

Effect of family member's counseling on postnatal perceived stress in Iranian women: a Randomized Controlled Trial

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Abstract

Background & Aims: Family members' support during postnatal period is so important for women and neonates health. The purpose of the present study was to determine the effect of counseling with family member's on postnatal perceived stress in Iranian women.

Methods: In this randomized clinical trial a group of 294 women and their husbands and family members randomly allocated into two intervention (149) and control (145) groups. Women in intervention group received involvement program. Both groups completed the Postnatal Perceived Stress Inventory, and a demographic questionnaire. Data were analyzed using Mann-Whitney U, Wilcoxon tests and independent t-test. P value less than 0.05 was considered significant.

Results: Findings revealed a significant reduction in total postnatal perceived stress ($t = 8.93, p<0.001$) and in its all subscales including fatigue ($t= 6.55, p<0.001$), relationship with baby ($t=2.63, p<0.001$), relationship with body ($t= 6.43, p<0.001$), feeding the baby ($t= 2.16, p<0.001$), future plan ($t= 10.29, p<0.001$) and in relationship with partner ($t= 10.83, p<0.001$).

Conclusion: Involvement husband and family members could empower women to overcome stressors and reduce postnatal perceived stress. **Keywords:** Family Involvement, Postnatal Perceives Stress, Pregnancy

Background

The postpartum period or puerperium is a transitional time and is a potentially stressful period because a woman needs to face both the new tasks of her maternal role and changes in her body [1]. The puerperium is a crucial time of transition in the lives of new mothers, coincidences by several physiological, emotional and psychosocial changes that begin soon after birth and can continue till the end of the first year of life of the child [2].

Postpartum anxiety and stress is widespread, with prevalence ranging from 2% to 45% in the first year postpartum [3, 4]. Along with postpartum stressors such as sleep deprivation, hormonal diversity, and the requirement of caring of a neonate, first-time mothers have to adjust to their new parenting role [5, 6]. First-time mothers may feel uncertain about their capabilities to care of newborn [7]. They often feel devastated, extremely tired, and abandoned in their new roles [8, 9]. Studies have indicated that first-time mothers are at a higher risk of postpartum mental disorders in compare to multiparous women [10-12].

Postnatal responsibilities also can cause anxiety and stress, which can be associated with difficulties in adapting of maternal role with prevalence between 33% and 59%[13]. Furthermore, it can disturb the development of the mother/infant relationship [14]. Studies demonstrated that concerns about negative body changes, maternal role and lack of social support are three causes of postpartum stress [15, 16]. Social support has been shown to be effective in helping women to cope with these stressors[17]. Low levels or inconsistent social support is a strong predictor of postpartum depression[18]. Husbands and

family members support has been found to be important to women's postpartum health and lack of sufficient support is inversely related to the risk for postpartum depression [19]. Even though postpartum stress has been recognized to specifically associate with minor postpartum psychiatric disorders[20, 21] such as postpartum depression[22, 23] [22, 23] and anxiety [24], very few researches have elucidated interventions with emphasizing to family members role, designing to decrease postpartum stress.

There is limited information regarding the effective role of the husbands and family members involvement during postpartum and childbirth in Iran. So this study conducted to assess the effect of counseling with family member's on postpartum perceived stress in nulliparous Iranian women.

Materials And Methods

This double-blind randomized controlled trial (Registration ID in IRCT: IRCT2017031720778N18) was conducted in Urmia, in North West of Iran. Women with following criteria were recruited in this study: primiparous women in postpartum period, aged 20 to 35, and understanding the Persian language. Women with following criteria were excluded from the study; having systemic diseases such as diabetes, hypertension, cardiac diseases, stressors events in the past 6 months, using psychotropic drugs and alcohol, women with general health disorders (screened by General Health Questionnaire). Women who consented to participate were randomly assigned to the intervention and control groups, based on the cards A (control group) and B (intervention group).

Sample size was calculated based on the results of a study conducted by Osman et al. with a confidence level of 95% and a power of 80%, 132 women with adding 20% as attrition in sample, 165 were identified in each group.

Sampling and research procedure

A multistage cluster sampling applied. First, Urmia (located in North West of Iran), divided into five areas: center, north, south, west, and east. In each of these areas, all public health centers were known. Four public health centers in each area were randomly chosen. From the determined centers, the number of samples (165) were selected in the form of relative proportions. Women were invited to participate the study by midwife in the health centers and provided an informed consent and randomly assigned into two groups. Then they asked to complete the general health questionnaire, and the Multidimensional Scale of Perceived Social Support (MSPSS).

