of this study was to determine the effect of a family-based consultation on the mother-child bonding at 4-6 weeks of postpartum. The results of mother-child bonding indicated significant difference between the intervention and control groups in the post-intervention tests. In other words, the rate of mother-child bonding components had decreased in subjects who were sponsored by family-based counseling, were compared to subjects who have not received this intervention. In order to confirm the results of this study, Li et al., examined the effect of educational programs on improving parent-child relationship and reducing parenting stress. Results showed that this education could improve the parent-child relationship and reduces significantly the stresses of parent. The results of this study showed that there was a significant decrease in defect bonding scores at 4-6 weeks after the intervention.

In confirmation of the results of this study, the study of Parsa et al. indicated that counseling of attachment behaviors among mothers during prenatal care can promote mother- child bonding (39). The study of Gharibi et al. and Karimi et al. also showed that parenting educational programs can reduce parental perceived stress, and increase the quality of life among mothers (40, 41). In this regard, the timely formation of the mother-child bonding plays a key role in the mental health of the mother and child, and in addition, mothers who have received social support in the postpartum period, such as family support, friendship and support from the spouse, are more confident and more satisfied with the expression of motherhood (42), which was consistent with the results of the present study. The results of this study showed that in the subscale of rejection and anger at 4-6 weeks after the intervention, the scores of rejection and anger significantly decreased compared to the control group. In confirmation of the results of this study, the studies of Sanders et al. showed that the group program of positive parenting leads to a decrease in depression, anger and high stress especially in parental roles (43). The study of Ostberg et al. also suggested that education increases the sense of satisfaction and competence of mothers to control anger and dominate their behavior and reduces the conflict of parent-child bonding (44). The education of parenting skills in this study is also in this regard. And also in a study conducted by Rahbar et al., entitled "effect of stress management training based on cognitive-behavioral approach on improving parent-child relationship and psychological well-being in mothers of children with intellectual disability", the results showed that the management of stress had a significant reduction in rejection scale of parental-child bonding (45), which was consistent with the results of this study. But the research community was different from the present study, which contrasts with this study.

In the subscale of care anxiety, the mean scores of care anxiety in the intervention group after the intervention significantly decreased compared to the control group, which was consistent with the study of Boryri et al. showed that education of attachment behaviors on the mother-child bonding in postpartum period could significantly decrease the anxiety of the care in the intervention group and promote a favorable relationship between mother and child (46). The results of study performed by Toosi et al. indicated that the training of attachment behaviors reduces maternal anxiety and increases mother-child attachment (4), as well as the study of Paul et al. showed that counseling and education in reducing postpartum stress, anxiety and care for the child are very important and effective (47). In this regard, the research results of Zhong et al. showed

that education and counseling of mothers increase the self-efficacy of mothers and reduce their anxiety in the care of their child (48), which was consistent with the results of the present study. Yekta et al. reviewed the effectiveness of anger management training on the relationship between mothers and mentally retarded children, which showed that such training can improve the relationship between parent and child (49), which was consistent with the results of the present study, but the research community was different from the present study, which contrasts with this study.

In the subscale of incipient abuse risk, the risk of incipient abuse after intervention in the intervention group was significantly lower than control group which was consistent with the study of Arabgol et al., showed that parenting education skills improve maternal general health and reduce incipient abuse of child (50), as well as the results of study conducted by Earls et al., revealed that postpartum depression increased the cost of medical care, the risk of incipient abuse and, discontinuation of breastfeeding and adversely affects the growth of the child, which some intervention such as screening, identifying depressed mothers of referrals, timely treatment of mothers and supporting the relationship between mother and child can improve the family's health and the well-being of the child (51).

5- CONCLUSION

According to the obtained results, family-based counseling has deeply positive effect on mother-child bonding that can arise physical and mental health benefits originated from this bonding in childhood period and in all stage of puberty.

6- CONFLICT OF INTEREST: None.

