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Determination of Adaptation to Pregnancy and Anxiety Levels in Primiparous Pregnant Women and Affecting Factors

Primipar Gebelerde Gebeliğe Uyum ve Kaygı Düzeyleri ve Etkileyen Faktörlerin Belirlenmesi

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ABSTRACT

Objective: This study was conducted to determine primiparous pregnant women's adaptation to pregnancy, anxiety levels, and affecting factors.

Methods: This cross-sectional study was conducted with a total of 136 primiparous pregnant women in the second and third trimesters at the obstetrics policlinic of the state hospital in Turkey. The data for the study were collected through the "Personal Information Form," the "Prenatal Self-Evaluation Questionnaire (PSEQ)," and the "State-Trait Anxiety Inventory (STAI; SAI-TAI)."

Results: The average age of the participating pregnant women was 24.79 ± 5.04 years. The participants' total SAI, TAI, and PSEQ mean scores were found to be 38.53 ± 7.69, 42.38 ± 7.95, and 135.95 ± 25.43, respectively. The most important variables determining the participating pregnant women's adaptation to pregnancy were found to be TAI and SAI levels (β = 0,347, P < 0.001; β = 0,256, P = 0.001 respectively), participation in the childbirth preparation classes (β = 0,202, P = 0.004), and the longest place of residence (β = -0,195, P <0.004)

Conclusion: The primiparous pregnant women adapted to their pregnancy, and they suffered from anxiety during the antenatal period. Anxiety experienced during this period was the most important determinant of the woman's adaptation to pregnancy.

Keywords: Pregnancy, primiparous, adaptation to pregnancy, anxiety, nursing care

ÖZ

Amaç: Bu çalışma, primipar gebelerin gebeliğe uyum ve kaygı düzeylerini ve etkileyen faktörleri belirlemek amacıyla yapılmıştır.

Yöntemler: Kesitsel tipte olan bu çalışma, Türkiye'deki bir devlet hastanesinin kadın doğum polikliniğinde ikinci ve üçüncü trimesterlerindeki toplam 136 primipar gebe ile gerçekleştirilmiştir. Araştırmanın verileri "Kişisel Bilgi Formu", "Prenatal Kendini Değerlendirme Ölçeği (PKDÖ)" ve "Durumluk-Sürekli Kaygı Envanteri (DSKE; DKE-SKE)" aracılığıyla toplanmıştır.

Bulgular: Çalışmaya katılan gebelerin yaş ortalaması 24,79 ± 5,04 idi. Katılımcıların toplam DKE, SKE ve PKDÖ puan ortalamaları sırasıyla 38,53 ± 7,69, 42,38 ± 7,95, ve 135,95 ± 25,43, olup, gebelerin gebeliklerine uyum sağladıkları ve kaygı yaşadıkları belirlenmiştir. Araştırmaya katılan gebelerin gebeliğe uyumunu belirleyen en önemli değişkenlerin SKE ve DKE düzeyleri (sırasıyla β = 0,347, *P* < 0.001, β = 0,256, *P* = 0.001), doğuma hazırlık sınıflarına katılım (β = 0,202) ve en uzun süre yaşanan yer (β = −0,195, *P* = 0,004) olduğu bulunmuştur.

Sonuç: Primipar gebelerin gebeliklerine uyum sağladıkları ve antenatal dönemde anksiyete yaşadıkları görülmüştür. Bu dönemde yaşanan kaygı, kadının gebeliğe uyumunun en önemli belirleyicisi olmuştur.

