Research Article / Araştırma

Determination of prenatal attachment and anxiety levels in postterm pregnancy

Miad aşimi gebeliklerde prenatal bağlanma ve anksiyete düzeylerinin belirlenmesi

Özge Şehirli Kıncı[1], Buket Koparal[2], Mehmet Ferdi Kıncı[3], Mehmet Onur Arslaner[4], Ahmet Akın Sivaslıoğlu[5]

[1] Liv Hospital, Obstetrics and Gynecology Department, Ankara, Turkey, drozgesehirlikinci@gmail.com, 0000-0001-6439-0798

[2] Gazi University Medical Faculty, Psychiatry Department, Ankara, Turkey, bkt_svnc@hotmail.com, 0000-0003-1874-270X

[3] Muğla Sıtkı Koçman University Education and Research Hospital, Obstetrics and Gynecology Department, Muğla, Turkey drferdikinci@gmail.com, 0000-0002-6798-4281

[4] Muğla Sıtkı Koçman University Education and Research Hospital, Obstetrics and Gynecology Department, Muğla, Turkey, dr.onur.arslaner@gmail.com, 0000-0002-1573-8556

[5] Muğla Sıtkı Koçman University Education and Research Hospital, Obstetrics and Gynecology Department, Muğla, Turkey, akinsivaslioglu@gmail.com, 0000-0003-3711-0118

ABSTRACT

Introduction and Aim: To compare anxiety and attachment levels besides obstetric and sociodemographic characteristics between late term and non-late term pregnant. **Methods**: This cross-sectional descriptive study was conducted on 49 pregnant women who were over 41 weeks of pregnancy as late-term pregnancy group and 67 pregnant women who were 37-41 weeks of pregnancy were included in the study as control group. Data were collected using demographic and obstetrics data form, Pregnancy-Related Anxiety Questionnaire-Revised-2, and prenatal attachment scale. **Results**: The prenatal attachment scale median score of late term pregnant women was 68 (39-81) and the anxiety scale median score was 28 (13-55). The median score of the prenatal attachment scale for may not affect the non-late term pregnant women was 64 (30-84), and the median score of the anxiety scale was 26 (11-43). There was no statistically significant difference between the two groups in terms of scale scores (p>0.05). **Conclusions**: It was found that prenatal attachment and anxiety levels were not affected by the late term state of pregnant women in this study. In the presence of other conditions that positively affect attachment, although late term pregnancy is risky, it did not have an effect on attachment and anxiety.

ÖZ

Amaç: Term gebelik ve miad aşımı gebelik döneminde olan gebelerin obstetrik ve sosyodemografik özelliklerinin yanı sıra anksiyete ve bağlanma düzeylerini karşılaştırması. **Gereç ve Yöntem:** Kesitsel tanımlayıcı tipte planlanan bu çalışmaya, 41. gebelik haftasının üzerinde olan 49 gebe miad aşımı gebelik grubu ve 37-41 hafta arasında olan 67 gebe kontrol grubu olarak çalışmaya dahil edildi. Veriler, demografik ve obstetrik veri formu, Gebelikle İlişkili Anksiyete Ölçeği Revize formu 2 ve Prenatal Bağlanma Ölçeği kullanılarak toplanmıştır. **Bulgular**: Miad aşımı gebelik grubunun prenatal bağlanma ölçeği medyan puanı 68 (39-81) ve anksiyete ölçeği medyan puanı ise 28 (13-55) idi. Prenatal bağlanma ölçeğinin term gebe grubu için medyan puanı 64 (30-84), anksiyete ölçeğinin medyan puanı ise 26 (11-43) idi. Ölçek puanları açısından iki grup arasında istatistiksel olarak anlamlı fark izlenmemiştir (p>0.05). **Sonuç**: Çalışmamızda gebelerin miad aşımı olması durumundan doğum öncesi bağlanma ve kaygı düzeylerinin etkilenmediği bulunmuştur. Miad aşımı gebelikler riskli olmasına rağmen, bağlanmayı olumlu etkileyen diğer durumların varlığında bağlanma ve kaygı üzerine etkisi olmamaktadır.

INTRODUCTION

"Attachment" is defined as the ability to establish and maintain healthy relationships and it has a crucial place in the mother-baby relationship. According to the theory suggested by Bowlby, the foundations of attachment are laid in the first years of life and shape the later life of the individual (Bowlby, 1982). Studies have shown that attachment begins to occur in the prenatal period before the baby is born, and this bond formed between the mother and the fetus is called the "prenatal attachment" (Brandon et al., 2009; Cranley, 1981; Raval et al., 2001; Yeşilçınar et al.).