7- ACKNOWLEDGMENTS

The present study was an experimental and clinical trial with IRCT2017031720778N18 code. The authors of the present study would like to extend their sincerest thanks and appreciation to the personnel of Urmia University of Medical Sciences as well as the participants in the study and all the people contributing to this research.

8- REFERENCES

1. Brockington I. Maternal rejection of the young child: Present status of the clinical syndrome. Psychopathology. 2011;44(5):329-36.

2. Garcia-Esteve L, Torres A, Lasheras G, Palacios-Hernández B, Farré-Sender B, Subirà S, et al. Assessment of psychometric properties of the Postpartum Bonding Questionnaire (PBQ) in Spanish mothers. Archives of women's mental health. 2016;19(2):385-94.

3. Kitamura T, Takegata M, Haruna M, Yoshida K, Yamashita H, Murakami M, et al. The Mother-Infant Bonding Scale: factor structure and psychosocial correlates of parental bonding disorders in Japan. Journal of child and family studies. 2015;24(2):393-401.

4. Toosi M, Akbarzadeh M, Zare N, Sharif F. Effect of attachment training on anxiety and attachment behaviors of first-time mothers. Journal of hayat. 2011;17(3):69-79.

5. Ohara M, Okada T, Kubota C, Nakamura Y, Shiino T, Aleksic B, et al. Validation and factor analysis of mother-infant bonding questionnaire in pregnant and postpartum women in Japan. BMC psychiatry. 2016;16(1):212.

6. Licata M, Paulus M, Thoermer C, Kristen S, Woodward AL, Sodian B. Mother–infant Interaction Quality and Infants' Ability to Encode Actions as Goal-directed. Social Development. 2014;23(2):340-56.

7. Zimet GD, 331. Relationship between Mother-Child Bonding with Postpartum Depression among a Group of Mothers in

Shiraz-Iran. Preventive Care in Nursing and Midwifery Journal. 2014;3(2):61-9.

8. Ohashi Y, Kitamura T, Sakanashi K, Tanaka T, editors. Postpartum Bonding Disorder: Factor Structure, Validity, Reliability and a Model Comparison of the Postnatal Bonding Questionnaire in Japanese Mothers of Infants. Healthcare; 2016: Multidisciplinary Digital Publishing Institute.

9. Behrendt HF, Konrad K, Goecke TW, Fakhrabadi R, Herpertz-Dahlmann B, Firk C. Postnatal Mother-to-Infant Attachment in Subclinically Depressed Mothers: Dyads at Risk? Psychopathology. 2016;49(4):269-76.

10. Tietz A, Zietlow A-L, Reck C. Maternal bonding in mothers with postpartum anxiety disorder: the crucial role of subclinical depressive symptoms and maternal avoidance behaviour. Archives of women's mental health. 2014;17(5):433-42.

11. Reck C, Zietlow A-L, Müller M, Dubber S. Perceived parenting stress in the course of postpartum depression: the buffering effect of maternal bonding. Archives of women's mental health. 2016;19(3):473-82.

12. Busonera A, Cataudella S, Lampis J, Tommasi M, Zavattini GC. Psychometric properties of the Postpartum Bonding Questionnaire and correlates of mother-infant bonding impairment in Italian new mothers. Midwifery. 2017.

13. Dubber S, Reck C, Müller M, Gawlik S. Postpartum bonding: the role of perinatal depression, anxiety and maternal–fetal bonding during pregnancy. Archives of women's mental health. 2015;18(2):187-95.

14. Ohoka H, Koide T, Goto S, Murase S, Kanai A, Masuda T, et al. Effects of maternal depressive symptomatology during pregnancy and the postpartum period on infant–mother attachment. Psychiatry and clinical neurosciences. 2014;68(8):631-9.

15. Galeshi M, Mirghafourvand M, Alizadeh-Sharajabad F, Sanaati F. Predictors of Mother-Child Bonding. Journal of hayat. 2016;22(1):13-26.

