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Prenatal Optimism and its Relationship with Fetal and Maternal Characteristics in Primiparous Women

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Abstract

Introduction

Maternal and fetal characteristics can be effect on optimism which vary among different cultures and countries. So the aim of this study was to determine Prenatal Optimism and its relationship with fetal and maternal characteristics in primiparous women.

Materials and Methods

This research study was a descriptive cross - sectional. The statistical populations consisted of 240 pregnancy women with first experience of Isfahan city in (2014-2015) in which were selected by simple available sampling. Demographic/fetal/maternal characteristics and life orientation questionnaire were completed by the participants. For data analysis Pearson correlation coefficient and enter regression by SPSS-14 were used.

Results

The age of women in the sample ranged from 18 – 37 years with a mean age at the time of the interview of 27.04± 1.2 years. 64% of the women reported moderate incomes, 62.5% reported holding a high school education. The mean of gestational age was 24.14±0.9 that 80.8% had 28-34 weeks. The mean for the Life Orientation Test-Revised (LOT-R) scores were 31.6±5.2. Pearson correlation index showed, as optimism scores increased, gestational age increased (P = 0.03, r=0.12). While There was no association between optimism and gestational BMI in the study population.

Conclusion

There was correlation between Optimism and some maternal and fetal information in pregnant women. So educating midwives regarding psychological problems in during pregnancy can be effective for such disorders.

***Key Words*:** Fetus, Maternal, Optimism.

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Introduction

Prenatal period is a time to prepare oneself materially and physic-psychologically for the changes to come with the transition to motherhood. Common emotional states during pregnancy include ambivalence, anxiety, affective distress, and stress. In fact, pregnancy is considered typical life event stressors that require some degree of coping strategies and adjustment for all reproductive age women. The results of study showed effects of stress on birth outcomes such as preterm, Intrauterine fetal death (IUFD), preeclampsia and et cetra (1).

In fact, life stressors like prenatal period may wear down the person's resources for coping and lead to the increased use of ineffective coping strategies under continued stress. However, some statues not may be so possible to change that endurance, rather than action, would be more effective. Attention to self confidence, hardiness and other individual difference variable like pessimism and optimism are Stress Copying strategies (2-4). On the other hands, optimism is defined as a variable disposition to take the most hopeful view of things. Where optimistic persons expect things in life to go their way and believe that well things happen in life (1).

Further, optimism appears to confer resilience to stressful life events. For example, optimists had more life satisfaction and less distress beforehand. Study results of Moyer showed overall mean LOT-R scores were 15.6 and the mean subscale scores were 11.0 for optimism and 7.3 for pessimism. As well as, optimism is related to more active coping strategies, health behavior, lower levels of psychological distress, higher immune functioning, more health outcomes and even lower mortality (6).

Researchers assert that optimism promotes effective coping with stressful circumstances. Since openness to experience, positive thinking is characteristics often associated with volunteerism. Optimism represents relatively stable individual differences that increase psychological and physical health and relate to sensitive coping strategies (7). The goal of this study was to investigate Prenatal Optimism and its relationship with fetal and maternal characteristics in primiparous women.

Materials and Methods

This study is the first part of a cross sectional study, which was carried out in health care centers and Beheshti Hospital in Isfahan city, the Centeral of Iran. The data were collected from 240 women in late pregnancy during a period of 2 months. The tools used are described in some detail below. Persian-speaking women were invited to participate at the more than 28 weeks of gestation. A set of questionnaires and written information about the project were given by the participants at the selected research centers to 240 women. Pregnant women completed demographic/ maternal/fetal informations (including: maternal age, maternal Body mass index (BMI), maternal education and occupation, spouse education and occupation, fetal gender, gestational age) and Life Orientation Test (LOT) questionnaire.

To determine the validity of quastionnaire, used the content validity. So after consideration new articles about this study and incorporate comments of 5 professors, validity was confirmed. To determine reliability of this question- naire, we used test-retest method. Thus, the questionnaire was completed on 10 mothers who were eligible and was repeated again after one week. The reliability of questionnaire was

confirmed by Pearson's correlation using (r=0.89).

Optimism was measured using the Life orientation test, a 10-item measure (including 4 filler items) designed to assess individual differences in optimism vs. pessimism. Questions are rated on a 4 (strongly agree) to 0 (strongly disagree) point Likert scale to specify agreement with statements that identify trait optimism. Higher scores demonstrate greater optimism, while lower scores are indicative of pessimism. LOT is a valid and reliable tool which was adopted in Yamada's study (2011) and its reliability was reported as test re-test of 0.79(8).