In recent academic studies, the interest in prenatal attachment has been increasing gradually because it affects the whole life, although it starts during pregnancy. There are many studies in the literature investigating the effect of attachment levels on both mother and fetus (Dubber et al., 2015; Ohoka et al., 2014; Ranson & Urichuk, 2008; YEŞİLÇINAR et al., 2021). Studies have reported that low prenatal attachment is associated with preterm birth, low birth weight, early termination of breastfeeding in the postpartum period(Alhusen et al., 2012), increased levels of postpartum depression and anxiety in the mother (Dubber et al., 2015), and deterioration in the mother-infant relationship (Della

Vedova, 2014). On the other hand, it is reported that a positive and high level of attachment reduces the mother's depression in the postpartum period, increases family attachment and affects the infant's spiritual development (Lucas, 2013; Yesilcinar et al., 2017).

Late-term pregnancy is defined as the absence of labor despite the completion of the 41st week from the last menstrual period. It is known that approximately 0.5-10% of all pregnant women have a post-term pregnancy (Chantry, 2011; GELEGEN et al., 2014; Olesen et al., 2003). Late-term and post-term pregnancy are important because it has fatal and maternal risks, and caesarean section, postpartum haemorrhage, infections and perineum lacerations and fetal loss are the leading risks (Chantry, 2011). It causes stress and anxiety for both parents and obstetricians (Galal et al., 2012). Due to the increased level of anxiety, mother-baby attachment may be affected. On the other hand, according to the studies; It seems possible that prenatal attachment will increase as the time spent by the fetus in the womb increases (Galal et al., 2012). Therefore, it was aimed to compare the prenatal attachment and anxiety levels compare the prenatal attachment and anxiety levels of late term pregnant women who have healthy pregnancies without any risk factors identified in their antenatal follow-up, with those who are not.

MATERIALS AND METHODS

Design of the study

This cross-sectional descriptive study was carried out in Muğla University Education and Research Hospital Obstetrics Department in Muğla-Turkey.

Inclusion/exclusion criteria

49 Turkish speaking pregnant women who were over 41 weeks of pregnancy (Late term pregnancy) and 67 native Turkish speaking pregnant women who were aged under 35, 37-41 weeks of uncomplicated pregnancies who are nullipar or multipar, uneducated about pregnany and complication and volunteered to participate were included in the study. The gestational week was calculated after the last menstrual period (LMP) was confirmed by the first trimester USG. The pregnant women who had a current diagnosis of anxiety disorders and/or other mental disorders or chronic diseases, multiple pregnancies, pregnancies with assisted reproductive technology were excluded.

Recruitment

Pregnant women were recruited from the Obstetrics Department. Recruitment took place between 1 September 2022- 15 December 2022. Pregnant women were informed about the aim of the research and written and verbal consent was obtained. Research data was collected through face-to-face interviews. It took approximately 20 minutes to complete the survey for each participant.

Socio-Demographic Data Form

It was prepared by the researchers to evaluate the participants' personal data such as education, age, employment status, presence of chronic disease, as well as obstetric data such as the number of pregnancies and births, gestational week and presence of risky pregnancy. The form consists of a total of 16 questions.

-Prenatal Attachment Scale

It was developed by Muller in 1990 (Muller, 1989). It is a Likert-type scale consisting of 21 items, in which each item is scored between 1 and 4. As the score obtained from the scale increases, the level of attachment also increases. The reliability of Turkish validity was done by Yılmaz et al (Yilmaz, 2013).

The Cronbach's alpha value in the Turkish validity study of the scale and in this study was found to be 0.84 and 0.90, respectively (YILMAZ DERELİ, 2013) .

-Pregnancy-related anxiety scale PRAQ-R2 revised version

It was developed by Van den Bergh in 1990 and revised by Kataja et al. (Kataja et al., 2017). It is a Likert-type scale consisting of 11 items and each item is scored between 1 and 5. As the score obtained from the scale increases, it is accepted that the level of anxiety in pregnancy is higher. The reliability of Turkish validity was done by Aksoy Derya et al (Derya et al., 2018). The Cronbach's alpha internal consistency coefficients ranged from 0.81 to 0.93 for the multiparous group and 0.87 and 0.94 for the primiparous group for complete PRAQ-R2. In this study, Cronbach's alpha values were 0.79 in primiparous women and 0.85 in multiparous women.

