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Research Article

Prevalence of Stress and Its Associated Factors among Pregnant Women: A Crass Sectional Study from Iran

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ABSTRACT:

Introduction: Pregnancy and childbirth are stressful events throughout women's lives which are often accompanied by anxiety. Emotional states and mother's anxiety affect the development of the embryo. The aim of this study was to determine the prevalence of anxiety and related factors in pregnant women.

Materials and Methods: This study is a descriptive-analytic study that is performed on 544 pregnant women referred to the prenatal care clinic of Jahrom city in 2016.The demographic questionnaire and the Spielberger standard questionnaire were used to assess anxiety. The data were analyzed by using descriptive statistics for mean, standard deviation, frequency and ANOVA for comparing the anxiety between the three months of pregnancy.

Findings:The mean age of under study women was 26.33 ± 4.70 years. The mean of trait and state anxiety scores in the samples were 48.35 ± 16.85 and 48.07 ± 16.58, respectively.12.5% of the samples showed state anxiety and 8.1% of the samples had trait anxiety.Comparing trait anxiety between the three months of pregnancy showed a significant increase (P=0.02). There was a significant statistical relationship between the state and trait anxiety with the age and age of the spouse, the age difference of the couples, the duration of marriage, the level of their education and their spouses, and deliberate pregnancy.

Conclusion: Given that the mean score of anxiety and frequency of that anxiety in pregnant women is relatively high, it is suggested that, psychologically and psychologically, women screening should be considered as routine care during pregnancy factors other than.

Keywords: Anxiety, Pregnancy, Women, Iran

INTRODUCTION

One of the most sensitive periods in a woman's life is pregnancy and childbirth, which lead to great physiological and psychological changes, and socio-family roles.These changes lead to psychopathological disorders such as stress and anxiety in the mother **(1)**.At the beginning of pregnancy, mother has concerns about the acceptance of pregnancy, physical health, loss of fitness, and changes in family and social roles that cause anxiety and symptoms of this anxiety may appear directly or indirectly in her **(2)**.The increasing evidence suggests the negative effects

of maternal stress on the fetus. These effects include spontaneous abortion, fetal weight loss, increased levels of stress hormones, chronic hypertension **(2)**, premature birth and infant mortality (**3**, **4**, and **5**).Mother's stress in pregnancy causes complications such as depression and postpartum mood disorders **(6)**. Children from mothers who have experienced pregnancy stresses will experience delayed walking and speech **(7)**, memory and learning impairment, sleep disorders and emotionality, motor disorders, mood loss, emotional and behavioral problems **(8)**.The role of prenatal stress in the etiology of many childhood **(9)** and adolescent embryos diseases **(10)** has been considered. Several studies have been done on mental disorders such as anxiety during pregnancy and different outbreaks of anxiety have been reported.The outbreak of anxiety has been reported in 22% Sweden **(11)**, Bangladesh (29%), 12.4% in Pakistan, 20.4% in Pakistan (13%) and in Qom, 40.4% trait anxiety and 44% state anxiety have been reported **(14)**.

Also, woman's impression from pregnancy and labor pains, fear of childbirth, age, education and marital satisfaction, mother's literacy, low economic status, inadequate support, poor communication with her husband, and physical violence on the part of her husband are also coldly associated with pregnancy anxiety **(12)**.

Given that pregnant women are one of the most sensitive health groups and their mental health guarantees the health of the family and the community, and these women are educators of children and future generations, checking their mental health status is very important **(15)**. Coping with stress is very important in mothers because it affects the mental health of the mother and the baby. For this reason, the present study aimed to investigate the correlation between strategies for adaptation to pregnancy stress and perceived stress in pregnancy.

MATERIALS AND METHODS

This study is a cross-sectional study that is conducted on 544 pregnant women who referred to women clinic in Jahrom during pregnancy for routine care in 2016.In this research, simple random sampling was done. All pregnant women referred to the Jahrom art center who were qualified for the research community were selected and the sample size was completed. In this research, the data collection tool was comprised of two parts: the first part contains 15 questions about the specific characteristics of the studied units including age, education, occupation, spouse's education, spouse's job, number of pregnancies, number of surviving children and type of previous delivery etc. At the beginning of each questionnaire, the method of answering the questions by the research units was explained.

Valid Spielberger Anxiety Inventory is a self-evaluation tool of 40 questions that includes 20 questions about state anxiety and 20 questions about trait anxiety, and it is measured based on 4-choice Likert from 1 to 4, and on a general scale of 20 to 80 grades. The state anxiety measures anxiety sensation at a time, but trait anxiety encompasses a general, perpetual feel, and in fact shows distressed personality. The reliability of the Spielberger anxiety test was 94% in Mashhad and in the study of Azimi and colleagues, this scale was 91% for state anxiety and 90% for trait anxiety (**16** ,**17**).

Then data were analyzed by SPSS software version 11.5 and by using descriptive statistics and ANOVA tests to compare the anxiety between pregnancies at the significant level of $P < 0.05$.

RESULTS

Women were between the ages of 15-39 years with a mean of 33.36 ± 4.70 years. The average duration of marriage was 4.31 ± 5.29 and the mean age difference of couples was 3.53 ± 5.05. 64.4% of the research samples resided in urban areas. Most of the women (47.4%) had high school diploma and 90.4% of theme were house keeper. 84.8% of the spouses were self-employed, and the maximum of them (41.2%) had high school education. 57.7% of women were without children, and 51.8% of them had the first pregnancy. 88.4% of pregnant women was deliberate and 57% of them had not yet given birth (**Table 1**)

The mean and standard deviation of the state and trait anxiety with regard to the gestational

age are presented in Table 2. The results showed that the score of state and trait anxiety increased during the first and third trimester of pregnancy but decreased in the second trimester. On the other hand, there was a significant relationship between the severities of anxiety scores between the trimesters of pregnancy (**Table 2**).