Anahtar Kelimeler: Gebelik, primipar, gebeliğe uyum, kaygı, hemşirelik bakımı

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INTRODUCTION

Pregnancy, which initiates the transition to a new life stage, causes physiological and psychosocial changes in woman.[1] At this stage, the pregnant woman tries to get used to the developments specific to the pregnancy process, adapt to pregnancy, and get prepared for the motherhood role.[2] Adaptation to pregnancy and the gain of the motherhood role depend on a variety of psychosocial factors, which are important for a mother. These factors include many environmental, cultural, and individual variables. And of course, pregnant woman's ability to adapt to their pregnancy is related to their positive relationships with their husbands and family, their fear of childbirth being under control, their feeling ready for birth, and their expectations about their baby's health and future.[3] A limited number of studies have reported that pregnant women's acceptance of pregnancy is affected by various socio-demographic variables such as education level, employment status, income level, social security, and desire for pregnancy. Also, women who receive information about pregnancy are reported to adapt to pregnancy and motherhood better in this study.[4-6] While women try to adapt to the changes and developments experienced during pregnancy and manage the affecting factors, they also experience anxiety.[2] A meta-analysis including 221 974 pregnant women from 34 countries demonstrated that the prenatal anxiety symptoms were caused by various factors, and 18.2% (95% CI, 13.6-22.8) occurred in the first trimester, 19.1% (95% CI, 15.9-22.4) in the second trimester, and 24.6% in the third trimester (95% CI, 21.2-28.0).[7] Anxiety experienced during pregnancy could prevent women from maintaining a healthy pregnancy and cause negative labor outcomes. Several studies reported that anxiety increases the spontaneous preterm birth risk approximately by 2.5 times (OR = 2.46; 95% CI, 1.22-4.94)[8] and the low-birth-weight risk by 2 times (RR = 1.76; 95% CI, 1.32-2.33).[9] Anxiety has also been reported to cause depression and mood disorders in women in the postnatal period,[5] lower mental development scores and internalizing problems in children, and negative cognitive and psychological effects in adulthood.[10] Prenatal anxiety negatively affects not only the transition to motherhood during pregnancy but also the management of the variables affecting adaptation to pregnancy. In a study, prenatal anxiety was reported to increase women's fear of childbirth.[5] Fear of childbirth is also stated to lead to early onset of labor and an emergency cesarean.[11,12] Levels of fear of childbirth[10] and prenatal anxiety[13] are stronger in especially primiparous pregnant women.

Because pregnancy requires adaptation to many psychosocial changes and because pregnant women suffer from anxiety, it is important to determine pregnant women's adaptation to pregnancy, their anxiety levels, and related factors, especially in primiparous pregnant women during the antenatal period. Primiparous pregnant women are reported to have more difficulty adapting to pregnancy and motherhood[4] and experience more anxiety at this stage.[11] However, although a limited number of studies have provided data on adaptation to pregnancy[4] and anxiety development,[5,11] most studies have focused on only the maternal role of pregnant women,[10] their feelings of readiness for childbirth,[14] and their fear of childbirth.[11-16] It is important to note that an investigation of the maternal roles of primiparous pregnant women, the anxiety they experience during this period, and the affecting factors in tandem indicate a gap in the literature.

AIM

This study was conducted to determine the adaptation to pregnancy and anxiety levels in primiparous pregnant women.

Research Questions

The present study sought answers to the following questions:

1. How well do primiparous pregnant women adapt to pregnancy?
2. What are the anxiety levels of primiparous pregnant women?
3. Is there a correlation between primiparous pregnant women's adaptation to pregnancy and their anxiety levels?
4. What are the factors affecting primiparous pregnant women's adaptation to pregnancy and their anxiety levels?

METHODS

Design

This study was carried out using a descriptive and cross-sectional design.

Sample/Participants

This study was conducted in the obstetrics policlinic of the single state hospital. Power analysis was performed to calculate the sample size using G*Power (https://stats.idre.ucla.edu/other/gpower/). To determine the factors affecting women's adaptation to pregnancy based on Demirbaş and Kadıoğlu's[4] study, it was decided to include at least 124 pregnant women at a power of 85%, a standard deviation of 5%, and a margin of error of 5%. This study was completed with 136 primiparous pregnant women who were admitted to a state hospital for antenatal follow-up. The inclusion criteria were as follows: (1) being aged 18 or older, (2) being a primipara, (3) being in the second or third trimester of the pregnancy, (4) having a singleton pregnancy with a live fetus, (5) being able to speak Turkish, (6) being able to answer the questions, and (7) agreeing to participate in the study. The exclusion criteria were as follows: (1) not having a high-risk pregnancy, (2) having no communication difficulties or mental problems, (3) not having been diagnosed with a psychiatric disease.

