The Prevalence of Depression During Pregnancy and The Affecting Factors

Gebelikte Depresyon Yaşama Durumu ve Etkileyen Faktörler

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ÖZ

Amaç: Çalışma gebelikte depresyon görülme sıklığını ve etkileyen faktörleri belirlemek amacıyla tanımlayıcı olarak yapılmıştır.

Yöntem: Verilerin toplanmasında araştırmacılar tarafından geliştirilen bir tanıtım formu ve Edinburg Depresyon Ölçeği kullanılmıştır. Çalışmanın örneklemini 200 gebe oluşturmuştur. Verilerin değerlendirilmesinde sayı, yüzdelik, ortalama, bağımsız gruplarda t testi, kruskal wallis Anova ve post-hoc(Tukey HSD)test kullanılmıştır.

Bulgular: Araştırmaya katılan gebelerin % 34.0' ı 25-29 yaş grubunda, % 82.0'ı ev hanımı, %56.5'i çekirdek ailede yaşamaktadır. Ayrıca çalışmaya katılan gebelerin %5.0'ı gelir durumunun orta düzeyde olduğunu, % 81.5'i sosyal güvenceye sahip olduğunu ifade etmiştir. Ayrıca gebelerin %33.5'inin ilk gebeliği olduğu, %55.5'inin planlayarak gebe kaldığı, %49.0'ının bebeğinin bakımına ilişkin kaygı yaşadığı, %15.5'i daha önceki gebeliklerinde depresyon yaşadığı ve %13.5'i de ailelerinde depresyon öyküsü olduğunu belirlenmiştir. Araştırmamızda gebelerin depresyon puan ortalamasının 10.4±6.6 olduğu ve % 36.0'sında depresyon olduğu belirlenmiştir. Gelir ve çalışma durumunun, çocuk sayısının, plansız gebeliğin, gebelikte sağlık probleminin, bebek bakımına ilişkin kaygı yaşamanın, gebelikte kayıp yaşamanın, önceki gebelikte ve ailede depresyon öyküsünün, eş ile olan ilişkinin, gebelikte eş ile olan ilişkide meydana gelen değişikliğin, sosyal destek eksikliğinin, depresyon puanını etkilediği belirlenmiştir.

Sonuç: Sonuç olarak, depresyon için risk taşıyan gebelerin psikososyal takiplerinin düzenli olarak yapılması ve uygun danışmanlık hizmetlerine yönlendirilmeleri önerilebilir..

Anahtar Kelimeler: Gebelik, Depresyon, Sosyal Destek

ABSTRACT

Aim: This is a descriptive study aimed to determine the prevalence of depression and the factors causing depression during pregnancy.

Method: The data were collected by using an Introductory Form developed by the researchers and the Edinburg Depression Scale. The sample of the study consisted of 200 pregnant women. Frequencies, means, independent samples t-test, kruskal wallis test, one-way analysis of variance (ANOVA) and post-hoc(Tukey HSD)test were used in order to analyze the data.

Results: 34 % of pregnant women that participated in the study were between the ages 25-29, 82.0 % of them were housewives and 56.5 % of them live in a nuclear family. Also, 5 % of these pregnant women stated that they have middle level income and 81.5 % of them stated that they have social security. It was also determined that 33.5 % of these women are primigravida, 55.5 % of them planned their pregnancy, 49.0 % of them are anxious about the care of their babies, 15.5 % of them experienced depression during their previous pregnancies and 13.5 % of them have someone with a history of depression in their families. In this study, it was found out that mean depression score of pregnant women is 10.4±6.6 and 36 % of them experienced depression. It was also found out that employment status, income level, number of children, unplanned pregnancy, health problems in pregnancy, anxiety about baby care, loss suffered during pregnancy, history of depression in the previous pregnancy and family, relationships with husband, changes in relationships with husbands during pregnancy lack of social support, affected depression score.

Conclusion: As a result, it can be suggested that psychosocial follow-ups of pregnant women who are under risk of depression should be made regularly and they should be directed to appropriate counselling services.