The inclusion criteria were signing an informed consent to attend the study; being the primiparous; having Iranian nationality; having at least 28 weeks passe after pregnancy; not having experienced medical problem (diabetes, thyroid disorders, Cushing disease, pituitary tumors, reproductive system diseases). Data of 240 qualified participants were collected and analyzed by Chi square, Pearson correlation coefficient through SPSS version 14. Also permission for this study was through the Vice Chancellery of research of Isfahan University of Medical Sciences, (ID Number: 293247) and all participants were informed about the purpose and design of this research, and that their participation was voluntary and signed a written informed consent for their participation. A P value less than 0.05 was significant.

Results

The age of women in the sample ranged from 18 - 37 years old with a mean age at the time of the interview of 27.04±1.2 years. Also the age of their spouse ranged from 24 - 37 years with a mean age at the time of the interview of 32.02±0.3 years. While 154(64%) of the women reported moderate incomes, 40 (49%) reported not moderate socio economic status (Table.1).

Table 1: Frequency distribution, mean and standard deviation (SD) of participants

Variables		N (%)	Mean(SD)
Maternal Age(y)	18>	1(0.4)	27.04(1.2)
	35-18	230(95.8)	
	>35	9(3.8)	
Spouse age(y)	35-18	209(87.1)	32.02(0.3)
	>35	31(12.9)	
Gestational age(w)	28-34	194(80.8)	24.14(0.9)
	34-38	46(19.2)	

Almost half of the women, or 150 (62.5%) reported holding a high school education or less compared to 172 (71.6%) their spouse reporting having a high school education or less. The mean of gestational age was 24.14±0.9 that 80.8% had 28-34 weeks. Descriptive statistics including mean, standard deviation, median, and range for the LOT-R scores were 31.6, 5.2, 24, 14-34 respectively.

Pearson correlation index showed, as optimism scores increased, gestational age increased (P= 0.03, r=0.12). While there was no association between optimism and gestational BMI in the study population.

Chi square showed a significant correlation between optimism scores and fetal gender (P= 0.042). Meanwhile, there was no significant correlation between optimism scores and maternal occupation and education (P = 0.103 and P = 0.513, respectively). This means that the effective variables on the score of optimism were considered as independent variables and the main two variables, as dependent variables, were separately entered into general linear regression model in several stages. According to the results of the general linear regression analysis, the only predicting variable on optimism was the gestational age (Table.2).

Table 2: Linear Regression between Predictor Variables (Maternal BMI and age, fetal gender) and Dependent Variables (Optimism)

Coefficients [a]					
Predictor Variables	Unstandardized Coefficients		Standardized Coefficients	t-test	P value
	B	Std. Error	Beta		
Maternal BMI	0.231	0.023	0.138	1.31	0.452
Maternal age	-0.342	0.122	-0.012	0.42	0.312
Fetal gender	0.432	0.145	0.023	0.125	0.001
a. Dependent Variable: optimism					

Discussion

The present study showed was about prenatal optimism and its relationship with fetal and maternal characteristics in primiparous women. The results of the present study showed that there was a significant correlation between optimism and gestational age. Meanwhile Catov showed that there was no association between optimism and gestational age in the study population (9). Oetting showed that the mean sum optimism scores are significantly correlated with age (r = 0.20, P<.001), income (r = 0.3l, P<.001) and education (r = 0.26, P<.001) in this sample of pregnant women (n = 261) (1).

Scheier et al. (1994) showed that totally, this sample of pregnant women is more optimistic than other clinical samples of women reported in the researches where the LOT-R was used as a measure of optimism (10). While Tindle (2009) showed that, optimism and cynical hostility are independently related to important health outcomes in black and white women (11). As well as, results of Moyer study showed that the mean LOT scores varied significantly among women in their samples from China, Ghana, and the U.S. (C = 15.85, G = 18.64, U = 16.69; P = .001)(12).

Also Moyer demonstrated, optimism and pessimism were entered into a regression model together, optimism was no longer statistically significant while pessimism remained significant, even when adjusting for clinical factors such as infant gestational age, previous abortion, previous miscarriage, birth complications, pregnancy complications, infant birth weight, labor duration and self rated difficulty of the pregnancy (13).

Conclusion

Our results showed a positive correlation between optimism and some maternal and fetal characteristics. With regard to these findings and those of other studies, health providers are suggested to consider the issues related to mothers' mental health. Also Education of all individuals concerning health related problems such as optimism.

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Conflict of Interest: None.

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