Statistical Analysis

The socio-demographic and obstetric characteristics of the pregnant women participating in the study were evaluated using percentages the comparison of the factors affecting the prenatal attachment and anxiety levels of late term group and non-late term group were analyzed with the Mann-Whitney U and Kruskal-Wallis tests (median and min-max values are given in accordance with these tests in the analysis), which are non-parametric tests since the data did not comply

with the normal distribution when evaluated with the Kolmogorov Smirnov test. SPSS 15 package program was used in the analysis of the data and the significance level was taken as 0.05 in the research. The minimum number of samples was determined by performing power analysis with the G-power program.

Results

The prenatal attachment and anxiety levels of late term and non-late term pregnant who participated in the study were compared according to their socio-demographic characteristics. A statistically significant difference was found between control and late term pregnant women in terms of age and parity (p<0.001). The median age of late term pregnants and non-late term pregnants were 27 and 30, respectively. Again, the median parity of late pregnants and non-late term pregnants were 1 and 3, respectively. There were no statistically significant differences in terms of study and social security status, pregnancy planning status and other socio-demographic and obstetric variables (p>0.05). The values of socio-demographic data between the groups are shown in Table 1.

The prenatal attachment scale median score of late term pregnant women was 68 (39-81) and the anxiety scale median score was 28 (13-55). The median score of the prenatal attachment scale for may not affect the non-late term pregnant women was 64 (30-84), and the median score of the anxiety scale was 26 (11-43). There was no statistically significant difference between the two groups in terms of anxiety scale scores and prenatal attachment scale scores (p>0.05)(Table 2).

Regardless of whether they are post term or not, when prenatal attachment and anxiety levels are evaluated by dividing them into groups in terms of socio-demographic and obstetric variables such as employment status, education level, whether the pregnancy is planned or not, and the number of children; it was determined that the prenatal attachment levels of pregnant women with high school and higher education level were higher (p<0.05), and no statistically significant difference was found between the other groups (Table 3).

DISCUSSION

This study aimed to compare the socio-demographic and obstetric characteristics of late term and non-late term pregnant women, as well as prenatal attachment levels and anxiety levels. Although there are various anxiety studies on late-term pregnant women in the literature, this survey is the first study conducted on late-term pregnant women. In this study, although there was a difference between the two groups in terms of

median age and number of pregnancies, no statistically significant difference was found in terms of prenatal attachment and anxiety levels.

Socio-demographic and obstetric characteristics affect prenatal attachment (Canlı & Demirtaş, 2021) It has been reported in the studies that prenatal attachment decreases as maternal age increases (Daglar & Nur, 2018; Damato, 2004; Potur et al., 2020). In the study by Dağlar et al., it was determined that the attachment levels of mothers aged 35 and above were higher than those under 35 years of age. This situation was related to the fact that young mothers-to-be are better prepared for the process (Daglar & Nur, 2018). Although the median age of non-late term pregnant women was found to be higher in this study, no difference was found between the two groups in terms of prenatal attachment levels. We associate this situation with the fact that the majority of both groups are made up of mothers under the age of 35.

There are studies in the literature reporting that the increasing number of children negatively affects mother-infant attachment (Daglar & Nur, 2018; Seimyr et al., 2009). Turan et al. reported that prenatal attachment levels in multigravida pregnancies were higher than in primiparous pregnancies (Turan et al.). Our study is also similar to studies reporting that there is no relationship between the number of children and prenatal attachment levels. In this study, the median number of children in the non-late term group was also found to be higher than the late term group. Considering both the older age of the mother and the high number of children, it is possible to expect lower prenatal attachment scores in non-late term pregnant women, the lack of significant difference between the two groups may be related to the fact that most of the pregnant women in this group had planned and voluntary pregnancies, and the absence of other risk factors that could disrupt mother-baby attachment. Studies have reported that planned pregnancy, the baby's sex being the expected sex, and the education level of the mother increase prenatal attachment (Yilmaz & Beji, 2013). In this study, it was found that prenatal attachment level was higher in mothers with high school and above education level, planned pregnancy and working; and the level of anxiety was not statistically significant.

Studies have reported that as the week of gestation increases, prenatal attachment also increases, attachment begins to be felt in the second trimester, when baby movements are clearly felt, and it occurs most strongly in the third trimester (Della Vedova et al., 2008; YILMAZ DERELİ, 2013) . In this study, all pregnant women were at the end of the 2nd trimester and in the 3rd trimester; median prenatal attachment scores were high in both groups. When the pregnant women were classified according to whether they were late term or not, no

Table 1: Socio-demographic characteristics of the groups

	Postterm (n:49)	Term (n:67)	Total (n:116)	p value
Age (year) Median (Q1-Q3)	27 (23-30)	30 (28-35)	29 (25-33)	**<0.001***
Parity (n) Median (Q1-Q3)	1 (1-2)	3 (2-4)	2 (1-3)	**<0.001***
Working status n(%)	7 (14.3%)	13 (19.4%)	20 (17.2%)	0.471
Planned pregnancy n(%)	40 (81.6%)	45 (67.2%)	85 (73.3%)	0.082
Complications or chronic diseases developed during pregnancy n(%)	10 (20.4%)	10 (14.9%)	20 (17.2%)	0.572

