Investigation of the Prenatal Attachment Levels of Pregnant With Depressive Symptoms**

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ABSTRACT:

Purpose: This study was conducted to determine the attachment level of pregnant women with depressive symptoms to their prenatal period baby.

Material and Methods: Research has been done in descriptive type. The universe of research was composed of pregnant women who applied to Sivas Kangal Family Health Center and Kangal State Hospital between April 10 and July 10, 2017. In the sampling, 150 pregnant women who met the criteria were included. Personal Information Form, Beck Depression Inventory and Prenatal Attachment Inventory were used to collect the data of the study. The data were collected by face to face interview method. The analysis of the data was made with the SPSS (Version: 22.0) program. In statistical analysis, the significance level was accepted as $p<0.05$.

Results: According to the data analysis results; Pregnant women are 27,02 years old on average and are married for 6,41 years, 41,4% are primary school graduates, 73,3% are housewives, 82,7% have middle-level income. The average gravida of pregnant women is 2,44 and 35,3% of them are their first pregnancy. Average gestation period is 27,76 weeks. When the BDI cut-off score was accepted as 17, the prevalence of depression in pregnant women was found to be 35,3%. The mean BDE score was determined to be 15.48 ± 10.12 (min 0-max 46). Generally, mild depression symptoms (32,6%) were found in pregnant women, while 11,3% had severe depression symptoms. The attachment levels of the pregnant women are above the average with 56.85 ± 12.64 (min 28-max 82) points. The relationship between Beck Depression Inventory and Prenatal Attachment Inventory was analyzed and a statistically negative correlation and a significant correlation was found ($p <0.05$).

Conclusion: As a result of the research, it was seen that prenatal attachment decreased as the severity of depressive symptoms of pregnant women increased. For this reason, pregnant women with depressive symptoms or diagnosed with depression in the prenatal period should be identified, if necessary, the affected pregnant woman should be planned individual training with her husband, practices should be made to improve and protect her mental health, and thus contribution should be made to increase mother-baby attachment.

Keywords: Pregnancy, Depressive Symptom, Prenatal Attachment

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INTRODUCTION

One of the important points in a woman's life is the pregnancy period. During pregnancy, the woman experiences some physiological changes due to the increase in hormones and the growth of the fetus, as well as psychological and social changes, and the pregnant tries to adapt to both the changes and the new roles gained during this period (Beji, 2015; Şirin & Kavlak, 2015). These physiological and physical changes that may occur in women during pregnancy are also the source of psychological changes. Psychological disorders may occur in pregnant women as a result of psychological changes (Taşkın, 2009; Beji, 2015; Şirin & Kavlak, 2015). Depression is one of the most common psychological disorders during pregnancy. The emergence of depression during pregnancy negatively affects the quality of life of the pregnant woman and therefore the health of the fetus (Kuğu & Akyüz, 2001; Savrun, 2008; Çam & Engin, 2014; Özorhan et al., 2014; Dağlar et al.,

2015). Dağlar et al. (2016) found that the rates of anxiety and depression in pregnant women were considerably higher than in the postpartum period. In many studies conducted in the world and in Turkey during the prenatal period, the rates of depression were found to be between 7.2% and 65.6%. While the rate of depression seen in pregnant women in the world is 7.2% - 40.3% (Niaz et al., 2004; Lee et al., 2007; Lancaster et al., 2010; Lee, 2016), this rate is between 27.9% and 65.6% in Turkey (Karaçam and Ancel ,2009;Tunç et al., 2012; Çelik et al., 2013; Dağlar et al., 2016; Bulut and Yiğitbaş, 2018;Yüksel et al.,2020). The data show that the rates of depression in our country are quite high compared to the countries of the world. If the depressive symptoms that occur during pregnancy are not evaluated in the early period and the necessary treatment is not applied, it can affect the mother and the fetus not only from the physiological point of view, but also from the psychological aspect (Kocabaşoğlu and Başer, 2008). The onset of pregnancy creates a bond/relationship between the mother and the fetus, and the strength of this bond is closely related to the psychological conditions experienced by the mother (Condon & Corkindale, 1997; Lindgren, 2001; Tunçel & Süt, 2019). Physiological and psychological changes experienced by the pregnant have a great effect on the bonding between mother and fetus (Eswi & Khalil, 2012; Yılmaz, 2013). The mental health of the pregnant woman and the depression she experiences are very important in terms of attachment (Öztürk et al., 2018).