Data Collection

The Personal Information Form, the "Prenatal Self-Evaluation Questionnaire (PSEQ)," and the "State-Trait Anxiety Inventory (STAI)" were used to collect the study data. The data were collected by meeting the participants face-to-face between July and December 2016. The data collection tools were administered to the pregnant women between 9:00 AM and 3:00 PM during work days at the hospital where the study was conducted. The interviews lasted 20-30 minutes.

The Personal Information Form

This form was developed by the researchers after reviewing the relevant literature.[3,4,9] The form includes 10 items questioning some sociodemographic characteristics of pregnant women (age, education level, employment status, duration of marriage, family type, longest place of residence, perceived income, and spouse's employment status, gestational age, and participation in the childbirth preparation classes).

Prenatal Self-Evaluation Questionnaire

The PSEQ was developed by Lederman in 1979 to assess the adaptation of women in the antenatal period to pregnancy and motherhood. The Turkish validity and reliability of the scale were performed by Beydağ and Mete in 2008.[17] The scale consists of 79 items rated on a four-point Likert scale ranging from 1 to 4.

The scale has the following 7 subscales: (1) concern for the well-being of self and baby, (2) acceptance of pregnancy, (3) identification of a motherhood role, (4) preparation for labor, (5) fear of helplessness and loss of control in labor, (6) relationship with mother, and (7) relationship with husband. The scores are to be obtained from the scale range between 79 and 316. Of the 79 items in the scale, 47 were reverse items, which are scored reversely. Higher total scores indicate poorer adaptation to pregnancy. The Cronbach's alpha reliability value was found to be 0.81 in the Turkish version of the scale[15] and 0.91 in the present study.

The State-Trait Anxiety Inventory

The STAI was developed by Spielberger et al in 1970 and adapted to Turkish in 1983 by Öner and Le Compte[18]. The 4-point Likert-type scale has 40 items equally divided into 2 subscales: state anxiety (anxiety about a specific event) and trait anxiety (anxiety as a personal characteristic). Scores to be obtained from each subscale range from 20 to 80. Higher scores indicate higher levels of anxiety. In the reliability study of the scale, Cronbach's alpha value was 0.94-0.96 for the State Anxiety Inventory (SAI) and 0.83-0.87 for the Trait Anxiety Inventory (TAI).[16] It was 0.809 for the SAI and 0.791 for the TAI in the present study.

Statistical Analysis

The study data were analyzed using the Statistical Package for Social Science Statistics software, version 24.0 (IBM Corp., Armonk, NY). The normal distribution of the data was tested using the Kolmogorov–Smirnov test. Numbers, percentages, arithmetic means, and standard deviation values were used for the descriptive statistics in the study. The student's *t*-test was used to compare the variables between the two groups. A 1-way analysis of variance was used for the comparison of three and more independent groups. Tamhane's T2 post hoc was used to determine the source of the difference between the groups. Pearson's correlation test was used to determine the relationships between groups and numerical variables. The multiple linear regression model was used to analyze the relationship between dependent variables. The findings were assessed with a 95% confidence interval at the $P < .05$ significance level.

Ethical Approval

This study followed the principles of the Declaration of Helsinki. The study protocol was approved by the Çukurova University Ethics Committee (Date: July 15, 2016, Number: 2016/12). An informed consent form was obtained from each participant. The purpose of the study was explained to the women participating in the study, and their written informed consent was obtained.

RESULTS

The mean age of the pregnant women participating in the present study was 24.79 ± 5.04 years. Of all the participants, 51.5% (70) were in the 18-23 age groups, 17.6% (24) were university graduates, and 89.7% (122) did not work. Approximately 1 out of every 2 pregnant women (53.6%, 73) had been married for ≤2 years, 4 out of every 5 pregnant women (82.4%, 112) lived with only their husbands, the city center was the longest place of residence for 64.0% (87), 67.6% (92) perceived their income level adequate, about 8.8% (12) husbands did not work, and 51.5% (70) attended childbirth preparation classes. The mean gestational age of pregnant women was 31.91 ± 6.84 weeks. Of them, 23.5% (32) were in the second trimester, and 76.5% (104) were in the third trimester (Table 1).

