

Pregnancy-Related Anxiety: A Cross-Sectional Study among Women in the West of Iran

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Abstract: Pregnancy is one of the most important and vulnerable course for women, the prevalence of anxiety in this time is more than any other course that can be followed several side effects for mother and baby. The aim of this study was to determine the socio-demographic characteristics associated with pregnancy-related anxiety among pregnant women in the West of Iran. In this cross-sectional study, conducted in Kermanshah County, the West of Iran, a total of 150 women's was randomly selected to participate voluntarily in the study. Participants filled out a self-administered questionnaire. Data were analyzed by SPSS Version 21 using t-test and ANOVA statistical tests at 95% significant level. The mean age of respondents was 27.92 years [SD: 5.61], ranged from 18-43 years. There was a statistically meaningful relationship between first-time pregnant and during the pregnancy with pregnancy-related anxiety ($p < 0.05$). Total score of pregnancy-related anxiety was 18.72 (SD: 4.63) which suggested that 46.8% of participants gained the given maximum score to pregnancy-related anxiety. Our findings indicated pregnancy-related anxiety was associated with first-time pregnant and during the pregnancy.

Key words: Women, pregnancy, anxiety, participant, voluntarily

INTRODUCTION

Pregnancy and delivery are natural events in women's life. However, although pregnancy is considered as a natural function for women, it is a stressful and anxiety-creating experience. This experience is accompanied by extensive mental and physical changes in the pregnant women (Kugu and Akyuz, 2001). Women's level of knowledge of guidelines and special cares for the pregnancy period is low. On the other hand, physical weakness due to low amount of activity and excessive weight gain result in pregnancy and delivery become accompanied by enduring anxiety, difficulties and unexpected negative outcomes in some cases. This can create problems for women for years after delivery and even during the old age (Crawford and Henry, 2003). In the case of appearance of a problem in mother the relationship between mother and child which an important relationship becomes impaired. If the mother cannot take care of her child or cannot provide an appropriate emotional atmosphere, she will reveal in appropriate reactions in her relationship. In such a

condition the mother will reveal abnormal behaviors such as indifference, lack of trust in others, unnatural behaviors and lack of effective communication together with social and emotional isolation (Kugu and Akyuz, 2001). Anxiety is a state experienced by every individual under tension or stress. However, sometimes the anxiety is not in proportion to spatial and temporal events and results in emergence of destructive and warning signs in human. Also, sometimes the anxiety not only impacts the individual but also the future of his/her child's life. Delivery is a stressful event in women's life that is often accompanied by anxiety. Concern about infant's possible deformity, childbirth pain, accepting responsibility and being a mother are among the sources of anxiety in mothers before delivery (Crowther *et al.*, 2005; Mirzaei *et al.*, 2011; Khamoushi *et al.*, 2015). Understanding responsibility and difficult motherhood duties, the conflicting feelings of excitement on one hand and concern, fear and anxiety on the other hand create instable states in the woman. A relatively major group of women are highly afraid of pregnancy and delivery and are always in fear and worry as they imagine having an

unnatural and difficult childbirth or having a child that would die due to defects or diseases. Also, the woman's morale may change during pregnancy due to an intense interest in a specific sex, the culture governing the family and society regarding pregnancy and child's sex, the lack of interest in pregnancy and having children; in addition, maternal anxiety can result in significant outcomes such as preterm birth, low birthweight, fetal distress and some birth defects such cleft palate and pyloric stenosis (Kariman *et al.*, 2016). Also, maternal anxiety in a pregnant woman impacts the woman herself and results in negative perception towards delivery and birth, unnecessary fears regarding childbirth and becoming a mother, self-medication or activity limitation (Dijk *et al.*, 2010). Furthermore, maternal anxiety increases the chance of preeclampsia and preterm birth and can negatively impact fetal brain development (Koenig *et al.*, 2002). The finding of the study by Punamaki *et al.* (2006) indicated that both the level of anxiety during pregnancy and clinical problems result in the deterioration of infant's health. On the other hand, many studies have pointed out the necessity of conducting ecological and cognitive studies as the first step in designing useful interventions (Ataee *et al.*, 2014; Jalilian *et al.*, 2015; Mirzaei *et al.*, 2015; Eldredge *et al.*, 2016).

Considering the importance of paying attention to the health of pregnant women, the present study was conducted with the aim of exploring pregnancy-related anxiety among women visiting health centers of the city of Kermanshah.

MATERIALS AND METHODS

This cross-sectional study was conducted among 150 pregnant women referred to health centers in Kermanshah county, the West of Iran, during 2016. The sample size was calculated at 95% significant level according to the results of a pilot study and a sample of 150 was estimated. To enroll the participants and collect data the following stages were done. First, different areas of the city were classified based on the division of the geographical region, next for each social class one health centers were randomly selected (a total of eight health centers were selected). Then, subjects referred to the health centers for taking health care, were enrolled into this study voluntarily. Finally, the volunteers were given the self-questionnaire. This research has been approved by the institutional review board at the Kermanshah University of medical sciences (KUMS.REC.1395.289). 107 (71.3%) participants out of 150 subjects signed the

consent form and voluntarily agreed to participate in the study. The study subjects were given explanations on the way the study is conducted, the confidentiality of the information and the aim of the study and all of them entered the study willingly. Furthermore, the criteria for inclusion in the study were being a pregnant woman visiting Kermanshah health centers, lack of use of medications for mental and neurological diseases, lack of a history of neurological and mental diseases and lack of medical conditions with pregnancy. Mother's affliction with physical or mental diseases was among the exclusion criteria.

