Depression and influencing factor in pregnancy: A community-based study

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ABSTRACT

Background: Pregnancy is a term in which significant biological and psychosocial changes in women's lives are experienced, and there is a high risk of encountering many anxieties and stresses. **Aims and Objectives:** The objective of the study is to estimate the prevalence and risk factors for pregnancy in Eastern Turkey in Elazıg. **Materials and Methods:** A community-based, cross-sectional, and descriptive study was conducted in the primary health-care center in Elazığ (pregnant women population: 4855). A total of 240 pregnant women were included in the study. The questionnaires were applied to pregnant women by visiting home. Each participant completed a questionnaire and the Beck Depression Inventory. The data were analyzed in SPSS version 18.0. One-way ANOVA and t-test analyses were used in the statistical evaluation. **Results:** The mean age of the women was 26.78 ± 5.52. About 7.1% of pregnancies are in terms of adolescence. About 11.7% of the women are not knowing literacy. The rate of women who have got the level of low economic is 81.7%. The average of marry age of women is 20.97 ± 4.34. About 20% of women who are involved in research are in the first trimester, and 23.3% of women are in the second trimester. About 25.4% of women have not planned pregnancy. The rate of pregnancy who take antenatal care is 92.5%. BDS average is found out 14.97 ± 8.58. Although the score of the Beck Depression Scale of adolescence pregnancy old is 17.71 ± 8.26, pregnant women of afterward and 35 years are 17.92 ± 11.56 ($P = 0.06$). While the score of Beck Depression Scale of illiterate pregnancy is 20.93 ± 9.03, literate pregnancy is found 16.33 ± 6.54 ($P = 0.0001$). The average depression score of pregnant women who talk to their husband about their problem is found out 14.31 ± 8.76 and 17.08 ± 8.65 by mother ($P = 0.000$). While average of the Beck Depression Scale of women who first pregnancy is 13.51 ± 8.51, an average of depression of women who two or upper pregnancy is found out 15.82 ± 8.54 ($P = 0.045$). Beck depression scale score is significantly decrease in women who her husband low level of education, term of last pregnant be between 3 and 6 years, have a health problem in during her pregnancy, non-antenatal care. **Conclusion:** Pregnant women had middle levels of depression which were associated with some sociodemographic variables. When pregnant women are medically examined, a holistic approach should be made to pregnant women.

KEY WORDS: Pregnancy; Depression; Factor; Infant

INTRODUCTION

Pregnancy is a physiological event. However, women can differently react to pregnancy according to the socioeconomic level and cultural form. In pregnancy, it is known that the hormonal changes seen in the body make great mental changes in women.[1] During pregnancy, women's perception and interpretation of events are more sensitive than before pregnancy.[2] In addition, contrary to popular belief, studies in psychiatry showed that the rate of depression in pregnancy is more prevalent than postpartum period.[3,4] If how much maternal depression develops in the earlier period, much more its negative effects on newborn increase and occur in the earlier period.[5] According to the Brazelton Neonatal Behavioral Assessment Scale, newborn of depressive mothers shows low

orientation, deceleration in motor functions, high irritability, low activity scores, and high rate depressive symptoms.[6] Particularly, development of depression in the past 2 months of pregnancy in mother increases the risk of hospitalization, epidural anesthesia, and cesarean section of newborn.[7] One in four of postnatal depression starts in gestation.[6] Furthermore, depression in pregnancy has negative effects on mother-child relationship and development of child's social and mental relationship. In the neonatal period, 75% of the mothers with a high score from the Beck Depression Inventory (BDI) had high scores from the depression scale in result of the 3-year follow-up. In addition, it is seen that these mothers have communication problems with their pre-school children.[5] In this study, we aimed to investigate the prevalence of depression in pregnancy and association between sociodemographic variables and depression because of the negative effects on maternal and child health.

MATERIALS AND METHODS

Study Design and Study Area

A total of 4855 pregnant women in center of Elazig constituted the universe of research. 240 pregnant women calculated using sampling formula known universes constituted sampling of research. The pregnancy tickets were placed on the top of each other, and then, pregnant women were determined by random method in four health centers. The questionnaires were applied to pregnant women by visiting home.

Data were collected through the following instruments.

Information Form

Data were collected through researcher's sociodemographic and obstetric history. Women were asked sociodemographic features (age, education level, and economic status) and obstetric features (number of pregnancy and pregnancy week). The socioeconomic level has been analyzed by women's assessments.

