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Supportive role of spouse in preventing Postpartum Depression among fertile women

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ABSTRACT

Background: In the postpartum period, the highest risks for mood disorders include distress, depression and psychosis. Postpartum depression (PPD) is a syndrome which is more severe than postpartum distress with great influence on family.
Objective: The aim was to determine the predisposing risk factors of PPD among fertile women.
Materials and methods: It was a cross-sectional study with multi stage samplings of 233 women referred to Larestan health centers in Iran during 2 months post delivery. The data collection tools consisted of two questionnaires.The first questionnaire included demographic characteristics such as age, education, employment status, income, age at the time of marriage, age difference with spouse, periods of relationship before marriage, type of marriage, number of children, newborn's gender, accommodation status and residency. The second questionnaire was Beck depression inventory. Data was analyzed using one way ANOVA, independent T test, Spearman's correlation coefficient and linear regression.
Results: A significant relationship was noted between PPD and husband's working status (P=.04). It means that women whose husbands worked in the Persian Gulf states showed the highest rate of depression. Whereas, there was no significant association between PPD and age (P=.49), age by time of marriage (P=.74), women education (P=.24), women working (P=.78), man education (P=.46), age difference with spouse (P=.76), period of dating before marriage (P=.72), duration of marriage (P=.27), contraception methods (P=.90), husband's addiction (P=.16), accommodation (P=.29), residence (P=.50), number of children (P=.861), number of female children (P=.16), and gender of newborns (P=.82).
Conclusions: Poor social supports, especially lack of supportive spouse, is a major risk factor for PPD among fertile women in Iran.

KEYWORDS Depression, Postpartum, Spouse, Iran.

Introduction

In the postpartum period, there is the highest risk for mood disorders including distress, depression and psychosis. Postpartum depression (PPD) is a clinical syndrome which is more severe than postpartum distress and has a greater influence on family. This syndrome is a combination of physical and mental illness, behavioural changes that some women experience it after childbirth [1]. About causes of this disorder, scientists still unsure about this theory, but they believe that the disease factors are hormonal, biochemical, environmental, psychology and genetic [2]. Another factor is the decline in hormonal levels after childbirth [3, 4]. PPD is recognized as a world health issue with negative effects on one's life, work, and family, affecting child's growth and health [5]. Various studies in different countries, have reported the prevalence of PPD from 10 to 28%, Studies in Iran reported the prevalence of PPD ranged from 16 to 31% [6-10]. Most women often do not discuss their condition with their doctors, because they are worried about other's distrust and judgment, especially if they don't trust the doctor, or concerned about the introduction to child support agency [11].

Other reasons that cause depressed mother not visiting doctors include: social status, treatment costs, concerns about insurance support, and lack of awareness about depression's harmful effects on both mother and infant health[5]. Given such a situation, the positive mother's emotion is not transferred to baby, and mother may harm the baby. Therefore, this situation is a disruptive agent for baby's physical and mental development in the present and future [12]. It usually happens within the first two to three months postpartum, though onset can be immediate after delivery. It may last up to several months or even a year[13]. A number of factors have been considered as risk factors for PPD, including, race, ethnicity, age, low social-economic status, depression or family history of depression, poor marital relationships, unplanned or unwanted pregnancy, tobacco usage during the last three months of pregnancy, substance abuse problems or background of alcohol dependence, and lack of social support. Women with these risk factors should be regularly monitored and evaluated during their pregnancy and after childbirth [14-16]. The aim was to assess the correlation between women PPD and age, age of marriage, female education and working, male education and working, age difference with spouse, period of relationship before marriage, duration of marriage, number of children, number of male and female children, newborn infant's gender, contraception methods, addiction, accommodation type, and place of residency.

Materials and Methods

It was a cross-sectional study with multi stage sampling of women referred to Larestan health centers during 2 months after delivery in 2013. Among the 21 Larestan health centers in Iran, four urban and four rural centers were selected as clusters. Thirty questionnaires (total of 240) were assigned to each health center. The questionnaires were given to the employed midwives with necessary explanations. At the end, 233 questionnaires were completed.