Keywords: Pregnancy, Depression, Social support

INTRODUCTION

Depressive disorders and their symptoms are widely seen public health problems that lead to a significant level of business loss and disability. The lifetime prevalence of depressive symptoms varies between 13-20 % (1,2). It is reported that the level of prevalence of clinical depression in the society in Turkey is about 10 % (3).

Major depression in women is 2 or 3 times more common than men(4,5). In western countries, the prevalence of major depression in men is approximately 2-3 % and in women it is around 5-9 % (6). Women's biological structure, psychological characteristics, personality, way of coping with problems, social and cultural position make women prone to depression. There is a close relationship between the nervous and hormonal systems and thus feminine hormones affect their behaviors. Menstruation, pregnancy, puerperality, breastfeeding, menopause and the use of birth control pills can lead to mental illnesses (7).

Depression is more common in women between the ages of 25 and 35, which is accepted as reproductive age, and this period is the high-risk period for the onset of depression in women. Infertility, pregnancy, abortion, stillbirth and social, economic, biological and hormonal changes during postpartum period affect a woman's mental health. Almost any life event can be compared with neuroendocrine and psychosocial changes caused by pregnancy and childbirth (6,8,9). Many women can adapt easily to physiological, psychological and social changes occurring with pregnancy and childbirth. However, the women who cannot adapt may have emotional problems in various levels (10).

As well as hormonal, physiological, psychological and social changes occurring during pregnancy, concerns related to the fetus and delivery can lead to occurrence of depressive symptoms during pregnancy (11,12).

Since depression in pregnancy affect the health of the mother and the fetus negatively, earlier diagnosis and determination of the factors predisposing to depression are important in order to protect the health of both the mother and the baby.

METHODS

Study design

This is a descriptive study aimed to determine the prevalence of depression and the factors causing depression during pregnancy.

Setting and sample

The population of the study consisted of pregnant women admitted to the hospital within a year. The sample of the study consisted of 200 pregnant women.

Ethical Consideration

Written permission was received from the provincial directorate of health to do the research. Also, the purpose of the research was explained to pregnant women and their verbal consents were obtained.

Instruments

The data were collected by using an Introductory Form prepared by the researchers and the Edinburg Depression Scale.

Introductory Form

A form prepared by the researchers in order to identify socio-demographic characteristics of pregnant women who participated in the study, their stories related to their previous pregnancies and their current pregnancy and whether they received any social support during their pregnancies.

Edinburgh Depression Scale

The EPDS is a kind of self-rating scale

prepared by Cox in 1987 to determine the risk of depression in women in the postpartum period. This is a screening scale and it is not intended to diagnose depression with this scale. The EPDS consists of 10 questions in the form of a 4-point Likert scale and the responses are scored between 0 and 3. The total score of the scale is obtained by summing the scores of the items. The women who score over 12 points are considered as the risk group. While the lowest possible score that one can get from the scale is 0, the highest is 30. Turkish validity and reliability studies of the scale were conducted by Engindeniz in 1996. In this study, the women who got 13 or more points were considered as the risk group for postpartum depression (13). The scale can also be used to determine depression during pregnancy (14). The Cronbach's Alpha reliability score was 0.875 in this study.

Data Analysis

SPSS was used to evaluate the data. Frequencies, means, independent samples t-test, kruskal wallis test, one-way analysis of variance (ANOVA) and post-hoc(Tukey HSD)test were used in order to analyze the data.

RESULTS

34.0 % of pregnant women that participated in the study were between the ages 25-29; 58.0 % of them were 1-5 years married; 55.0 % of them married before the age of 19; 29.5 % of them were graduated from secondary school; 82.0 % of them were housewives and 56.5 % of them live in a nuclear family. Also, 5.0 % of these pregnant women stated that they have middle level income and 81.5 % of them stated that they have social security.