Bowlby defines attachment as a strong bond between two people (Bowlby, 1969). The emotional bond formed between parents and fetus during pregnancy is defined as prenatal attachment (Condon & Corkindale, 1997; Beji & Yılmaz, 2013; Yılmaz, 2013). In a study, it was stated that the feeling of attachment between the mother and the fetus started before birth, and this attachment increased when the mother felt the movements of the fetus (Sezici et al., 2016). When the literature studies on prenatal attachment are examined, prenatal attachment has been affected by many positive or negative factors (Lindgren, 2001; Yarcheski et al., 2009; Yılmaz and Beji, 2010; Elkin,

2015; Sezici et al., 2016; Badem and Zeyneloğlu, 2021). Many studies have been conducted to date on how women and fetuses are affected physiologically during pregnancy (Diego et al., 2009; Çalık and Aktaş, 2011; Eskici et al., 2012; Mutlugüneş and Mete, 2013). When the literature is examined, depression (Karaçam & Ançel, 2009; Arslan et al., 2011; Tunç et al., 2012; Dağlar & Nur, 2014; Elkin, 2015) and prenatal attachment (Lindgren, 2001; Karaçam & Ançel, 2009; Elkin, 2015; Buko and Özkan, 2016; Metin and Pasinlioğlu, 2016) were studied separately in our country , but the extent of how it would affect attachment if depression in pregnant women is not diagnosed and treated early has not been examined. Therefore, this study was conducted to determine the prevalence of depressive symptoms and prenatal attachment level in pregnant women.

MATERIALS AND METHODS
Purpose and Type of Research
The research was carried out as a descriptive study in order to determine the level of attachment of pregnant women with depressive symptoms to their prenatal period babies.

Population and Sample of the Research
Research Ministry of Health Sivas Provincial Health Directorate Sivas Kangal State Hospital Gynecology and Obstetrics Polyclinic and T.R. It was held at the Ministry of Health Sivas Kangal Family Health Center between April 10 and July 10, 2017. The research population consisted of pregnant women with a gestational age of 14 weeks and above who applied to Kangal State Hospital and Kangal Family Health Center. The sample of the study consisted of 150 pregnant women who came for examination between 10 April and 10 July 2017. While pregnant women were taken into the sample, those who had the following criteria were selected.

✓ Having a gestational week of 14 weeks and above (2nd and 3rd trimester)
✓ Having a healthy pregnancy (not having chronic disease, gestational diabetes, eclampsia and preeclampsia, preterm birth threat, premature rupture of membranes)
✓ Having a healthy fetus

✓ Being 18 years or older
✓ Not having communication difficulties and mental inadequacy
✓ Not having received infertility treatment to get pregnant
✓ Not having a diagnosed depression before and during pregnancy

Data Collection Tools
Research data were collected with Personal Information Form, Beck Depression Inventory and Prenatal Attachment Inventory.

Personal Information Form
It consists of 20 questions including demographic and obstetric characteristics of the pregnant woman.

Beck Depression Inventory
It was developed by Beck (1961) to measure the behavioral manifestations of depression in adults; Turkish validity and reliability study was conducted by Hisli (1989). The scale consists of 21 questions. In the result evaluation, the scores of all questions are collected and classified according to their grades between 0 and 63 points. 0-9 points, minimal depression; 10-16 points, mild depression; 17-29 points, moderate depression; A score of 30-63 is defined as severe depression. The scale cut-off point is 17.

Prenatal Attachment Inventory
The scale developed by Muller (1993), Duyan et al. (2013) adapted it to Turkish. It was developed to explain the feelings, thoughts and situations experienced by the pregnant during pregnancy and to determine the attachment levels in the prenatal period. The scale consists of 21 items. Each item can receive points between 1-4. A minimum of 21 and a maximum of 84 points can be obtained from the scale.