According to the state anxiety rating, 25.6% were mild, 61.9% had moderate anxiety and 12.5% had severe anxiety. Also, in the case of state anxiety: 32.7% were mild and 59.2% moderate and 8.1% severe.

Table 3 showed that the mean of trait and state anxiety scores was not determined according to the studied variables (age, education, occupation, number of children and number of pregnancies) (**Table 3**).

Table I. Demographic characteristics of the participants (n= 544)

Characteristics			**Mean±SD**
Woman's age			26.34±4.71
Husband's age			31.16±5.47
Duration of marriage			5.30±4.32
Categories of variables			**N (%)**
	Educational level		
		Uneducated	2 (0.4)
		Primary school	121 (22.3)
		Secondary school	254 (46.9)
		Academic	165 (30.4)
	Employment status		
		Housewife	490 (90.4)
		Employed	52 (9.6)
	Husband's Education		
		None	10 (1.8)
		Primary school	188 (34.7)
		High school	224 (41.3)
		Academic	120 (22.1)
	Husband's Occupation		
		Employed	462 (85.2)
		Non-employed	80 (14.8)

Table 1.1 : Mean score ofState Anxiety and Trait Anxiety score in the tree trimesters of pregnancy

Variable	State Anxiety **Means±SD**	Trait Anxiety **Means±SD**
First trimester Pregnancy	48.20±1.59	46.68±1.72
Second trimesterPregnancy	47.94±1.64	45.47±1.25
Tried trimesterPregnancy	49.14±1.78	51.52±2.70
P Value	F=3.70 P=0.02 d=2	F=0.28 P=0.75 d=2

Table 2: mean score of Anxietydemographic characteristics of the participants

		Total Anxiety	Trait Anxiety	State Anxiety
		Means±SD	**Means±SD**	**Means±SD**
Age´	1-20	102.21±32.84	53.51±28.62	48.58±14.58
	21-30	95.87±25.92	47.56±18.52	48.30±17.19
	>30	95.33±30.45	46.92±21.93	48.40±16.78
Number of child	None child	97.84±31.12	48.21±2.14	49.62±2.01
	1-3	94.56±22.36	47.88±1.09	46.67±1.09
	3<	91.60±5.72	47.20±3.63	44.40±47.00
Educational	Uneducated	101.00±8.48	44.50±0.70	56.50±9.19

level	Primary school	92.61±27.08	45.85±1.93	46.75±1.82
	Secondary school	99.55±30.10	51.00±2.51	48.56±1.48
	College or university	94.34±23.69	45.23±1.12	49.10±1.87
Number of pregnancy	First pregnancy	97.70±31.33	48.34±2.02	49.35±1.93
	Second pregnancy	96.12±25.26	49.48±2.28	46.63±1.18
	Tried pregnancy	92.97±18.12	44.40±4.37	48.56±1.65
Job statues	Housewife	96.84±28.19	48.51±2.15	48.324±1.63
	Employed	92.50±22.15	43.88±4.79	48.61±2.08

DISCUSSION:

Anxiety disorders are common during pregnancy and shape a high proportion of health problems. The effect of mothers' mental disorders on infants is more than delay in their psychosocial development, including low birth weight, reduced breast feeding, decreased growth, severe malnutrition, increased diarrhea, and reduced compliance with immunization programs **(18)**.

In the present study, the prevalence of severe trait and state anxiety in the examined samples was 12.5% 8.5%, which is greatly consistent with the study done by Azimi et al., that shows 10.1 and 7.9 of this number **(19)**.

On the other hand, in our study, 61.9% of the samples had moderate state anxiety and 59.2% had moderate trait anxiety; these findings were confirmed by the results of research that indicate high prevalence of anxiety disorders in Iranian pregnant women **(20)**. In the study of Bazrafshan et al. in Shiraz, 38% of the samples had moderate to high state anxiety and 43% had trait moderate to high anxiety (21). Another study showed the prevalence of anxiety disorders in pregnancy above 30% indicate that they may have inverse effects on midwifery, fetal and neonatal conditions (**19** ,**23**).

The results of this study showed that the mean of anxiety scores increased in the first and third trimesters, but decreased in the second trimester of pregnancy which was a significant decrease in trait anxiety.

Increasing the anxiety and changes in the mood of the mother in the first trimester of pregnancy could be attributed to hormonal factors, abortion fear, physiological changes in pregnancy, changes in the mental image of the woman, etc. Also, the average increase in anxiety level in the third trimester of pregnancy can be attributed to the approaching delivery time, anxiety about the baby's need for care, the health of the fetus, and so on.

The findings of this study showed that in the age group less than 20 years, the overall anxiety level was higher. But the difference of opinion is not significant. Therefore, it seems that as age grows older, adaptation and compromise with the existing conditions more and, consequently, anxiety decreases.

Also, the results of this study showed that the level of state and trait anxiety was higher in nulliparous and without children women than the rest. Women, who were pregnant for the first time, considering that they have never had any experience of pregnancy and childbirth, are therefore more distressing than others, including pregnant women.

Also, the results of this study showed that the level of state and trait anxiety in employed women was lower than that of housewives. These results are consistent with the research results in this regard, which showed that anxiety in housewives is more than employed women **(23)**. Therefore, being employed can be effective in reducing anxiety.

CONCLUSION

Based on the findings of this study, it can be concluded that the level of anxiety in pregnant women is high and pregnancy anxiety can affect the health of mother and infant. Therefore, it seems necessary to use measures to reduce the anxiety of women during pregnancy. Women's screening for anxiety during pregnancy should

be considered as a routine maternity care program.

Competing interests

The authors declare that they have no competing interests.

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