It was also determined that 33.5 % of these women were primigravida, 42.5 % of them were in the third trimester of pregnancy and 55.5 % of them had planned their pregnancy. Nevertheless, 78 % of the pregnant women stated that they had not had any health problems during their pregnancy. 38.6 % of the women, who declared that they had had health problems, had experienced hyperemesis gravidarum, 20.5 % of them had experienced gestational hypertension and 15.9 % of them had experienced gestational diabetes.

Table 1. Depression Scores of Pregnant Women According to Their Socio-Demographic Characteristics

Socio-Demographic Characteristics	EPDS Scores $\overline{X}$ ± SD	p
Education		
Literate	16.0 ± 4.7	
Primary School	10,6 ± 6.8	9,34
Secondary School	10.1 ± 6.7	p>.05
High School	11.7 ± 6.8	
University	8.3 ± 5.5	
Employment Status		-2.19
Working	8.3 ± 6.6	p<.05
Not working	10.9 ± 6.5	
Social Security		
Have	10.4 ± 6.4	-0.25
Do not have	10.7 ± 7.4	p>.05
Family Type		
Nuclear family	10.2 ± 6.2	-0.57
Extended family	10.7 ± 7.2	p>.05
Income Status		
Very bad*	20.7 ± 4.1	
Bad*	14.8 ± 7.7	9.45
Middle	10.2 ± 5.8	p<.001
Good	8.9 ± 6.2	
Very good	3.7 ± 3.8	

*Post-Hoc(Tukey HSD) p<.05

In our study, 49.0 % of pregnant women stated that they were anxious about the care of their babies and 15.5 % of them had suffered a loss (e.g. death, migration, separation). Also, 15.5 % of them stated that they had experienced depression during their previous pregnancies and 13.5 % of them declared that they had someone with a history of depression in their families. 81.5 % of the women indicated that they received social support during pregnancy. 57.1 % of these women received support from their husbands and 39.3 % of them received support from their families. 72.0 % of the women stated that they had good/very good relationships with their husbands and 73.5 % of the women indicated that they experienced no change in their relationships with their husbands during their pregnancies.

Table 2. Depression Scores of Pregnant Women According to Their Obstetric Characteristics

Obstetric Characteristics Number of children	EPDS Scores $\overline{X} \pm$ SD	p
No children*	8.9 ± 6.6	
1	11.8 ± 6.4	2.91
2	10.0 ± 7.3	p<.05
3 and more	12.0 ± 5.5	
Gestational Age		
1-3	11.3 ± 7.7	1.06
4-6	10.7 ± 6.5	p>.05
7-9	9.7 ± 6.0	
Planned/Unplanned Pregnancy		
Planned	9.2 ± 6.4	-3.02
Unplanned	12.0 ± 6.6	p<.05
Health Problems in Pregnancy		
Have	12.9 ± 7.4	2.52
Do not have	9.8 ± 6.2	p<.05
Types of Health Problems		
Hyperemesis gravidarum	11.9 ± 6.5	
Pregnancy hypertension	11.2 ± 7.3	2,22 p>.05
Problems with the placenta	10.2 ± 12.5	
Gestational diabetes	14.8 ± 5.6	
Other (Anemia. IGR**)	16.3 ± 8.4	

*Post-hoc(Tukey HSD) p<.05   **intrauterine Growth Retardation

In our study, it was determined that mean depression score of the pregnant women was 10.4±6.6 and 36.0 % of them were under the risk of depression.

Depression scores of pregnant women according to their socio-demographic characteristics are given in Table 1. It was found to be statistically significant that depression scores are higher in women who are not working (p<0.05) and who had bad and very bad income status (p<.001). It was seen that education, family type and social security did not affect depression scores.

Depression scores of pregnant women according to their obstetric characteristics are given in Table 2. It was determined to be statistically significant (p<0.05) that depression scores are higher in women with

unplanned pregnancies and who had problems during their pregnancies. Also, depression scores are significantly lower in women who don't have any children. (p<0.05).

