

Does counseling affect parental postpartum depression?

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Abstract

Introduction and objectives: During pregnancy and after childbirth, parents experience new roles and responsibilities, which may affect their mood and lead to postpartum depression. The present study examines the effects of counseling on postpartum depression in parents.

Materials and methods: The study is a clinical trial on 76 couples from Urmia, Iran. The samples were chosen from week 34 of pregnancy to 6 months after childbirth and randomly assigned to control (38 couples) and intervention (38 couples) groups. The control group received routine care, while parents in the intervention group received routine care plus five counseling sessions. All the women and their spouse in the control and intervention groups were assessed with the Edinburgh Postpartum Depression Scale at the beginning of study, 2 and 6 months after childbirth. Descriptive statistics tests and t-test were used to extract the results. P-values less than 0.05 were considered significant.

Findings: Mean Edinburgh depression score 2 months after childbirth was higher for control group mothers (10.18 ± 1.53) as compared with the intervention group (8.21 ± 1.43). This was statistically significant. The mean Edinburgh depression scores for fathers in the control and intervention groups were 6.92 ± 1.51 and 6.36 ± 1.42 , respectively, but this difference was not statistically significant. Also, the mean Edinburgh depression scores 6 months after childbirth were found to be higher for the control group mothers ($p = 0.001$) and fathers ($p = 0.019$), and this was statistically significant.

Conclusion: The results of this study showed that couple-based counseling significantly decreased depression scores of nulliparous women within 2-6 months after delivery. However, the interventions failed to have effects on fathers within 2 months after childbirth and only proved statistically effective after 6 months.

Keywords

Couple-based counseling, postpartum depression, fathers, mothers, parents.

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Introduction

Childbearing and undertaking related parental roles are psychological processes that bring about personal as well as familial changes [1]. These changes are likely to cause postpartum mood inconsistencies and other psychological disorders. Postpartum depression is a mood disorder with disabling effects on the human mind, body, and behavior. It is associated with parents' relationship with the infant and happens within a few weeks after childbirth [2, 3]. Studies have shown that about 10-15% of mothers develop postpartum depression [4]; however, in most cases, it remains unnoticed and untreated [5]. In Iran, 25% of women suffer from this disorder, which tends to be 43% in unplanned pregnancies and 45% in mothers with a history of depression [6]. Although postpartum depression is mostly associated with women, men have also been reported to experience it [7]. Nevertheless, it begins later in men [8] and affects 1.2-25.5% of them. Symptoms of postpartum depression are appetite problems, weight loss/gain, lack of energy, sleep disorders, warning signs of suicide, withdrawal from social activities, alcohol use and addiction [9]. An individual should manifest these symptoms for at least two weeks to be recognized as affected [10]. These symptoms influence the patient's quality of life [11] and increase the likelihood of developing chronic diseases, such as cancer and cardiovascular problems [12]. It can be ascribed to a range of factors including history of depression, marital problems, changing roles, new responsibilities, changes in the relationship between the couples, unplanned pregnancy, financial problems, lack of social support, low education, and uncertainty about undertaking parental responsibility and baby care [13-15]. Postpartum depression may influence the relationships between either of the parents and

their infant [16]. Affected mothers fail to provide for basic needs of their children and, in most cases, avoid breastfeeding and do not adhere to medical advice [17]. Similarly, depressed fathers do not develop a strong bond with their children and cannot support them [18]. This gives rise to a sense of insufficiency in the father and a feeling of being rejected in the child [17]. Thus, risks of behavioral problems increase in these children between the ages of 3 and 5 [18]. Furthermore, fathers are primary sources of formal support for mothers after delivery, and their depressive problems directly influence their conjugal relationships [19].

A number of medicinal and non-medicinal methods have been suggested to treat postpartum depression. However, medicinal practices are usually avoided for their side effects and breastfeeding restrictions [20]. On the contrary, non-medicinal practices, such as increased social support, training skills to handle stress [5] and counseling interventions have proved more appealing as they incur no negative effects [21, 22].