Measures

Demographic characteristic

A questionnaire was used to obtain information such as age, type of delivery, education level, economic status and family members.

General Health Questionnaire (GHQ₂₈)

General Health Questionnaire (GHQ₂₈) was used to screen the subjects' mental health. The GHQ₂₈ consists of four subscales including somatic symptoms (items 1-7), anxiety/insomnia (items 8-14), social dysfunction (items 15-21) and severe depression (items 22-28). All items are responded on a 4-point Likert scale of none, mild, moderate, and severe which were scored from zero to three. The score 23 or above was the cut-off point for probability of having a mental disorder[25]. Accordingly, women who obtained scores >23 were excluded from the study. The Persian version of GHQ₂₈ questionnaire was validated by Yaghoubi, et al [26].

Multidimensional scale of perceived social support (MSPSS)

The MSPSS is a tool to measure the perceived social support (emotional, instrumental, informational, and appraisal) from three sources of individuals' social lives: family, friends, and significant others. This scale developed by Zimet *et al.* in 1988, contains 12 items[27]. The 7-point Likert-type scale was used for measurements, with ratings from "1 = strongly disagree" to "7 = strongly agree." The range of possible scores is 12–84, with higher scores representing higher levels of perceived social support. The validity and reliability of MSPSS was approved by Zimet *et al*[27, 28]. The Persian version of MSPSS was validated in Iran by Salimi *et al* [29].

The Postnatal Perceived Stress Inventory

The Postnatal Perceived Stress Inventory developed by Razurel *et al.* [30] was used to measure postnatal perceived stress. It is an instrument with a 27-item rated on a four-point response format with 1 = not at all; 2 = a little; 3 = moderately; 4 = very; and 5 = extremely. It consists of domains of fatigue and organization at home (5 items); relationship with baby (6 items); relationship with body (5 items); feeding the baby (4 items); future plans (3 items); and relationship with partner (4 items). The total scores of the scale ranges from 27 to 135 with a higher score indicating a more perceived stress. For this study, the Postnatal Perceived Stress Inventory was translated into Persian using the following steps: (i) the original English instrument was translated into Persian by one of the researcher

s, (ii) the Iranian version was translated back into English by a bilingual professional person who has not seen the original English version and (iii) the three versions were then compared. Unclear or incorrect translations were discussed between the researcher and the professional translator until agreement was obtained. Thus, the translation process followed the recommendations provided by the California Academic Press [31]. For present study the Cronbach's alpha for the total scale was measured to be 0.89. The alpha coefficients for the subscales ranged from 0.699 to 0.898. The content validity ratio (CVR) was 76.77% and content validity index (CVI) was 82.33% which are acceptable.

Ethical Considerations

The research protocol was approved by the institutional review board and the Ethics Committee of the Urmia University of Medical Sciences (Ref No: Ir.umusl.rec.1395.109). Participants were provided with detailed information about the study and were assured that confidentiality would be maintained at all times. Written consent was obtained prior to data collection.

Intervention

The intervention included individual and group consultation for family, in six sessions with 5-6 participants and one active family member. Every session lasted 1.5-2 hours in each week. Through the sessions, the researcher discussed every simple item in postpartum challenges which may produce stress. Women received a notebook to record their thoughts, feelings and all experiences toward the issues that make them feel stress, anxiety and worries. During the sessions, researcher as a facilitator encouraged them to discuss about their negative and positive experiences. For homework, participants monitored and recorded their fatigue, sleep, rest, activity, breast feeding patterns, relationships and other items. Women in the control group did not receive any intervention and they participated in the program after the completion of intervention. The sessions' content are shown in table 1.

Statistical analysis

Data were analyzed using SPSS software (version 20). Non-parametric Mann-Whitney U test, Wilcoxon test and independent t-test were used for statistical analyses. The normal distribution of data was assessed using the Shapiro-Wilk test. The significance level was set <0.05.

Results

The findings indicated that demographic, clinical characteristics and the mean of family support were homogeneous in the two groups ($p>0.05$). (**Table 2**).

Regarding the effects of intervention our findings revealed a significant reduction in total postpartum perceived stress in the intervention group compared to the control group ($t = 8.93, p<0.001$). Also the subscales of perceived stress including fatigue ($t= 6.55, p<0.001$), relationship with baby ($t=2.63, p<0.001$), relationship with body ($t= 6.43, p<0.001$), feeding the baby ($t=2.16, p<0.001$), future plan ($t=-10.29, p<0.001$) and in relationship with partner ($t=- 10.83, p<0.001$) improved in the intervention group compared to the control group. (**Table 3**).