BDI

Depression was measured using the BDI. It is a 21-item, Likert-type, self-report tool. On evaluation, every item is scored between 0 and 3, and the scores from every item are totaled to give the depression score. The minimum and maximum scores were 0-63. BDI cut point is 17. A higher score indicates a higher level of depression. The reliability and validity of the scale were tested by Buket Tegin.[8] The study was approved by the Ethical Committee of Firat University.

Data Analysis

Data were entered and analyzed using SPSS version 18.0. Frequency, percentage, and arithmetic mean were used to present the data. Appropriate tests of significance (Student's t and F-tests) were applied at the 5% level of significance. A $P < 0.05$ was considered as statistically significant at 95% confidence level.

RESULTS

A total of 240 women participated in the study. The average age of the women was 26.78 ± 5.52 years. 7.1% of women are in the adolescence period. 36.7% of pregnant women who are taken into the study are primary school graduates, and 12.5% are middle school graduates. The education levels of husband of women are as follows: 17.9% are primary school graduates and 20.0% are secondary school graduates. Sociodemographic characteristics of the study sample were shown in Table 1.

About 20.8% of pregnant women have abortus story, and 7.2% have a stillbirth story in their past life. The rate of women with infertility treatment is 3.3%. 54.2% of the pregnant women have help care for the baby after birth. 76.3% of pregnant women live a health problem in pregnancy. Some congenital characteristics of pregnant women are given in Table 2.

While 63.8% of the pregnant women were not experienced depression, and 36.3% experienced depression. The mean BDI of pregnant women was 14.97 ± 8.58. No significant relationship was observed between depression and socioeconomic level and smoking. Mean scores of depression in socioeconomic specials are compared in Table 3.

The effects of obstetric characteristics of the pregnant women on mean BDI scores are presented in Table 4. There were no statistically significant differences between mean BDI scores and variables of having an undesired pregnancy, history of abortion, and stillbirth.

DISCUSSION

Depression is an important and frequently seen health problem among the psychiatric diseases. Pregnancy may prevent women from depression by creating the feelings of happiness, joy, and self-realization, as well as causing depression by creating anxiety, stress, and overload.[9] Many studies focus on postpartum depression because of its impacts on the health of the infant and the mother. However, due to its effects on the health of the infants and the mothers and its prevalence, depression in pregnancy is a health problem that should be determined at the earliest period.[10]

In this study, the average BDI scores of pregnant women were identified as 14.97 ± 8.58. In the study of Yanıkkerem et al., the average BDI score for the pregnant women was 14.52 ± 10.43.[11] These findings show that slightly depressive symptoms are observed in pregnant women. The depression

Table 1: Sociodemographic specials of pregnant women participating in the study

Sociodemographic specials	n (%)
Age	
16-19	17 (7.1)
20-34	199 (82.9)
35 and over	24 (10.0)
Education level	
Illiterate	28 (11.7)
Literate	9 (3.8)
Primary school	88 (36.7)
Secondary school	30 (12.5)
High school	52 (21.7)
Graduate	33 (13.8)
Socioeconomic status	
Low	196 (81.7)
Middle	30 (12.5)
High	14 (5.8)
People who pregnant women talk about their problems	
Husband	172 (71.7)
Mother	25 (10.4)
Relative	19 (7.9)
Friend	24 (10.0)

Table 2: Some birthday specials of pregnant women

Pregnancy characteristic	n (%)
Number of pregnancies	
Primipara	88 (36.7)
Multipar	152 (63.3)
Pregnancy weeks	
12 weeks and less	48 (20.0)
13-24 weeks	56 (23.3)
25 weeks and over	2136 (56.7)
Planned current pregnancy	
Yes	179 (74.6)
No	61 (25.4)
Antenatal care in pregnancy	
Yes	222 (92.5)
No	18 (7.5)

Table 3: Compare the mean score of depression in sociodemographic characteristics

Sociodemographic characteristics	BDI score	P
Age		
16-19	17.71±8.26	0.06
20-34	14.38±8.11	
35 and over	17.92±11.56	
Education level		
Illiterate	20.93±9.03	0.001
Literate	16.33±6.54	
Primary school	15.77±9.46	
Secondary school	12.97±7.85	
High school	12.69±6.57	
Graduate	12.82±7.22	
Education level of husband		
Primary school	17.37±10.86	0.012
Secondary school	14.58±7.97	
High school	14.05±7.99	
Graduate	13.68±7.41	
People who pregnant women talk about their problems		
Husband	14.31±8.76	0.001
Mother	17.08±8.65	
Relative	21.37±10.53	
Friend	12.57±6.33	