Analysis of Data
The analysis of the data obtained from the research was made with the SPSS (Version: 22.0) program. Independent t test, One-Way Analysis of Variance, Mann Whitney U, Kruskal Wallis-H test were used in statistical analysis and the level of significance was

accepted as $p < 0.05$.

Ethical Aspect of Research
Before data collection, ethics committee approval dated 10.03.2017 and numbered 03/03 was obtained from Sivas Cumhuriyet University Faculty of Medicine Non-Interventional Clinical Research Ethics Committee. Ministry of Health Sivas Provincial Health Directorate Kangal State Hospital Gynecology and Obstetrics Polyclinic dated 20.04.2017, numbered 75.723.911-903.05.99-E.99-3825 and T.R. Written permissions were obtained from the Ministry of Health Sivas Kangal Family Health Center and dated 25.04.2017 and numbered 73192166.044.E269. The pregnant women who will participate in the study were informed about the study and their verbal and written consents were obtained.

RESULTS
42.7% of the pregnant women included in the study are between the ages of 21-25. 9.3% are illiterate and most (41.4%) are primary school graduates. 35.3% of the pregnant women have been married for 1-2 years, 73.3% are unemployed and 37.3% of their spouses are working as workers. 82.7% have a middle income and 9.3% smoke during pregnancy. 76% of the pregnant women are in the nuclear family structure and 14.7% of them live with their mother-in-law and father-in-law. Beck Depression Scale and Prenatal Attachment Scale scores were examined according to the demographic characteristics of the pregnant women. High depressive symptoms were observed in pregnant women over the age of 35, married for 5-6 years, illiterate, pregnant and pregnant spouses working as workers, and pregnant women with low income and living in a large family. Accordingly, prenatal attachment rates were also found to be low. Although low depressive symptoms were observed in pregnant smokers, prenatal attachment levels were not found significant ($p > 0.05$) (Table 1).
The gestational age of 53.3% of the pregnants is 14-28 weeks. 44.0% 2-3. 35.5% of them experience their first pregnancy while they are having their first pregnancy. While 44.0% have 1-2 children, 41.3% have no living children. 39.3% of the pregnant

women who gave birth before had a normal delivery and 70.7% of them did not have a history of miscarriage. 76.7% of the pregnant women who

participated in the study became pregnant voluntarily, 38.0% of them stated any gender desire.

Table1. Scale Score Comparisons According to Demographic Characteristics of Pregnants

Demographic Features	n (%)	Beck Depression Inventory		Prenatal Attachment Inventory	
		$\bar{x}\pm SD$	p	$\bar{x}\pm SD$	p
Age					
18-20	16(10.7)	19.56±9.71		56.00±8.87	
21-25	64(42.7)	13.28±9.05		59.07±13.12	
26-30	30(20.0)	13.00±9.10	0.00	59.23±12.51	0.02
31-35	29(19.3)	16.65±10.70		53.31±12.12	
35 and above	11(7.3)	26.09±10.14		48.00±12.64	
Wedding Year					
1-2	53(35.3)	11.86±8.60		63.15±11.96	
3-4	25(16.7)	14.96±6.52		56.72±11.63	
5-6	23(15.3)	18.86±12.72	0.00	51.52±11.34	0.00
7 and above	49(32.7)	18.08±10.74		52.61±11.78	
Education Level					
İlliterate	14(9.3)	29.42±7.34		43.28±12.79	
Primary school graduate	62(41.3)	17.27±10.05		52.91±9.52	
High school graduate	35(23.3)	13.51±8.32	0.00	60.08±13.70	0.00
University graduate and above	39(26.0)	9.70±6.41		65.02±9.39	
Pregnant Occupation					
Unemployed	110(73.3)	17.26±10.17		54.79±12.29	
Worker	8(5.3)	19.55±11.38	0.00	57.77±15.59	0.00
Public servant	32(21.4)	8.00±4.88		63.90±10.62	
Spouse Occupation					
Unemployed	15(10.0)	22.86±11.16		52.66±13.37	
Worker	56(37.3)	18.89±10.48		51.19±12.08	
Tradesman	27(18.0)	11.62±8.09	0.00	60.85± 8.69	0.00
Public servant	45(30.0)	9.95±6.40		64.00±11.21	
Farmer-Shepherd	7(4.7)	22.85±7.64		49.71±10.48	
Income Level					
Low	22(14.7)	27.31±10.89		46.22±10.94	
Middle	124(82.7)	13.44±8.46	0.00	58.70±12.08	0.00
High	4(2.7)	13.75±10.71		58.00±12.35	
Smoking					
Yes	14(9.3)	23.07±10.20	0.00	54.42±9.17	0.45
No	136(90.7)	14.70±9.82		57.10±12.95	
Family Type					
Nuclear family	114(76.0)	13.98±9.93	0.00	58.32±12.83	0.01
Extended family	36(24.0)	20.25±9.33		52.19±10.92	