Questionnaire included three sections that comprised of 16 questions: six questions for background characteristics and 10 questions for pregnancy-related anxiety scale. Background data collected in this research include: age, educational level, economic status, first-time pregnant, job and during the pregnancy. The pregnancy-related anxiety scale was a standard questioner (Rini *et al.*, 1999) and consisted of 10 questions. In order to facilitate respondents' responses to the items, all items were standardized to a 5-point Likert scale, ranging from 0 (strongly disagree) to 4 (strongly agree). Estimated reliability coefficients for pregnancy-Related Anxiety questionnaire were as ($\alpha = 0.76$). Data were analyzed by SPSS Version 21 using t-test and ANOVA statistical tests at 95% significant level.

RESULTS AND DISCUSSION

The mean age of respondents was 27.92 years [SD: 5.61], ranged from 18-43 years, educational status: 19.6% (21/107) had in under diploma, 63.6% (68/107) diploma and 16.8% (18/107) were academic education. Furthermore, regarding the economic status 21.5% (23/107) had weak, 67.3% (72/107) average and 11.2% (12/107) were good. Almost, 7.5% (8/107) participants were working and 92.5% (99/107) were housewife. In addition, 42.1% (45/107) participants were reported first-time pregnant. Nearly 45.8% (49/107), 30.8% (33/107) and 23.4% (25/107) of the respondents reported that were in first, second and third trimester of pregnancy, respectively.

Table 1 shows the relationship between maternal anxiety and background variables. Based on the results, there was a statistically meaningful relationship between first-time pregnant and during the pregnancy with pregnancy-related anxiety. In addition, results of Pearson correlation test showed not statistically meaningful association between age and maternal anxiety ($p = 0.853$).

Table 1: Association between background variable and pregnancy-related anxiety

Variables	Mean	SD	p-values
Education al level			
Under diploma	17.71	4.91	0.219
Diploma	18.63	4.83	
Academic	20.27	3.08	
Economic status			
Bad/very bad	17.26	4.74	0.088
Middle	18.84	4.70	
Very good/good	20.83	3.06	
First-time pregnant			
Yes	19.80	4.46	0.041
No	17.95	4.62	
Job			
Working	18.12	5.59	0.703
Housewife	18.77	4.57	
During the pregnancy			
First trimester of pregnancy	18.63	3.38	0.019
Second trimester of pregnancy	17.33	6.27	
Third trimester of pregnancy	20.72	3.50	

Finally, total score of pregnancy-related anxiety was 18.72 (SD: 4.63) which suggested that 46.8% of participants gained the given maximum score to pregnancy-related anxiety.

The findings of the present study indicated that the participants obtained 46.8% of the pregnancy-related anxiety score. In this regards by Alipour *et al.* (2006) in their study on the first-time pregnant women the results indicated that 63.2% of the subjects had medium overt anxiety and 63.4% of the subjects had medium covert anxiety. According to World Health Organization (WHO) the prevalence of mental disorders in pregnant women in counties with low and average income was significantly higher. Researchers believe that high prevalence of anxiety in the studied mothers can be due to environmental and sociocultural factors, mothers' lack of familiarity with pregnancy physiology during pregnancy and childbirth and the issues after it including taking care of the child. These findings show the necessity of implementing psychological interventions among pregnant women.

The findings of the present study indicated that the closer the delivery, the more the anxieties score. The study by Dvais *et al.* (2011) also did not reveal any difference in the anxiety in the weeks 25, 31 and 37 of pregnancy. Those who measured anxiety in the second and third trimester suggested that mothers' anxiety was almost fixed in all stages. These results were not consistent with those of the present study. However, the study by Buss *et al.* (2011) indicated that with the progress of pregnancy age the level of anxiety was reduced and this result is consistent with the result of the present study.

The findings of the present study also indicated that there was no significant relationship between anxiety in

pregnant women and the education level in this regards in the study on American women titled "The Relationship Between Psychosocial Profile Health Practices and Pregnancy Outcomes" by Nasreen *et al.* (2011), it was shown that the women with higher levels of education had more self-confidence and faced less problems in taking care of themselves. A higher level of education can be probably accompanied by more women's knowledge of pregnancy physiology and can have a more useful role in reduction of maternal anxiety in pregnant women.

The findings of the present study also showed that anxiety mean score was higher in employed women, compared with housewives and this result is not consistent with the results of other studies (Claesson *et al.*, 2010). The findings of the present study also indicated that no significant relationship existed between anxiety mean score and mothers' age and this result is consistent with the other studies (Nerum *et al.*, 2006; Heimstad *et al.*, 2006).

The present study indicated that there was a significant relationship between maternal anxiety due to pregnancy and concerns about childbirth costs. It seems that the reduction of childbirth costs and providing an appropriate program for increasing the inclination of pregnant women to choose natural delivery which reduces childbirth costs can lead to useful results in reducing pregnancy-related anxiety in pregnant women.

CONCLUSION

Our findings indicated pregnancy-related anxiety was associated with first-time pregnant and during the pregnancy.

ACKNOWLEDGEMENTS

This study is a part of research project supported by Research Center for Environmental Determinants of Health, Kermanshah University of Medical Sciences, Kermanshah, Iran. We would like to thank deputy of research of Kermanshah University of Medical Sciences for financial support of this study.

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