BDI: Beck Depression Inventory

Table 4: Compare the mean score of depression in obstetrics characteristic

Pregnancy characteristic	BDI score	P
Number of pregnancies		
Primipara	13.51±8.51	0.045
Multipar	15.82±8.54	
Pregnancy-related problems		
Yes	15.70±8.65	0.017
No	12.61±7.99	
Antenatal care in pregnancy		
Yes	14.59±8.48	0.015
No	19.67±8.73	

BDI: Beck Depression Inventory

prevalence in pregnant women was found to be higher than the previous studies (36.3%). In the studies performed in our country, it was found to be 27.9% in the study of Karaçam and Ançel and 27.3% in the study of Caliskan et al.,[12,13] and in the studies conducted abroad, it was found to be 19.6% in Brazil, 30% in Finland, and 25% in Canada.[14-16] The causes for the high depressive symptom prevalence in our study may be the value given to the pregnancy within the family, the perception of the pregnancy, and inadequate coping abilities. Problems in the adaptation to the pregnancy and the decrease in the social support might cause depression to be raised.

The average BDI scores of the adolescent and older aged, pregnant women, who were considered as risky and included in the study, were higher than the average scores of 20-34-year-old pregnant women, although these scores were not statistically significant. In the study of Casanueva et al., the adolescent pregnant women received high scores from the depression test.[17] In the literature, there are studies that indicate that the age does not has any effect on depression.[18,19] Depressive symptoms that are observed in risky pregnancies may lead to weaker mother-infant relationship in the short-term and violence toward the child in the long term. The

reason for the highness of the score in the adolescents that struggle for their independence may be becoming more dependent after pregnancy.

The BDI scores of the non-illiterate pregnant women included in the study were higher than that the pregnant women who had a primary school or higher education level. Our results were supported by the Turkish literature in accordance with the studies in our country.[11-18,20,21] In Brazil, a longitudinal study presented that higher educational level protected against depression in pregnancy.[22] Not only Turkish literature but also studies from other countries approved on the effect of low education on depression during pregnancy.[23] The mother's having lower level of education may cause worries and insecurity about not being able to provide the adequate care to the infant. This may increase the depressive symptoms in the mother. These symptoms may affect the newborn baby's health in a negative way by causing the mother's indifference to the baby after the birth.

It is seen that the BDI score averages of the pregnant women included in the study decreases as their spouses' level of education increases. In the study of Akbaş et al., it was found that the education level of the spouse does not has effect on depression development in pregnant women.[18] Increasing the education level of the spouse can reduce depressive symptoms by increasing the social support to the mother and reducing the workload of the mother.

The BDI scores of the pregnant women who speak with their spouses about the problems that they encounter in their daily life were found to be lower than the pregnant women who talk to their relatives and mothers. In the studies that were carried out, it was revealed that insufficient social support in pregnancy is associated with increased depression and anxiety levels.[12-24] Sorias has stated in his study that the women, who share their important problems with their spouses, more easily adapt to their new role.[21] The family is important in terms of strong support of relatives, accurately directing and supporting the pregnant women in our society. However, in our study, we have seen that the social sources are not always supporting, though they are stressful. On the other hand, relevant social support plays a protective role from stressful life events and depression.[25]

The BDI scores of women in their first pregnancy were significantly lower than those with two or more pregnancies. The higher number of pregnancies means the increase in the mother's workload at home. Taking care of other children may increase depressive symptoms by causing the mothers to feel insufficient in taking care of the newborn baby.

CONCLUSİON

The prevalence of depression in pregnancy was 36.3%. The current community-based study in Turkey found that there are some sociodemographic and birthday specials lead to depression in pregnancy, for example, low education of pregnant women and her spouses, insufficient social support her spouse, and first pregnancy. In the direction of these findings, our proposals are performing psychiatric evaluation together with physical evaluation during the routine checkups of pregnant women and considering sociodemographic characteristics that may affect the mental situation. Strengthening the women in a socioeconomic way and increasing their level of education are also necessary. Increasing social support systems, especially the support of the spouses, in the positive way will be helpful in preventing depression in pregnancy.

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