The data collection tools consisted of two questionnaires. The

first questionnaire included demographic characteristics such as age, education, employment status, monthly income, age by time of marriage, age difference with spouse, period of relationship before marriage, type of marriage, number of children, new born child's gender, addiction (if any), accommodation status and residence. The second questionnaire was Beck *depression inventory.* The score obtained from the questionnaire indicates different levels of mental health. 0-4 indicates lack of or lowest level of depression, 5-7 mild, 8-15 moderate, 16-39 severe depressions.

Data was analyzed by SPSS version 16 by using descriptive statistics, one way ANOVA, independent T test, Spearman's correlation coefficient and linear regression.

Ethical considerations
All participants were given verbal and written information and it was made clear that their participation was voluntarily. Written consent was obtained from all women.

Results
The mean age of women was 27.5±5.56. 39.5% of the women had no high school diploma, and 92.3% were housewives. About their husband's education, 51.1% had no high school diploma, and 69.5% of them were employed in non-governmental institutions. In the case of age difference, 85.4% of the women were younger than their husbands, 9.9% men and women were of the same age, and 4.7% of women were older than their husbands. 50.2% of them were familiar with each other more than one year before marriage. 45.5% of the women had a natural method of birth control. In 88.4% of the cases, spouses were not addicted, but 11.6% of spouses were addicted. In terms of housing, 67.8% had personal house and 32.2% had rental houses. Also, 61.8% of women were from rural areas and 38.2% lived in urban areas. 50.2% of newborn infant's gender was female and 47.6% was male (Table 1). The mean age for marriage was 21.52±4.38. The mean period of marriage was 5.96±5.0, the mean number of children was 1.86±1.0. Average number of female children was 0.91±.86, and mean number of male children was 0.96±0.88 (Table 2).

Of the total 233 women, 72.1 % were healthy, 11.2% had mild, 14.2% moderate and 2.6% had severe depressions. The average number of depression was 3.32 with 5.17 standard of deviation (Table 3). This study also showed that there was no significant association between postpartum depression and age (P=0.49), age by time of marriage (P=0.74), women education (P=0.24), women working (P=0.78), man education (P=0.46), age difference with spouse (P=0.76), period of dating before marriage (P=0.72), duration of marriage (P=0.27), contraception methods (P=0.90), husband's addiction (P=0.16), accommodation (P=0.29), residence (P=0.50), number of children (P=0.86), number of female children (P=0.16), number of male children (P=0.19) and gender of newborns (P=0.82). Whereas, there was a significant relationship between PPD and husband's working place (P=0.04) (Table 4, 5). It means that women whose husbands worked in the Persian Gulf states showed the highest rates of depressions.

Discussion
Many studies have shown that the prevalence of depression, particularly PPD, has a close relationship with cultural-social factors. Therefore, its prevalence varies in different countries and races. Effective factors for PPD can vary depending on the culture of the population [17]. Among the factors studied here, there was an association between men's working place and PPD. Depression in women whose husbands worked in the Persian Gulf states were more than others. Some of men in this region are away from their families for a long period of time.

Lack of support and spending insufficient time from spouse, impose a lot of pressure to the mother. So, these mothers are unable to grow their newborn infants without harming their health [18]. In this study, there was insignificant association between maternal age and PPD, which was contradictory with the findings of Beck. Beck (2001) showed the high age of mothers is important risk factor for PPD [19]. While, according to research from PRAMS, younger women show more symptoms of PPD [5]. The findings showed that there was no significant association between the age at marriage, duration of marriage, period of pre-marital relationship, age difference with spouse, educations and women employment with PPD. According to PRAMS's research, less educated women showed more depressive symptoms, also women with low income had higher prevalence rates of PPD [5]. Wang et al (2003) and Verdoux et al (2002) showed that there was significant correlation between the education level of mothers and PPD [20, 21]. The results also showed that PPD has no significant correlation with accommodation type and place of residency. In addition, the number of male and female children and newborn infant's gender is not associated with PPD.