The rate of experiencing joy and happiness when pregnant women learn of their pregnancy is 70.0%. 72.0% of the pregnant women stated that they received support from their spouses during pregnancy, whereas 6% of the pregnant women stated that they experienced violence from their spouse or family. According to the obstetric characteristics of pregnant women; Beck Depression Inventory and Prenatal Attachment Inventory scores were examined. High Beck Depression Inventory scores were found in pregnant women who had 4 or more pregnancies, had 3-4 living children, had the last normal delivery, had an unwanted pregnancy, experienced sadness when they heard about their pregnancy for the first time, had no support from a spouse, and were subjected to violence by their spouse or family. It was found that pregnant women showed low attachment. However, the factors of gestational week, miscarriage history, and sex desire were not found to be significant in terms of both the presence of depressive symptoms and attachment (Table 2).

Table 2. Scale-Score Comparisons of Pregnants According to Obstetrical Characteristics

Obstetric Features	n (%)	Beck Depression Inventory		Prenatal Attachment Inventory	
		x̄±SD	p	x̄±SD	p
Gravida					
First	53(35.3)	12.18±8.20		62.58±11.96	
2	37(24.7)	13.62±8.82		58.86±11.13	
3	29(19.3)	16.27±8.10	0.00	49.89±10.17	0.00
4 and above	31(20.7)	22.61±12.68		51.16±13.20	
Gestational Age					
14-28	80(53.3)	14.10±9.80	0.08	57.06±13.40	0.82
29-40	70(46.7)	17.07±10.31		56.61±11.81	
Number of children					
No children	62(41.3)	12.16±8.70		61.88±11.88	
1-2 children	66(44.0)	15.31±8.56	0.00	55.63±11.34	0.00
3-4 children	17(11.3)	26.23±12.12		44.88± 8.13	
5 or more children	5(3.4)	22.40±12.54		51.20±19.51	
Latest Delivery Type					
Cesarean Delivery	28(18.7)	15.75±12.04		55.71±11.90	
Vaginal Delivery	59(39.3)	18.76±9.77	0.00	51.50±11.27	0.00
Nulliparous	63(42.0)	12.30±8.55		62.36±12.05	
History of Abortion					
Yes	44(29.3)	15.45±9.97	0.95	56.02±13.02	0.60
No	106(70.7)	15.50±10.23		57.19±12.53	
State of Desiring Pregnancy					
Yes	115(76.7)	14.15±9.27	0.01	59.14±11.78	0.00
No	35(23.3)	19.85±11.60		49.31±12.61	
Gender Request in Pregnancy					
Male	16(10.7)	14.43±10.76		55.00±15.23	
Girl	41(27.3)	14.31±0.15	0.38	60.31± 9.30	0.11
It does not matter	93(62.0)	16.18±10.04		55.64±13.27	
When You First Hear About Pregnancy Feeling Emotion					
Joy, Happiness	105(70.0)	12.73±8.94		59.68±12.16	
Sadness	6(4.0)	31.33±13.09		45.50±10.82	
Anxiety	32(21.3)	19.84±8.79	0.00	52.25± 9.70	0.00
Fear	4(2.7)	22.25±10.68		50.00±16.49	
Other	3(2.0)	24.66±1.52		38.66±18.00	
Spouse Support					
Yes	108(72.0)	13.61±8.61		60.05±11.05	
Sometime	31(20.7)	18.54±11.77	0.00	48.83±12.16	0.00
None	11(7.3)	25.27±12.01		48.00±15.36	
Violence by Spouse or Family					
Yes	9(6.0)	28.00±9.06	0.00	45.66±14.27	0.00
No	141(94.0)	14.68±9.67		57.56±12.24	