Based on the considerable prevalence of postpartum depression and its negative impacts on the normal growth of infants, mental health of families, and relationships between couples, on the one hand, and the effects of counseling interventions on treatment of depression symptoms, on the other hand, the aim of the present study was to examine the effects of counseling on postpartum depression in parents.

Methodology

The present study is an experimental clinical trial (IRCT2016060828340N1) that investigates the effects of counseling on postpartum depression in parents. Samples were chosen from among pregnant women and their spouses referred to health centers in Urmia, Iran.

Sampling

A sample size of 35 couples was estimated for each group, considering the 95% confidence and 90% power based on a research conducted by Moshki et al. [22]. However, using a 20% attrition rate, 42 couples were randomly sampled for each group. A list of women within 34-36 weeks of pregnancy was obtained and the samples were randomly selected. Accordingly, the sample size was proportional to the number of pregnant women in each center. Thus, each pregnant woman was

assigned a number in the list. The random numbers were used for random selection. Thereafter, the pregnant mothers and their husbands were invited to the health center. Those who refused to participate were replaced. The samples were informed about the objectives of the study and randomly assigned to either the control or the intervention group. A total number of 84 envelopes containing number one or two were designed for couples to choose from. Couples who received number one were assigned to the intervention group (42 couples) and the others were assigned to the control group (42 couples).

Inclusion and exclusion criteria

Inclusion criteria for women were nulliparous women, residence in Urmia, Edinburgh depression score less than 9 (pre-test), Iranian nationality, literacy, lack of abnormality in the child, pregnancy of 34 weeks, absence of diagnosed depression, no use of antidepressants during pregnancy, no drug addiction, no stressful experience over the past six months, and living with spouse. Inclusion criteria for men were residence in Urmia, Edinburgh depression score less than 9 (pre-test), Iranian nationality, literacy, lack of abnormality in the child, pregnancy of their spouse 34 weeks, absence of diagnosed depression, no use of antidepressants during pregnancy, no drug addiction, no stressful experience over the past six months, employment, and living with spouse. Those who did not attend counseling sessions, moved, reported death or abnormality of the child, hospitalization of mother or baby during the study, suffered from severe depression and took antidepressants at the time of research, and showed no interest to continue the study were excluded.

Intervention

Participants in the control group received routine healthcare services during pregnancy and after delivery, while participants in the intervention group received these services and attended five counseling sessions. These sessions (60-80 min) were held in quiet private rooms in the health centers from which participants received care services: session one in weeks 34-36 of pregnancy; session two in weeks 36-38; session three about 3-5 days after delivery; session four about 10-15 days after delivery; and session five 6-8 weeks after delivery. The researcher explained the objectives

of the study to the couples and asked them to disclose their problems during pregnancy and after childbirth. Accordingly, the researcher provided them with pieces of advice to choose from and solve their problems. In fact, the agenda of each counseling session was determined by participants in the place. Furthermore, the researcher provided the participants with her phone number in case they needed to talk to her. Some issues discussed in the counseling sessions included physiologic changes during pregnancy and after delivery, health problems during pregnancy, type of delivery, postnatal health issues, breastfeeding, childcare, sex in late pregnancy and after childbirth, nutrition, postnatal care, use of contraceptives, postpartum exercises, and support of husbands. With the exception of session three, which featured only fathers, all the sessions were held with the presence of both partners. All the women and their spouse in the control and intervention groups were assessed with the Edinburgh Postpartum Depression Scale at the beginning of study, 2 and 6 months after childbirth.

Tools

Demographic profile questionnaire and the Edinburgh Postpartum Depression Scale were used for data collection. Edinburgh Postpartum Depression Scale was developed by Cox (1987) as a set of 10 questions to indicate participants' feelings over the past few days [23]. Each item is scored on a scale from 0-3, giving a total score between 0 and 30. Items 1, 2 and 4 are reversely scored. In Iran, the Edinburgh Postpartum Depression Scale is used for screening postpartum depression in clinical studies and its validity is confirmed through retest (0.8) and Cronbach's alpha (0.77) [23, 24].