Table 3. Depression Scores of Pregnant Women According to Their Emotional Experiences

Emotional Experiences	EPDS Scores $\overline{X} \pm$ SD	p
Anxiety about baby care		5.64
Have	12.9 ± 6.7	p<.001
Do not have	8.0 ± 5.6	
Loss suffered during pregnancy		2.71
Yes	13.4 ± 6.7	p<.05
No	9.9 ± 6.5	
History of depression in previous pregnancies		4.61
Yes	15.3 ± 6.4	p< .001
No	9.5 ± 6.3	
History of depression in the family		2.63
Yes	13.9 ± 7.5	p<.05
No	9.9 ± 6.3	
Having social support during pregnancy		-3.330
Yes	9.6 ± 6.3	p<.05
No	13.9 ± 7.2	
General Relationships with husband		
Bad	19.5 ± 4.0	25.81
Moderate	14.8 ± 6.6	p< .001
Good*	9.2 ± 5.3	
Very good*	7.4 ± 5.5	
Changes in relationships with husbands during pregnancy		4.04 p< .001
Yes	13.9 ± 7.5	
No	9.2 ± 5.9	
The quality of the social support during pregnancy		
Adequate*	7.5 ± 5.4	13.69
Partly adequate	11.3 ± 6.3	p< .001
Inadequate	15.3 ± 6.3	
No support	13.9 ± 7.2	

*Post-hoc(Tukey HSD) p<.05

Depression scores of pregnant women according to their emotional experiences are given in Table 3. It was determined that depression scores of women, who were anxious about the care of their babies(p<0.001), who had suffered a loss (e.g. death, migration, separation etc.) (p<0.05), who had a story of depression in their previous pregnancies (p<0.001) and who had someone with a history of depression in their families

(p<0.05) were higher and it was found to be statistically significant. In addition, it was found out that depression scores were higher for women who could not receive social support during their pregnancies (p<0.05) or who found the support inadequate (p<0.001), who had bad relationships with their husbands(p<0.001) and whose relationships with their husbands changed during their pregnancies(p<0.001) and it was found to be statistically significant.

DISCUSSION

While pregnancy is a normal physiological process for women, sometimes it can cause considerable emotional stress. There are limited numbers of studies related with depression in pregnancy in Turkey. In the studies conducted by Eskici et al. and Karaçam and Ancel The Beck Depression Inventory (BDI) was used and the incidence of depressive symptoms in pregnant women was found to be 14.4% and 27.9 % in these studies, respectively (15,16). In the studies conducted by Ocaktan et al. and Gölbaşı et al. Edinburgh Postnatal Depression Scale (EPDS) was used and the incidence of depressive symptoms in pregnant women was found to be 31.8 % and 27.5 % in these studies, respectively (17,18). In Lara et al.'s study the prevalence of depressive symptoms was 32.4 % for pregnant Latinas and 36.8 % for Mexicans (19). Boven et al. found out that the prevalence of depression (EPDS $\geq$ 12) was 14.1% in early pregnancy and 10.4% in late pregnancy(20). In our study, the prevalence of depressive symptoms was found to be 36 % .

It is reported that the effectiveness of women over their own lives and their self-respect increased and the rate of depression decreased with increasing level of education (21). In our study, it was determined that depression scores of pregnant women who were university graduates were lower than the others who were not (p>0.05) In some other studies conducted in Turkey, it was reported that women with higher education level had lower depression scores (15,22-24) (Table 1). On the other hand, there are some studies that found no relation between educational level and depression (12,25).

Poverty is increasingly recognized as the most powerful variable that causes the emergence and continuance of mental disorders (26,27). It was determined in our study that, depression scores of pregnant women increased as their income decreased (p<0.001) (Table 1). Leign et al. stated that pregnant women who had low income had higher depression scores than the ones who had good incomes in their studies (28). In another study, depression scores of pregnant women whose incomes were less than their expenditures were found to be higher than women with more incomes (22). The results of our study support the view that bad socioeconomic status is a risk factor for depressive symptoms in pregnancy.