Table 3. The Relationship Between BDI and PAI Mean Scores of Pregnants

Scales	x̄+SD	Minimum	Maximum	
BDI	15.48±10.12	0	46	r= -0.62 p=0.00
PAI	56.85±12.64	21	84	

Table 3 shows the mean BDI and PAI scores of pregnant women. The mean score of Beck Depression Inventory administered to pregnant women was calculated as 15.48 ± 10.12, and the mean score of Prenatal Attachment Inventory was calculated as 56.85 ± 12.64. In the correlation analysis between the scales, it was determined that there was a statistically negative and significant (r= -

0.621 p<0.05) relationship between the Beck Depression Inventory mean score and the Prenatal Attachment Inventory mean score. As the bonding rates between mother and fetus increase in the prenatal period, there is a decrease in depressive symptoms in pregnant women.

DİSCUSSİON

The findings obtained from the study carried out to determine the prevalence of depressive symptoms in pregnant women and to determine the prenatal attachment level of pregnant women who experienced symptoms were discussed in line with the literature. Most of the pregnant women included in the study are between the ages of 21-25. In our study, most of the pregnant women were primary school graduates (41.4%), unemployed (73.3%), middle-income (82.7%), and living in a nuclear family (76.0%). While most of the pregnant women (73.3%) do not work in any job, their pregnant spouses mostly work as workers (37.3%), which can be attributed to the fact that agriculture and animal husbandry are the main sources of livelihood in rural areas. 35.3% of pregnant women experience their first pregnancies, it is thought that this situation is caused by the small average age of the pregnant women. Most of the women included in the study became pregnant voluntarily and have regular pregnancy follow-ups. Despite being a rural area, the fact that regular pregnancy follow-up is in the majority has been a pleasing result in terms of healthy continuation of pregnancy. 67.7% of the pregnant women who gave birth before gave birth normally. In our study, when the BDI cutoff score was accepted as 17, the prevalence of depressive symptoms was found to be 35.3%. When pregnant women in the world and in our country were examined, the rates of depression were found to be quite high in studies conducted with many scales (Lara et al., 2009; Lancaster et al., 2010; Ali et al., 2012; Lee, 2016). In Turkey, this rate is between 27.9% - 65.6% (Karaçam and Ançel ,2009;Tunç et al., 2012; Çelik et al., 2013; Dağlar et al., 2016; Bulut and Yiğitbaş, 2018;Yüksel et al.,2020). In studies conducted with BDI, the scale score was evaluated as above 17, and it was determined that the pregnant women showed depressive symptoms between