Data analysis

As soon as the data were collected and coded, SPSS® 19.0 was used for their analysis and to obtain the descriptive statistics such as mean, standard deviation, and appropriate tables. A t-test was used for comparing means. P-values less than 0.05 were considered significant.

Ethics statement

The present study received an ethics code (IR.UMSU.REC.1395.102) from the Ethics Committee of Urmia University of Medical Sciences.

Results

A total number of 84 couples were randomly assigned to the control (42 couples) and the intervention (42 couples) groups; in each group 38 couples went through the process of intervention and data collection. The demographic information of the participants is shown in **Tab. 1**. The mean age of men in the control and intervention groups was 27.71 ± 2.31 and 26.97 ± 2.22 , respectively ($p = 0.27$). While the mean age of women in the control and intervention groups was 22.89 ± 3.17 and 22.15 ± 2.16 , respectively ($p = 0.69$).

No significant difference was observed for mean Edinburgh depression score, as only those who scored less than 9 were included in the study.

The mean Edinburgh depression score within 2 months after delivery was higher for mothers in

the control group than those in the intervention group and it was statistically significant ($p = 0.001$). This was found to be 6.92 ± 1.51 and 6.36 ± 1.42 for fathers in the control and intervention groups, respectively, and was not statistically significant ($p = 0.10$). The sum of mean depression scores for mothers and fathers within 2 months after delivery was higher in the control group than in the intervention group and it was statistically significant ($p = 0.001$) (**Tab. 2**).

The mean depression score within 6 months after birth in mothers and fathers in the control group was higher than in mothers and fathers in the intervention group. This difference was statistically significant. Also, the average total score of the parents' depression in the control group was higher than the intervention group, this difference was statistically significant (**Tab. 3**).

Table 1. Demographic information of participants in the control and intervention groups.

Variable	Category	Intervention group n = 38		Control group n = 38		p-value ^a
		Percent	Number	Percent	Number	
Men's education	Primary school and lower	5.3	2	18.4	7	0.12
	High school diploma	63.2	24	44.7	17	
	College education	31.6	12	36.8	14	
Women's education	Primary school and lower	18.4	7	15.8	6	0.62
	High school diploma	55.3	21	65.8	25	
	College education	26.3	10	18.4	7	
Men's job	Free	84.2	32	81.6	31	0.76
	Employee	15.3	6	18.4	7	
Women's job	Housewife	78.94	30	86.8	33	0.36
	Practitioner	21.2	8	13.2	5	

^a Chi-square.

Table 2. Mean depression score of participants within 2 months after delivery.

Variable	Intervention group n = 38	Control group n = 38	p-value ^a
Women	8.21 ± 1.43	10.18 ± 1.53	0.001
Men	6.36 ± 1.42	6.92 ± 1.51	0.10
Women and men	14.57 ± 2.11	17.10 ± 2.44	0.001

^a Independent sample t-test.

Table 3. Mean depression score of participants within 6 months after delivery.

Variable	Intervention group n = 38	Control group n = 37	p-value ^a
Women	5.05 ± 1.74	7.27 ± 2.02	0.001
Men	3.91 ± 1.46	4.94 ± 2.12	0.019
Women and men	9.05 ± 2.66	12.31 ± 3.26	0.001

^a Independent sample t-test.

Discussion

Childbearing and undertaking related parental roles are psychological processes that bring about personal as well as familial changes such as anxiety and postpartum depression. In other words, the majority of mothers experience certain degrees of changes in mood and temperament. Schumacher et al. [25] pointed out that parents are more likely to suffer from psychological distress and postpartum depression is not a rare phenomenon among them. This is further affirmed by de Magistris et al. [26].