Pregnant women experience different changes in every period of their pregnancy. These changes might affect their psychological state (29). In our study, mean EPDS scores of pregnant women in the first trimester of pregnancy were higher than mean EPDS scores of pregnant women in the second and third trimester, but the difference between these groups was not statistically significant (p> 0.05) (Table 2). Similar to our study, some studies conducted in Turkey also reported no significant difference between depression scores in terms of gestational age (18,22,30). Besides this, there are studies stating that depression scores of pregnant women in the second and third trimester(25,31) are higher, as well as there are studies indicating that depression scores of pregnant women in the first trimester are higher (32, 33). It is thought that this difference between the results can be explained by the difference between the communities in which the studies were conducted, the sample group and the measuring instruments.

Unplanned pregnancies also negatively

affect the emotions of women during their pregnancies (34). Depression rates of women who experienced unplanned pregnancy were found to be high in some studies (18,35). However, unlike our study, whether the pregnancy was planned or not did not significantly affect depression scores of women in some other studies (17,22). In our study, depression scores of women with unplanned pregnancies were significantly higher than those who planned their pregnancies (p <0.05) (Table 2).

Although pregnancy is a normal physiological process, it may cause some health problems. While women are trying to adapt to changes during this period, some health problems that arise in this period may make it difficult for women to cope with these changes. In our study, depression scores of women who experienced health problems during pregnancy were determined to be higher than those who did not (p<0.05) (Table 2). In addition to this, the frequency of depressive symptoms varies according to the problems. While depression scores of pregnant women, who experienced health problems such as diabetes, anaemia and intrauterine growth retardation were over 13, depression scores of women who experienced health problems such as hyperemesis gravidarum or pregnancy hypertension were under 13, but this difference was not statistically significant (p>.05) (Table 2). Kalken et al. reported that severe nausea and vomiting during early pregnancy were associated with depression scores(36). Şimşek et al. determined that pregnant women with hyperemesis gravidarum had higher depression scores than those in the control group in their studies (37).

Some studies showed that anxieties of women concerning the care of their babies resulted in postpartum depression (38,39). There is limited information about whether pregnant women's anxiety concerning the care of baby increases the risk of depression during pregnancy or not. In a randomized study conducted in Australia, it was seen that there is significant association between pregnancy depression and the parenting stress (28). In our study, it was determined that depression scores of pregnant women who are anxious about the care of their babies are higher than those who are not (Table 3). This finding of our study is important because it shows that pregnant women should prepare themselves for the postpartum period and baby care training given during pregnancy may reduce the risk of depression.

Social support systems are very important for the people to cope with life's difficulties. Supportive relationships are considered to play an important role in people's lives in strengthening efforts to health promotion, to prevent health problems, to protect against the effects of stress and to cope with them (40). There are many studies showing the relation between social support and depression during pregnancy (41-43). Yeşilçiçek Çalık and Aktaş identified that problems in marriage relationships and the lack or absence of social support create risks for depression during pregnancy (27). In our study, mean EPDS scores of pregnant women who couldn't receive social support during their pregnancies or who found the support inadequate, who generally had poor relationships with their husbands and whose relationships with their husbands changed during their pregnancies were found to be higher(Table 3). These findings of our study are similar to the literature.

Lancaster et al. stated that history of depression is associated with depression during pregnancy (44). Similarly, Yeşilçiçek at al. and Verreault at al. stated that history of depression is a risk factor for depression during pregnancy (27,45). In our study, EPDS scores of pregnant women, who had suffered from depression during their previous pregnancies and who have family members with a history of depression, were found to be higher and this was statistically significant

(Table 3). According to these results, psychosocial assessment in addition to physical assessment can be suggested to be done during follow-up of pregnant women to prevent or diagnose depression in pregnancy earlier. A limitation of the study is the relatively small sample.

CONCLUSION

As a result, not working, having bad income, unplanned pregnancy, having health problems during pregnancy, lack or absence of social support, anxiety about baby care, loss suffered during pregnancy, poor relationships with husband, changes in relationships with husbands during pregnancy, a history of depression or having a history of depression in the family were found to be associated with depression during pregnancy. Regular psychosocial follow-ups and consultancy can be recommended for pregnant women at risk for depression.

Conflicts of interest

The authors have no conflicts of interest to dec

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