12.0% and 45.3% (Cebeci et al., 2002; Yanıkkerem et al., 2004; Sevindik, 2005; Çelik et al., 2013; Daştan et al. ., 2015; Bulut et al., 2018). When the world and Turkish literature findings were evaluated, the level of depression and depressive symptoms in our study was found to be similar to the studies conducted with the same and different scales in the literature, and showed a value closer to the studies conducted in Turkey. When the level of depression was examined in our study, it was found that most of the pregnant women had mild depression symptoms (32.6%). When the depression levels were evaluated, it was concluded that 32% of the pregnant women experienced minimal depressive symptoms, 24% moderate and 11.3% severe depressive symptoms. In the literature, more severe depression is seen in Turkey compared to other countries in the world (Ayele et al., 2016; Sevindik, 2005; Çalık and Aktaş, 2011; Çelik et al., 2013; Zaman et al., 2018; Bulut et al., 2018). Our study shows parallelism with studies conducted in Turkey. This may be due to the excess stress of pregnant women, the lack of opportunities in rural areas and the living standards they live. In our study, the mean BDI score was found to be 15.48±10.12 (min= 0 – max= 46). In studies in the world and in Turkey, mean BDI scores vary between 10±5.77 and 17.34±1.71 points (Ayele et al., 2016; Yanıkkerem et al., 2004; Cebeci et al., 2002; Daştan et al., 2015; Zaman et al., 2018; Çalıkoğlu et al., 2018). In terms of BDI score average, the literature findings show parallelism with our study. When the BDI score averages of the pregnant women are compared according to their socio-demographic characteristics, it is seen that pregnant women over 35 years of age, 5 years or more of marriage, unemployed, and among the employees working as workers, illiterate, unemployed, and farmer-shepherd and employed spouses. It was concluded that pregnant women who work as workers, have low income, smoke, live in an extended family experience more depressive symptoms. There are studies supporting our research result in the literature (Ayele et al., 2016; Çapık et al., 2015; Field ,2017; Çalıkoğlu et al., 2018). Bilgen (2020) in his study,reported that depression in pregnant women decreased as income and education level increased, similar to our study. In our study, when the

relationship between depressive symptom levels and obstetric characteristics of pregnant women was examined, those who were multiparous (4 or more pregnancies), had a normal delivery, did not have pregnancy follow-up, had an unplanned and unwanted pregnancy, suffered from violence by their spouse or family, who were upset when they heard about the pregnancy for the first time, and had spousal support during pregnancy. Similar to our study, in a study conducted in Jamaica, lack of spousal support, exposure to violence and financial difficulties were factors that increased the level of depressive symptoms in pregnant women (Bernard et al.,2018). There was no statistical difference in depression symptoms between pregnant women with a history of miscarriage and desired gender, and pregnant women in the 2nd and 3rd trimesters (gestational age). However, more depressive symptoms are seen in third trimester pregnant women compared to second trimester pregnant women. The reason for this may be anxieties about the upcoming birth, extreme fatigue due to the limitation of movement, sleep and appetite disorders, and a decrease in the quality of life (Marakoğlu and Şahsıvar, 2008). In a study conducted in parallel with our study, when the frequency of depressive symptoms was evaluated in the pregnant group according to trimesters, there was no statistically significant difference, and the score of the third trimester pregnant women was found to be significantly higher (Zaman et al., 2018). In our study, when the mean score of the Prenatal Attachment Inventory was examined, the pregnant women showed a high attachment score by getting 56.85±12.64 (min=21 – max=84). Our study results have similar rates with most studies conducted in the world and Turkey (Eswi and Khalil, 2012; Elkin, 2015; Aksoy et al., 2016). In our study, PAI scores of pregnant women were compared according to their socio-demographic and obstetric characteristics. When the mean scores of the Prenatal Attachment Inventory were compared according to the socio-demographic characteristics of the pregnant women, it was found that the pregnant women between the ages of 26-30 were at the highest level of attachment, but when the age between the ages of 21 and 35 was evaluated, the level of prenatal attachment decreased as the age increased. It can be said that this result is due to the fact that young mothers are more interested and willing about pregnancy. In our study, attachment scores decreased as the years of marriage of pregnant women increased. This situation can be explained by the decrease in interest and desire for pregnancy. It was determined that as the education level of pregnant women increased, prenatal attachment increased. It can be said that pregnant women with a high education level are more conscious in terms of pregnancy, birth and fetus, and thus attachment increases. Attachment levels were found to be high in pregnant women whose spouses and self-employed and those with a high income level were pregnant. Some studies in the literature in recent years support this result (Damato, 2004; Yılmaz and Beji, 2010; Bakır et al., 2014; Elkin 2015; Metin and Pasinlioğlu, 2016; Dağlı, 2017; Dikmen, 2018). But Ozkan et al. (2020)'s study, on the contrary, showed that pregnant women with a high level of education had a negative impact on their PAI scores. In our study, when the relationship between other factors affecting attachment and prenatal attachment was examined, it was determined that pregnant women living in a nuclear family and receiving spousal support during pregnancy showed higher prenatal attachment. Alan (2013) and Metin and Pasinlioğlu (2016) stated in their study that there is a significant relationship between perceived social support by the mother and prenatal mother-fetus attachment. Napoli et al. (2020) emphasized in their study that if the pregnancy is planned and desired, prenatal attachment will be increased with social support and these results support our study.