The present study found that mean depression score within 2 and 6 months after delivery was higher in the control group as compared with the intervention group, and it was statistically significant ($p = 0.001$). In a study by Gao et al. [20], the mean depression score 6 weeks after delivery was observed to be higher for mother in the control group (8.96 ± 4.55) than mothers in the intervention group (7.61 ± 3.43). Moshki et al. [21] studied the effects of educational classes on the prevention of postpartum depression among women and reported that, within a month after delivery, women in the intervention group (7.40 ± 3.73) scored less than those in the control group (10.75 ± 4.89). Also, Shorey et al. [27] demonstrated that psychological programs promoted the sense of self-sufficiency in nulliparous women within 6-12 weeks after childbirth, while it reduced their depression score. Zlotnick et al. [28] investigated the effects of interpersonal psychotherapy (IPT) on postpartum depression and showed that, within 6 months after delivery, mothers in the control group (31%) were more depressed than the intervention group (16%). The results obtained in a study by Hou et al. [29] also showed that cognitive behavioral treatments (CBT) decrease depression score of nulliparous women (control 15.663 and intervention 13.362). This is in agreement with the results of the present study that psychological interventions and counseling as well as familial support during pregnancy and after delivery significantly decreased the level of postpartum depression. Studies have shown that postnatal support has positive effects on declining psychological morbidity during pregnancy [29, 30]. Unlike the previous studies, the present study features the presence of fathers in counseling sessions and promotes their contribution and support of spouses after delivery. As reported by Kaye et al. [31], fathers who attend training sessions are more likely to engage in childcare activities and establish stronger ties with their wives. This

decreases the postpartum depression score of mothers in the intervention group as compared to their counterparts in the control group.

Ho et al. [32] determined the effects of a training program on decreasing postpartum depression within 6 weeks after delivery in Taiwan. In the study, the control group received routine care services, while the intervention group was trained on postpartum depression. The results showed a significant difference in terms of depression score between the two groups. Ryding et al. [33], in their study, randomly divided 106 mothers into control and intervention groups and provided the intervention group with counseling services by a counselor and a midwife within 1-2 months after delivery. They observed a significant difference between the two groups in terms of depression scores within 6 months after childbirth.

In the present study, depression scores within 2 months after delivery showed no difference for fathers in the control and intervention groups. However, Edinburgh depression score was significantly different for them within 6 months after delivery. Brunton et al. [8] also showed that postpartum depression started late in fathers than in mothers. The results of the present study showed that depression score 6 months after delivery was significantly different for fathers in the control and intervention groups, indicating the effectiveness of the intervention protocol on decreasing postpartum depression in fathers.

The present study considered parents as a single unit in the family and calculated their depression scores in both groups. It was found that depression scores within 2-6 months after delivery were higher in the control group than the intervention group. Parents can tackle upcoming challenges when they are integrated. Thus, our couple-based counseling protocol examined parents as an integrated unit challenged by a newly born baby.

The major limitation of the present study is the unavailability of intervention studies on postpartum depression in men. Thus to deal with the issue and add to the literature, it is suggested that future studies be carried out in this regard. This study was conducted on nulliparous mothers and their spouses referred to public health centers and may not represent the general multiparous mothers and their spouses who have other children. In these families, the effective factors and the mode of intervention may vary. Therefore, it is suggested that other interventional studies should be conducted with a family-centered approach

in couples who have children to improve mental health and reduce the potential stress associated with mother's re-pregnancy and the birth of another child.

Conclusion

The study showed that couple-based counseling contributes to alleviating postpartum depression in parents with a newly born baby. According to the discussion, it is better for counseling to begin during pregnancy because it is more effective in improving postnatal depression. Since childbirth is a serious challenge to the whole family, parents were taken as an integrated unit in the present study. It seems that considering parents as a unit is more in line with the challenge of adding a new member to the family.

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Declaration of interest

The Authors declare that there is no conflict of interest.

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