16. O'Higgins M, Roberts ISJ, Glover V, Taylor A. Mother-child bonding at 1 year; associations with symptoms of postnatal depression and bonding in the first few weeks. Archives of women's mental health. 2013;16(5):381-9.

17. Huang CY, Costeines J, Kaufman JS, Ayala C. Parenting stress, social support, and depression for ethnic minority adolescent mothers: impact on child development. Journal of child and family studies. 2014;23(2):255-62.

18. Thomason E, Volling BL, Flynn HA, McDonough SC, Marcus SM, Lopez JF, et al. Parenting stress and depressive symptoms in postpartum mothers: Bidirectional or unidirectional effects? Infant Behavior and Development. 2014;37(3):406-15.

19. Diniz E, Volling BL, Koller SH. Social support moderates association between depression and maternal–fetal attachment among pregnant Brazilian adolescents. Journal of Reproductive and Infant Psychology. 2014;32(4):400-11.

20. Gooding JS, Cooper LG, Blaine AI, Franck LS, Howse JL, Berns SD, editors. Family support and family-centered care in the neonatal intensive care unit: origins, advances, impact. Seminars in perinatology; Elsevier; 2011.

21. Negron R, Martin A, Almog M, Balbierz A, Howell EA. Social support during the postpartum period: mothers' views on needs, expectations, and mobilization of support. Maternal and child health journal. 2013;17(4):616-23.

22. Bradford AB, Burningham KL, Sandberg JG, Johnson LN. The Association between the Parent–Child Relationship and Symptoms of Anxiety and Depression: The Roles of Attachment and Perceived Spouse Attachment Behaviors. Journal of marital and family therapy. 2017;43(2):291-307.

23. Chen CM, Kuo SF, Chou YH, Chen HC. Postpartum Taiwanese women: their postpartum depression, social support and health-promoting lifestyle profiles. Journal of Clinical Nursing. 2007;16(8):1550-60.

24. Black KD. Stress, symptoms, self-monitoring confidence, well-being, and social support in the progression of preeclampsia/gestational hypertension. Journal

of Obstetric, Gynecologic, & Neonatal Nursing. 2007;36(5):419-29.

25. Xie R-H, He G, Koszycki D, Walker M, Wen SW. Prenatal social support, postnatal social support, and postpartum depression. Annals of epidemiology. 2009;19(9):637-43.

26. Nazari S SP, Mazlom R, Mahram B. Comparison of Social Support in the First and Second Month of Postpartum in Multiparous. Society health. 2014;8(2):1-9.

27. Gronowitz C, Henrysson H. Stress, social support and health status among postpartum women in an urban and a rural area of Thailand. 2009.

28. Mann JR, Mannan J, Quiñones LA, Palmer AA, Torres M. Religion, spirituality, social support, and perceived stress in pregnant and postpartum Hispanic women. Journal of Obstetric, Gynecologic, & Neonatal Nursing. 2010;39(6):645-57.

29. Martell LK. Heading toward the new normal: a contemporay postpartum experience. Journal of Obstetric, Gynecologic, & Neonatal Nursing. 2001;30(5):496-506.

30. Osman H, Saliba M, Chaaya M, Naasan G. Interventions to reduce postpartum stress in first-time mothers: a randomized-controlled trial. BMC women's health. 2014;14(1):1.

31. Goldberg DP, Hillier VF. A scaled version of the General Health Questionnaire. Psychological medicine. 1979;9(1):139-45.

32. Ebrahimi AE, Moulavi H, Mousavi SG, Borna Manesh A, YAGHOUBI M. Psychometric properties and factor structure of General Health Questionnaire 28 (GHQ-28) in Iranian psychiatric patients. 2007. Journal of Research in Behavioral Sciences. 2007: 1 (9); 5-12.