When we compared some of the obstetric characteristics of the pregnant women with the mean PBE, high attachment was found in the pregnant women who had pregnancy follow-up, had no previous children or did not give birth. Yılmaz and Beji (2010), Mutlu et al. (2015) and Kırca and Savaşer (2017) also found high attachment levels of primiparous pregnant women in their studies. Differently, in the study conducted by Badem and Zeyneloğlu (2021), Özkan et al. (2020) found that the prenatal attachment levels of pregnant women who were 3 and above were high. Different results were

found in studies on the number of pregnancies factor. In our study, cesarean section among pregnant women who gave birth before showed higher attachment than those who gave normal birth. Alan and Ege (2013) in their study in pregnant women with caesarean section as opposed to our studies have indicated that low binding. The trimester of pregnancy has been one of the factors that affect the binding of our study (p> 0.05). Apart from this, no relationship was found between the history of miscarriage, sex desire, smoking, employment status of the spouse and prenatal attachment.

In this study, a statistically negative correlation and a significant (r=-0.621 p<0.001) relationship was found between Beck Depression Inventory and Prenatal Attachment Inventory (Table 3). As the severity of depressive symptoms of pregnant women increases, prenatal attachment decreases. No study has been found in the literature indicating the relationship between the level of depressive symptoms and prenatal attachment. However, there are some studies that can support the result of this study. In a doctoral study, databases on attachment published in the last 7 years were compiled and it was determined that pregnant women with high attachment were better psychologically and their anxiety levels were low (Alhusen et al., 2008). In a study conducted with 32 women in the USA, it was found that low anxiety level is among the factors that increase prenatal attachment (Reed, 2014). In Turkey, Mutlu et al. (2015) stated that attachment before, during and after birth is affected only by mental problems. As a result of their study, Özdemir and Çevirme (2020) stated that as the anxiety levels of pregnant women increase, their attachment scores decrease and anxiety disorder affects maternal and fetal health negatively. When these studies were examined, it was seen that anxiety was mostly addressed in terms of anxiety, and it is known that anxiety, that is, anxiety, often accompanies depressive mood clinically.

Psychological disorders and mental symptoms experienced during pregnancy contribute negatively to both the mother's quality of life and the development of the baby as a healthy individual (Devam and Cantez, 2020). İt was seen in our study that depressive symptoms experienced by pregnant women significantly affected their attachment levels. In some studies, it is clear that a healthy prenatal attachment will make positive contributions to both pregnancy and postnatal maternal-fetal attachment and will no longer pose a threat to infant health and development (Branjerdporn et al., 2017). Our work is important in order to increase prenatal attachment, to have a healthier pregnancy and to raise healthier individuals.

CONCLUSIONS AND RECOMMENDATIONS

In the study conducted to determine the prevalence of depressive symptoms in pregnant women and the level of prenatal attachment, mild depressive symptom prevalence was found at a rate of 35.3%. At the same time, a high level of prenatal attachment was found in pregnant women. It was determined that as the depression symptom levels of the pregnant women increased, their prenatal attachment decreased significantly (negatively). Depression symptoms are observed at low levels in pregnant women with high prenatal attachment level. Women should be taken by health professionals both before pregnancy and during pregnancy with their psychological aspects as well as physical follow-up. Necessary family counseling training should be given by determining whether the pregnancy is the desired pregnancy. Factors that may adversely affect mother-infant attachment in the prenatal period and may pose a risk should be determined by screening or scale studies to be added during pregnancy follow-up, and necessary preventive and therapeutic measures should be taken practices should be made to improve and protect health. Thus, it should contribute to the increase of mother-baby attachment and to start and maintain the formation of love in this process. The results of our study are of a quality that can support pregnant women to carry out follow-up studies in which psychological effects are examined in more detail as well as physical effects.

Conflict of Interest: The authors have no conflict of interest between.

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