*p<0.05: Statistically significant difference

Table 2: Evaluation of Prenatal Bonding Scale and Pregnancy-Related Anxiety Scale Scores of the Study Groups

	Postterm (n:49)	Term (n:67)	Total (n: 116)	p value
Prenatal bonding scale score Median (Q1-Q3)	68.0 (53.0-71.0)	64.0 (52.0-73.0)	65.0 (53.0-72.0)	0.572
Pregnancy-related anxiety scale score Median (Q1-Q3)	28.0 (24.0-33.0)	26.0 (21.0-31.50)	27.0 (22.75-32.0)	0.092

Table 3: Evaluation of Prenatal Bonding Scale Score and Pregnancy-Related Anxiety Scale Score with Sociodemographic Variables

		Prenatal bonding scale score Median (Q1-Q3)	P value	Pregnancy-related anxiety scale Score Median (Q1-Q3)	p value
Educational Status	Primary and secondary school (n:53)	55.0 (49.0-65.0)	**<0.001***	27.0 (22.0-31.0)	0.729
	High school and above (n:63)	70.0 (63.5-74.5)		27.0 (23.0-33.0)	
Number of Children	≥2 (n:53)	61.0 (49.0-71.0)	0.017	26.0 (22.0-31.0)	0.379
	<2 (n:63)	69.0 (58.25-73.0)		27.0 (23.0-33.0)	
The status of pregnancy (planned/unplanned)	Planned (n:85)	66.0 (55.0-73.0)	0.083	27.0 (21.0-32.0)	0.528
	Unplanned (n:31)	63.0 (49.0-69.5)		27.0 (23.0-32.0)	
Working status of the pregnant woman	Employed (n:20)	75.5 (68.0-78.0)	**<0.001***	28.5 (22.5-36.75)	0.295
	Not working (n:96)	63.0 (51.75-70.0)		27.0 (22.75-31.25)	

*p<0.05: Statistically significant difference

statistically significant difference was found between the two groups. This suggested that prenatal attachment was strongly formed in both groups. Since both groups were in the period when attachment was formed and strengthened, whether there was an expiration date or not may not have had an additional effect on attachment. In addition, although late term pregnancy carries risks in itself, it may not have an effect on the attachment level, since it is not perceived as a negative situation by the pregnant women due to the low level of knowledge on this subject and does not cause any additional anxiety in the pregnant woman.

In the studies conducted, the relationship between anxiety levels and prenatal attachment is not clear. There are publications reporting that high level anxiety negatively affects prenatal attachment in pregnant women, as well as those reporting that it does not (Dubber et al., 2015; Gaffney, 1986; Hart & McMahon, 2006; Yarcheski et al., 2009). In this study, when the anxiety scores of late term and non-late term pregnant women were compared, no statistically significant difference was found between the two groups, and both groups had moderate anxiety scores. Late term pregnancy carries some risks for both mother and baby (KINCI et al., 2021). Although these risks are known by the physician, it may not have led to an increase in anxiety levels as the parents did not see the current situation as a risk. In the study, a determination of moderate anxiety score in both groups can be explained by the exclusion of pregnant women who are clinically thought to have anxiety disorders and the fact that moderate anxiety is a normal and expected situation during the pregnancy. In the analyses performed, no correlation was found between anxiety levels and prenatal attachment levels in both groups. This situation can be explained by the fact that risk factors such as the presence of risky pregnancy, social and environmental factors, presence of additional health problems, the poor socioeconomic level which may negatively affect the anxiety levels and mother-infant attachment of the mothers in this study, were found at similar levels and at low rates in both groups.

LIMITATIONS

The pregnant women who participated in the study were in 2nd and 3rd trimesters. The limitation of the study is that the pregnant women participating in this study were not in the same trimester.

CONCLUSIONS

In this study, it was found that prenatal attachment and anxiety levels were not affected by the late term state of pregnant women, and in the presence of other conditions (high risk pregnancies such as hypertensive disorders, gestational diabetes mellitus, etc) that positively affect attachment, although late term pregnancy is risky, it did not have an effect on attachment and anxiety. It is suggested to repeat the study in larger sample groups. It maybe suggested to evaluate whether women with late term pregnancy perceive their situation as risky, and their thoughts about their current pregnancies and delivery with qualitative studies. It may also be suggested to evaluate different trimester groups.

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