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Original Article

Postpartum mental health in relation to sociocultural practices

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ABSTRACT

Objectives: Cultural practices have been found to positively impact the mothering experience. This study sought to identify the relationship between sociocultural practices and *postpartum* depression (PPD) in a cohort of Iranian women for the first time.
Materials and methods: In a longitudinal cohort design, 2279 pregnant women attending primary health centers of Mazandaran province in Iran were recruited using stratified random sampling method. Data were collected using the Edinburgh Postnatal Depression Scale and researchers developed validated cultural practices questionnaire at 3 months after delivery. Data were analyzed using Chi-square test and multiple logistic regression models.
Results: The prevalence of PPD was 19% among 1910 women who were followed postdelivery in this study. Cultural practices were not associated with lower odds of PPD in multiple logistic regression model after adjustment for all sociodemographic factors. The results of this study do not also provide any evidence to support that sex of baby is associated with the greater risk of PPD.
Conclusions: Cultural practices could not be perceived as protective mechanisms that protect women from PPD in this traditional society. However, health professionals should be familiar with *postpartum* beliefs and practices that could support mothers in the *postpartum* period.

Introduction

Over recent years, research has been conducted to understand the universal risk factors for *postpartum* depression (PPD). Culture plays an important role in the pregnancy evaluation and *postpartum* adjustment [1]. In some traditional cultural settings, due to the traditional practices that encourage maternal role transition, the physical and psychological pain of women are decreased [1]. PPD may occur as a result of the absence of rituals in several ways; decreasing the women's self-confidence, uncertainty of access to social support, and increasing the probability of physical activities leading to fatigue and stress [2,3].

The idea that postnatal rituals act as supportive mechanisms comes from studies by Chien et al [4] among Vietnamese women, Lee et al [5] among Chinese women in Hong Kong, and Fisher et al [6] among women in Ho Chi Minh City in Vietnam [4–6]. However the findings of studies done to evaluate such assumptions are contradictory [3,7]. A review among Asian societies did not show evidence that cultural practices provide significant psychological benefits for the women [8]. However, studies in some other countries such as Japan revealed higher occurrence of this disorder (17%) in women who adhered to traditional practices [9].

Cultural dimensions play a significant role in the perception and experience of motherhood in a variety of cultures. The diversity of manifestations of PPD across different cultures could suggest whether this disorder primarily has psychological or biological factors [10]. While there are well documented systems of rituals and practices during *postpartum* period by Iranian culture, no research has been carried out on the impact of these practices on PPD in this country. Thus, it was important to study the impact of Iranian women's cultural practices on PPD.

Materials and methods

This paper is based on the findings of a large cohort study which examined risk factors of PPD. Eligibility criteria for selection of

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samples were: pregnant women at gestational age of 32–42 weeks, literate in Persian, attended prenatal care at urban and rural primary health centers (PHCs) in Mazandran province in the north of Iran, from January to June 2009. The exclusion criterion was pharmacological treatment for psychiatric problems. Using G-power software for logistic regression [11], the minimum sample size was 1938 women. Medical Research Ethics Committee in the Faculty of Medicine and Health Sciences, Medical Research Ethics Committee, University Putra Malaysia and Ethics Committee of Mazandaran University of Medical Sciences in Iran gave approval to conduct the research. Participants gave written consent in the time of entry to the study. Women were recruited during the third trimester of pregnancy and were followed-up to 12 weeks after delivery. The researchers were able to approach 2626 pregnant women who attended to the PHCs. Of 2359 (89.8%) eligible women who consented to participate in this study, 2279 (96.6%) completed the first Edinburgh Postnatal Depression Scale (EPDS) during the 32–42 weeks of pregnancy and of those, 1910 women (84.13%) participated on both occasions and completed the EPDS and cultural questionnaires.