Discussion

The current resaerch was designed to assess the effect of counseling with family members to reduce the postpartum percieved stress.

The findings revealed significant decrease in perceived stress in intervention group compared to the control group. In other words the present study highlighted the crucial role of family members to help new mothers to cope with postpartum period stress. Regarding perceived stress subscales, the result of our study showed that effective involvement of family members to support of the mothers is also essential to reduce the postpartum stress in all dimensions. Other studies confirm the results of the present study about the crucial role of family members as an influential factor to deal with stress of new mothers [19, 32]. In this line the results of a study conducted by Billings et al. showed a significant relation between lack of husband's support and high degree of perceived stress [33]. Other studies pointed out that with higher family support, the level of stress will decrease in pregnancy and postpartum period [34, 35]. Also Kehoe et al. in their study revealed that, mothers of newly born twins require family support to cope with stress [36]. Further, Eddins et al. and Colut et al. found that in newly mothers and in attachment period especially at the earliest moments of newborn's life there is a significant association among depression level, domestic violence, drug use/abuse, disappointment, anxiety and more stress [37].

One of the aspects of the MSPSS questionnaire is "fatigue and organization at home". Our intervention could significantly reduce fatigue in mothers compared to the control group. In agreement with the present study Giallo et al. demonstrated that the parents described unrelenting physical and cognitive symptoms of fatigue, and its impact on daily functioning, well-being, and parenting. Sleep deprivation was seen to contribute to fatigue for both mothers and fathers, however, mothers also emphasized that daily demands and limited opportunities for a rest are contributed to their fatigue. Parents need taking time out for exercise and social support especially family support as a way of managing fatigue [38].

The impression of not being able to look after my baby, baby's health, the risk of stillbirth, caring for the baby are mentioned in relationship with baby subscale and the current study illustrated that involving new fathers and other family members created an appreciative support to diminish perceived stress in this threatening and stressful situation. Concurrent with our results, other studies indicated that mothers with higher scores on the preoccupied and fearful attachment scales had more severe postpartum anxiety and depression symptoms [39]. And also mothers reported moderate to low stress, with parental role alteration in NICU-related stress [40].

Regarding feeding the baby, pain during breastfeeding, uncertainty about baby's sufficient eating, difference between expected and actual experience of breast feeding were mentioned by mothers. In agreement with our study other investigators expressed the family supporting role as a modifier for the major concern regarding breast feeding in newly mothers [41-44].

In regard to relationship with body as another subscale of perceived stress scale, episiotomy scars and perineal tears, recovering sexual intimacy, and painful scar were mentioned. The findings of the present research elucidated that family members had admirable effect to relieve the postpartum perceived stress. In Iranian culture grandmother and other close family usually company the women in postpartum period so this issue provide an opportunity for the new mother to take more rest. In agreement with our study,

other studies indicated that mothers expressed the need to be accompanied and counseled when problems arose and regretted the lack of long-term postpartum support [45, 46].

In relationship with partner as the other subscale of the post-partum perceived stress two items; relationship with partner and father's role with the baby were mentioned. A study conducted in Canada depicted that women with depressive symptoms at 8-weeks postpartum had significantly lower perceptions of relationship-specific and postpartum-specific partner support and significantly higher levels of relationship conflict than women with no depressive symptoms[47]. In this line Schlagintweit et al. in their study revealed that a wide range of postpartum sexuality concerns was highly prevalent and moderately distressing for new mothers and fathers. New fathers had a more serious concern about postpartum sexual relationship and also their satisfaction with sexual relationship was decreased. Whereas new mothers' greater severity of postpartum sexual concerns was associated only with lower relationship satisfaction in new fathers. In addition, new mothers' greater frequency of postpartum sexual concerns was associated with their own and new fathers' lower relationship satisfaction[48]. These studies confirm the results of the present study regarding husband's praiseworthy role to manage perceived stress in postpartum of their wives.

Limitation

The limitations of this study is that some family members did not attend counseling sessions at the beginning of the study. The researcher tried to provide a privet situation during the counseling sessions, to maximize collaboration and coordination with the families and to remind them by phone prior to the sessions.

Conclusion

The results of our study illuminated that family member's involvement created appreciative opportunity for women during post-partum period and played an instructive role for empowering women for managing the stressors to reduce post-partum perceived stress. The results showed that these kinds of abilities to overcome to the stressful situation can be motivated by family member's encouragements and their admired support.

Declarations

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Availability of data and materials

The data set is available from the corresponding author on reasonable request.