Wang et al (2003) declared that there is no relationship between newborn infant's gender and depression, so Wang's findings is consistent with ours [20]. Khodadadian et al (2008) also indicated that there is significant correlation between having undesired baby's gender and PPD [9]. Hung et al (2011) showed that the risk for depression rises with increasing the number of delivery [22]. In this investigation, none of the women had drug addiction. PRAMS also announced that the use of tobacco in last three months of pregnancy associated with risk for PPD [23]. Based on the findings, PPD is not significantly related to status of spouse addiction.

In using contraception methods, the highest rates of depression were among Depo-Medroxy Progesterone Acetate (DMPA) / *Cyclofem*users. The lowest depression rate, however, was among women who did tubal ligation (tubectomy) and no significant correlation between contraception methods and PPD were noted. Women usually tend to receive more instrumental support from their parents and spend postpartum recovery (puerperium) in her father's house, and receive emotional support from parents of her husband.

Kruckman argued that supportive initiatives, if provided meaningful and sincere to mother, affect function of hypothalamus, pituitary and adrenal. So, it reduces the anxiety or fear in women after childbirth [24]. Most women who suffer from PPD usually have unfavorable supportive conditions and paying less attention to their babies [25-29]. Finally, this study showed that poor social supports, especially lack of supportive spouses, are major risk factors for PPD, which is consistent with previous results [2].

Women who are supported and encouraged by their husbands during pregnancy, after childbirth and breast feeding, have more sense of security and peace of mind. Thus, they could do their maternal responsibilities better. Mothers feel more responsible after delivery, so creating an emotional relation helps them to take care of their babies. In this regards, husband is the best person who can support the mother. Husband should think about his wife's physical and mental health, and try to create a relaxed atmosphere. He should not let his wife to be anxious, worry or afraid. If a woman is left alone in taking care of the baby, she will be tired and disenchantment and provide ground for PPD. Mild depression after childbirth, usually resolve quickly by support from family and friends. Mothers in severe depression may not be able to care for themselves or their babies. So, hospitalization may be necessary, but is curable by counseling with relevant experts, using medication and family support [30]. The nurses and midwives in health centers can offer necessary training about risk factors for PPD, its early identification, and dealing with it. In this field, not only mothers, but other family members, like husbands, must receive relevant training. Further studies should be done about effects of training to spouses about affective factors on PPD and compare the prevalence of depression in mothers.

Conclusions

In conclusion, this study showed that poor social support, especially lack of a supportive spouse, is a major risk factor for PPD among fertile women in Iran.

Table 1: Frequency and percentile of qualitative variables frequency

Variable	Frequency	Percentile of frequency
Woman education		
Unlettered	12	5.2
Below diploma	92	39.5
Diploma	86	36.9
AA(associates of arts)	12	5.2
BA(bachelors of arts)	31	13.3
MA(masters of arts) and PHD	0	0
Men education		
Unlettered	11	4.7
Below diploma	119	51.1
Diploma	80	34.3
AA(associates of arts)	5	2.1
BA(bachelors of arts)	15	6.4
MA(masters of arts) and PHD	3	1.3
Women working		
Unemployed / Housewife	215	92.3
Working in governmental institution	12	5.2
Working in non-governmental institution	6	2.6
Working in Persian Gulf States	0	0
Man working		
Unemployed	9	3.9
Working in governmental institution	22	9.4
Working in non-governmental institution	162	69.5
Working in Persian Gulf States	40	17.2
Contraception methods		
Oral contraceptive(OCP)	39	16.7
Depo-MedroxyProgesterone	5	2.1
Acetate(DMPA) / Cyclofem	4	1.7
IntraUterine Device (IUD)	7	3.0
Tubectomy	0	0
Vasectomy	72	30.9
Condom	106	45.5
Natural methods of birth control		
Accommodation		
Rental	75	32.2
Personal	158	67.8
Period of dating before marriage		
Less than 6 months	80	34.3
6 month to 1 year	36	15.5
More than 1 year	117	50.2
Gender of newborn infant		
Girl	117	50.2
Boy	111	47.6
Boy / Girl	5	2.1
Age difference		
Men older than women	199	85.4
Men and women of the same age	23	9.9
Women older than men	11	4.7
Spouse addiction status		
Yes	27	11.6
No	206	88.4
Residence		
Town	89	38.2
Village	144	61.8