Data on demographic characteristics and cultural practices after childbirth were collected using questionnaires. Investigators also asked a few experienced elderly women in the state to give them some recommendations to develop the cultural practices questionnaire. Cultural practices were categorized into general, maternal, nutritional, and neonatal practices. General practices included: giving a party, visiting family members, getting help in taking care of other children, and avoiding bad news. Maternal practices included: 40 days rest after childbirth, not being left alone in the house and not leaving the house for 40 days. Nutritional practices included: eating plenty of hot drinks, eating plenty of sweet oily foods, eating traditional foods, and avoiding spicy foods. Neonatal practices included: massaging the baby with warm oil, wrapping or binding the baby, placing a clove of garlic on the infant's chest or dress, and cuddling and rocking the baby. Yes (scored 1) and No (scored 0) answers were summed up to calculate the total score from 0 to 27. The higher scores showed more practices. The reliability of cultural questionnaire that was used for the first time in Iran was tested by test–retest reliability and internal consistency in 60 women 8 weeks after delivery. Intra-rater reliability determined consistency of the questionnaire, completed by the women twice after birth. Consistency was shown to be good in test–retest correlation by $\kappa = 0.60$ ($p < 0.05$) over the 2-week interval. Internal consistency of the questionnaire was also measured by α Guttmann, which ranged from 0.34 to 0.65. Sociodemographic questionnaire was also used after pretesting by 60 healthy unselected women in PHCs (Cronbach α, 0.92). Sociodemographic variables included: women's age, age at marriage, marital status, women's and husbands' education, women's and husbands' employment status, family structure, housing condition, family income, parity, and location of the health center. Questions about breast feeding status and sex of children were also asked.

The dependent variable was PPD which was measured by the validated Iranian version of EPDS. The scores >12 was considered as cut-off point for the Iranian population [12]. It consists of 10 items relating to mood that are scored from zero to three (*no, not at all* to *yes, quite often*) according to the severity of symptoms during the past week. The total score is calculated by computing the scores of 10 items, with seven of these items (3, 5, 6, 7, 8, 9, 10) being scored reversely [13,14].

Sociodemographic data of the women who participated at both pregnancy and 12-week *postpartum* were analyzed. The women were divided into two groups; one group involved women who scored more than the EPDS cut-off level at 12 weeks *postpartum* and a reference group encompassing women who scored less than the cut-off level at that time. The frequencies and percentages for PPD status for each level of the categorical variables and Pearson's p values for Chi-square test were calculated. Simple logistic regression was used to evaluate the relationship between the sociodemographic and cultural factors with PPD. Odds ratio (OR) with 95% confidence limits and p values were obtained. Association between PPD and number of cultural practices was tested after adjustment for all sociodemographic characteristics of women. Statistical significance was taken at $p \leq 0.05$.

There was no guideline to determine cut-off point for the scores of cultural practices variable. Thus, the authors categorized this variable into three levels; high, medium, and low, based on the tertiles of the data.

Results

This study followed 1910 women from pregnancy to 3 months *postpartum*. Changes in the residence, unwillingness to continue the study and still birth were the causes of dropouts in this prospective study. Using Chi-square or t test, there were no significant differences between the characteristics of participants who had been seen during 12 weeks *postpartum* ($n = 1910$) and who were not seen during this period ($n = 369$) in terms of the average age (26.07 vs. 25.7 years), women's and their husbands' education, previous PPD as well as total family income.

Women who provided complete data were mostly younger (82.2% ≤ 24 years) with average age of 26.07 ± 5.20 years, with low family income (64.6% < 3,500,000 Rials/mo: ~US$350), low educational level (76.2% under diploma) and had married early (85.2% ≤ 24 years). A higher proportion of the women had husbands with low educational level (42.2%) and engaged in nongovernmental occupations (67.9%). The participants were predominantly from nuclear families (72.2%), owned their own home (60.3%), and have never worked (94.9%). Almost half of the women (53.1%) were nulliparous. Half of women (51.6%) were recruited from urban PHCs. Minority of the participants reported experienced PPD in previous pregnancies (8.1%). Most of the infants (90.1%) were breast feed exclusively by women at 3 months after birth.

The total number of cultural practices ranged from 0 to 27 with a mean of 14.20 ± 3.92. Maternal behaviors were the most common type of cultural practices in this study with a mean of 5.55 ± 1.88 (Table 1).

The prevalence rate of depression during 32–42 weeks of pregnancy and 12 weeks *postpartum* based on EPDS was 21.3% (406) and 19% (362) with a mean of 8.60 ± 4.89% (range, 2–28%) and 8.29 ± 4.95% (range, 2–25%) respectively.

Table 2 illustrates prevalence of reported PPD according to sociodemographic characteristics of the women. Prevalence of PPD was more common in women who lived in the rental house compared with women who lived in their own house ($p < 0.05$). The prevalence of PPD in women with low and high number of cultural practices was 21.5% and 19.3%, respectively, which that was

Table 1
The number of cultural practices of women during *postpartum* period ($n = 1910$).

Cultural Practices	Frequency (%)	Mean ± SD
Low (≤12)	633 (33.1)	
Medium (13–16)	645 (33.8)	14.20 ± 3.92
High(>16)	632 (331)	
General		3.78 ± 1.58
Maternal		5.55 ± 1.88
Nutritional		2.84 ± 1.03

SD = standard deviation.