Authors' contributions

FMT in the position of the supervisor contributed to the study design, the accuracy of the data analysis, writing the manuscript, and is the guarantor of this work. HN as the master's student participated as investigators and collecting the data. Both authors read and approved the content of the manuscript.

Author's information

FMT is a PhD, associate professor in Midwifery Department. HM was a master's student in midwifery consultation in Urmia university medical sciences.

Ethics approval and consent to participate

The research protocol was approved by the institutional review board and the Ethics Committee of the Uremia University of Medical Sciences (Ir.umsu.rec.1395.109). Participants were provided with detailed information about the study and were assured that confidentiality would be maintained at all times. Written consent was obtained prior to data collection.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests

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Tables

Table 1. Topics and Methods of family member's counseling to reduce postpartum perceived stress

Weekly Session	Title of session	Topics	Duration (Min)	Methods
1	Fatigue and organization at home	Regulation sleep schedule to deal with fatigue Plans to adapt to a shortage of time at home. Cope with daily routine schedule changes Satisfy baby demands Manage the house	60-90	Short lectures, Group discussion Sharing positive and constructive experiences with each other
2	Relationship with baby	Empowering mother to take care of baby Awareness of baby's health and attention to abnormal symptoms Teaching the mother how to take care of the baby (bath, umbilical cord, diaper change) Dealing with postpartum blues, and negative thoughts Communicate with closed relatives	60-90	Reviewing Negative experiences and training effective strategies Flash cards Power point
3	Relationship with body	Tips to reduce episiotomy pain and recovery Introducing post- partum exercise to restore the body to its normal state.	60-90	
4	Feeding the baby	Choosing the right position during breastfeeding to reduce pain How to breastfeed properly How to get family support to successful breastfeeding How to choose the right information from the different advices proposed by different caregivers.	60-90	
5	Future plans	Back to normal daily activities Tips for back to outdoor activities.	60-90	
6	Relationship with Husbands	Tips for improving and recovering sexual intimacy Teaching fathers to bond with baby	60-90	

Table2: Demographic, clinical characteristics and family support in intervention and control group

		Intervention N(%)	Control N(%)	X ²	P
able man's age	20-24	91(55.5)	94(56.6)	2.8	0.43
	25-29	39(23.8)	49(27.7)		
	30-34	34(20.7)	26(15.7)		
tation	Yes	23(14)	33(19.9)	2	0.18
	No	141(86)	133(80.1)		
atisfaction of fetal sex	Yes	144(87.8)	158(95.2)	1.26	0.01
	No	20(12.2)	8(4.8)		
cation status	Primary	25(15.2)	21(12.7)	1.85	0.39
	High school	49(29.9)	61(36.7)		
	College certificate	90(54.9)	84(50.6)		
conomic status	Good	29(17.7)	39(23.5)	1.84	0.4
	Fair	96(58.5)	93(56)		
	Poor	39(23.8)	34(20.5)		
ness status	Employed	46(28)	34(20.5)	2.57	0.12
	Housewife	118(72)	132(79.5)		
band's age	20-24	24(14.6)	27(16.3)	0/5	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)		
band's education	Primary	20(12.2)	15(9)	2.5	0.29
	High school	58(53.4)	72(43.4)		
	College certificate	86(52.4)	79(47.6)		
band's job	Nongoovernmental	101(61.5)	100(61)	1.83	0.016
	Governmental	63(38.5)	64(39)		
sing status	Tenant	136(83)	78(78.8)	0.5	0.4
	Owner	28(17)	35(21.2)		
riage Duration(SD)	3.20±1.63	3.13±1.14		0.7	0.91
ily support(SD)	12.90±5.46	12.51±5.42		0.4	0.56

Table 3: Changes Perceived stress scores in intervention and control group

P	T	Post-intervention (Mean (SD)	Pre-intervention (Mean (SD	
				Perceived stress total
<0.001	- 8.93	81/40±24/82	101/63±13/47	Intervention group
0/68	- 0.41	99/97±15/3	100/16±15/88	Control group
				(Fatigue(5-25
0.001>	6.55 -	15.08±6.75	20.76±6.14	Intervention group
0.78	0.27 -	20.20±6.30	20.22±6.26	Control group
				(Relationship with baby(6-30
0.008>	2.63 -	17.77±9.53	21.18±7.05	Intervention group
0.31	1 -	20.77±6.95	20.68±6.99	Control group
				Relationship with body(5-25)
0.001>	6.43 -	16.09±5.85	19.53±1.12	Intervention group
0.37>	0.88 -	18.76±5.05	18.80±4.91	Control group
				(Feeding the baby (4-20
0.03	2.16 -	10.61±4.05	12.20±5.65	Intervention group
0.19	1.31 -	11.99±5.61	12.04±5.53	Control group
				(Future plan (3-15
0.001>	10.29 -	8.02±2.45	12.43±2.24	Intervention group
0.31	1 -	11.99±2.07	11.98±5.61	Control group
				Relationship with partner
0.001>	10.83 -	13.82±1.03	16.91±0.98	Intervention group
0.55	0.58 -	16.43±3.44	16.25±3.45	Control group