Table 2: The average, standard deviation, minimum and maximum of quantitative variables

	Average	Standard deviation	Minimum	Maximum
Age	27.5	5.56	14	44
Age by time of marriage	21.52	4.38	12	35
Duration of marriage	5.96	5.00	1	23
Number of children	1.86	1.00	1	5
Number of female children	0.91	0.86	0	4
Number of male children	0.96	0.88	0	5

Table 3: Frequency and Percentile of depression degree's frequency

Depression's degree	Frequency	Percentile of frequency
Health	168	72.1
Mild depression	26	11.2
Moderate depression	33	14.2
Severe depression	6	2.6
Total	233	100

Table 4: Comparison of average depression score based on qualitative variables

Variable	average	standard deviation	P- Value
Woman education			
Unlettered	2.75	4.09	
Below diploma	4.14	6.18	
Diploma	3.06	4.90	
AA(associates of arts)	3.41	44.05	
BA(bachelors of arts)	1.77	2.49	0.247**
MA(masters of arts) and PHD	0	0	
Men education			
Unlettered	4.63	5.35	
Below diploma	3.73	5.61	
Diploma	3.01	4.99	
AA(associates of arts)	2.40	3.36	
BA(bachelors of arts)	1.13	1.80	0.463**
MA(masters of arts) and PHD	2.66	3.78	
Women working			
Unemployed / Housewife			
Working in governmental institution	3.38	5.31	
Working in non-governmental institution	2.33	2.74	0.783**
	3.00	4.28	
Man working			
Unemployed			
Working in governmental institution	1.04	1.61	
Working in non-governmental institution	3.70	5.58	
Working in Persian Gulf States	2.52	3.98	0.049**
	5.44	6.84	
Contraception methods			
Oral contraceptive(OCP)	3.76	5.32	
Depo-MedroxyProgesterone	5.20	5.06	
Acetate(DMPA) / Cyclofem	4.75	5.18	
IntraUterine Device (IUD)	2.71	3.40	
Tubectomy	3.02	6.32	0.904**
Condom	3.25	4.37	
Natural methods of birth control			
Accommodation			
Rental	3.84	4.85	
Personal	3.07	5.32	0.294*
Period of dating before marriage			
Less than 6 months	3.40	6.02	
6 month to 1 year	4.02	5.40	0.722**
More than 1 year	3.02	4.48	
Gender of newborn infant			
Girl	3.52	5.75	
Boy	3.09	4.58	0.822**
Boy / Girl	3.40	3.91	
Age difference			
Men older than women	3.82	4.12	
Men and women of the same age	3.14	3.98	0.764**
Women older than men	3.04	4.51	
Spouse addiction status			
Yes	3.10	4.95	0.166*
No	4.96	6.56	
Residence			
Town	3.03	4.62	0.506*
Village	3.50	5.50	

* T-Test

** (ONE WAY ANOVA)

Table 5: Spearman correlation coefficient between depression scores and quantitative variables

Variable	correlation coefficient	P-Value
Age	0.045	0.492*
Women age at marriage	-0.022	0.740*
Duration of marriage	0.073	0.270*
Number of children	0.012	0.861*
Number of female children	0.092	0.160*
Number of male children	-0.085	0.198*

*Spearman's correlation coefficient

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