33. Malakouti SK, Fatollahi P, Mirabzadeh A, Zandi T. Reliability, validity and factor structure of the GHQ-28 used among elderly Iranians. International Psychogeriatrics. 2007; 19(04):623-34. (Persian)

34. Yaghubi N, Nasr M, Shahmohammadi D. Epidemiology of mental disorders in urabn and rural areas of Sowmaesara-Gillan. Iranian Journal of Psychiatry and Clinical Psychology. 1995; 1(4):55-60.

35. Zimet GD, Powell SS, Farley GK, Werkman S, Berkoff KA. Psychometric characteristics of the multidimensional scale of perceived social support. Journal of personality assessment. 1990;55(3-4):610-7.

36. Salimi A, Jokar B, Nikpoor R. Internet connections in life: the role of perceived social support and loneliness in using internet. Psychol Stud. 2009;5(3):81-102.

37. Brockington I, Fraser C, Wilson D. The postpartum bonding questionnaire: a validation. Archives of women's mental health. 2006;9(5):233-42.

38. Aflakseir A, Jamali S. Relationship between Mother-Child Bonding with Postpartum Depression among a Group of Mothers in Shiraz-Iran. Preventive Care in Nursing & Midwifery Journal. 2014;3(2):61-9.

39. Parsa P, Saiedzadeh N, Roshanai G, Masoumi SZ. The effect of training on maternal-fetal attachment (MFA) in nulliparous women: A randomized clinical trial. Scientific Journal of Hamadan Nursing and Midwifery Faculty (Nasim-Danesh).2016;24 (1): 24-30

40. Gharibi H, Sheidai A, Rostami C. The Effectiveness of Parenting Skills Training on Attachment, Perceived Stress and Quality of Life in Mothers of Preschool Children. Journal of Health and Care. 2017;18(4):292-305.

41. Karimi FZ, Khadivzadeh T, Saeidi M, Bagheri S. The Effect of Kangaroo Mother Care Immediately after Delivery on Mother-infant Attachment and on Maternal Anxiety about the Baby 3- Months after Delivery: a Randomized Controlled Trial. Int J Pediatr 2016; 4(9): 3561-70.

42. XIE RH, Yang J, Liao S, Xie H, Walker M, Wen SW. Prenatal family support, postnatal family support and postpartum depression. Australian and new zealand journal of obstetrics and gynaecology. 2010;50(4):340-5.

43. Sanders M. Triple P: A multi-level system of parenting intervention: Workshop participant notes. The University of Queensland: Brisbane, Australia. 2005.

44. Östberg M, Hagekull B. A structural modeling approach to the understanding of

parenting stress. Journal of clinical child psychology. 2000;29(4):615-25.

45. Rahbar KF, Abolghasemi A, Rahbar KE. Effect of Stress Management Training Based on Cognitive-Behavioral Approach on Improving Parent-Child Relationship and Psychological Well-Being in Mothers Of Children With Intellectual Disability. 2016; 3 (3):59-71.

46. Boryri T, Navidian A, Kiani R. The effect of training attachment behaviors on mother-child bonding after birth. International Journal of Advanced Biotechnology and Research.2016; 7(3):1204-10.

47. Paul IM, Downs DS, Schaefer EW, Beiler JS, Weisman CS. Postpartum anxiety and maternal-infant health outcomes. Pediatrics. 2013;131(4):e1218-e24.

48. Zhong J, Wang C, Li J, Liu J. Penn State Worry Questionnaire: structure and psychometric properties of the Chinese version. Journal of Zhejiang University-Science B. 2009;10(3):211-8.

49. Yekta S, Zamani N. Efficacy of anger management training on relationship between mothers and their mildly mentally retarded and slow learner children. Journal of Family Research. 2008;4(3):231-46.

50. Arabgol F, Derakhshanpour F, Panaghi L. Effect of therapeutic intervention on general health of child abused mothers. Journal of Gorgan University of Medical Sciences. 2016;18(1): 202-10.

51. Earls MF, Child CoPAo, Health F. Incorporating recognition and management of perinatal and postpartum depression into pediatric practice. Pediatrics. 2010;126(5):1032-39.