Figures

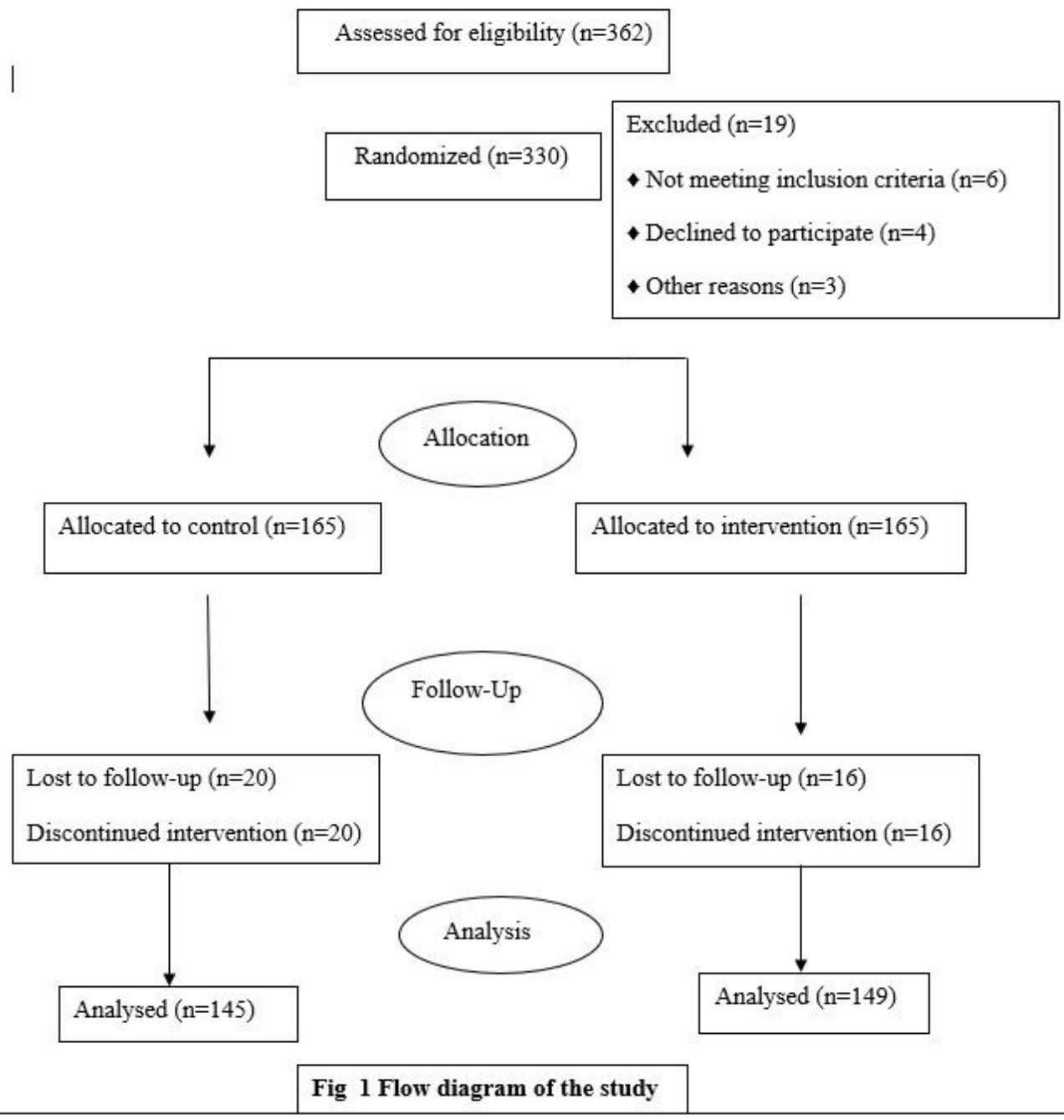


Figure 1

Family Involvement, Postnatal Perceives Stress, Pregnancy