The SAI, TAI, and PSEQ total mean scores of the pregnant women were 38.53 ± 7.69, 42.38 ± 7.95, and 135.95 ± 25.43, respectively. The PSEQ subscale mean scores were 21.93 ± 6.07 for concern for the well-being of self and baby, 21.13 ± 5.78 for acceptance of pregnancy, 23.02 ± 5.27 for identification of the motherhood role,

Table 1. Descriptive Characteristics of Primiparous Pregnant Women

Characteristics	n	%
Age groups (years) (mean ± SD = 24.79 ± 5.04) (minimum–maximum = 18-38)		
18–23	70	51.5
24–29	39	28.7
≥30	27	19.8
Education status		
Primary school graduate	30	22.1
Secondary school graduate	43	31.6
High school graduate	39	28.7
University graduate	24	17.6
Employment status		
Employed	14	10.3
Unemployed	122	89.7
Duration of marriage (years)		
≤2	73	53.6
3–4	22	16.2
≥5	41	30.2
Family type		
Nuclear family	112	82.4
Extended family	24	17.6
Place of residence stayed longest		
Village/town/County	49	36.0
City	87	64.0
Income perception		
Income < expenditure	44	32.4
Income = expenditure	92	67.6
Spouse's employment status		
Employed	124	91.2
Unemployed	12	8.8
Participation in the childbirth education class		
Yes	70	51.5
No	66	48.5
Gestational age (mean ± SD = 31.91 ± 6.84) (minimum–maximum = 14–41)		
Second trimester	32	23.5
Third trimester	104	76.5

SD, Standard deviation.

17.74 ± 4.33 for preparation for labor, 20.41 ± 5.14 for fear of labor, 15.06 ± 5.27 for relationship with mother, and 16.65 ± 5.31 for relationship with husband (Table 2).

The total PSEQ score was found to have statistically significant differences in the variables of the level of education, the duration of the marriage, the longest place of residence, the employment status of the husband, and participation in the childbirth preparation classes ($P < .05$). While a statistically significant difference was determined between the mean SAI score and the pregnant women's education level, duration of marriage, husband's employment status, and participation in the childbirth preparation classes, the TAI mean score was found to have a statistically significant difference only with the husband's employment status ($P < .05$) (Table 3).

There was a statistically significant and positive correlation between the participating pregnant women's SAI and TAI mean scores and the PSEQ mean scores ($r = 0.480$, $r = 0.527$, $P < .001$, respectively) (Table 4).

A regression model was established with the variables affecting the pregnant women's adaptation to pregnancy, which was followed by the Backward Linear Regression analysis. In the presence of all the variables in the model created, it was found that living in the city center for the longest time and participating in the childbirth preparation classes decreased the participants' mean score by 10 points (B = –10.929, B = –10.290, respectively) and increased their SAI and TAI levels by 1 point (B = 0.846, B = 1.100, respectively, $P < .001$). The variables determining the pregnant women's adaptation to pregnancy most were as follows: their TAI and SAI levels ($\beta = 0.347$, $\beta = 0.256$, respectively), participation in the childbirth preparation classes ($\beta = 0.202$) and the longest place of residence ($\beta = -0.195$). It was determined that existing variables explained adaptation to pregnancy by approximately 42% (adjusted $R^2 = 0.423$) (Table 5).

DISCUSSION

This study determined the adaptation to pregnancy and anxiety levels in primiparous pregnant women. Pregnancy is an important stage in women's lives that requires adaptation to many physiological, psychological, and sociological variables.[1] Women who have difficulties adapting to this process and accepting their pregnancy are reported to have difficulty in the transition to pregnancy and motherhood.[3] In our study, the PSEQ total mean score of participating pregnant women was close to the average score of the scale. Unlike the present study, the study conducted by Demirbaş and Kadıoğlu[4], including both primiparous and multiparous pregnant women in all three trimesters, reported that the total mean score obtained by the primiparous women was higher and their adaptation to pregnancy was poorer. Compared to other studies in the literature, the participating pregnant women's adaptation to pregnancy was found to be better in the present study. Adaptation to pregnancy is affected by many psychosocial dynamics.[3] In addition, due to the nature of pregnancy, pregnant women experience different psychological effects that they should adapt to in each trimester.[19] The difference between the results obtained in our study and the results of other studies was considered to be caused by having primiparous pregnant women in their second and third trimesters of pregnancy in this study.

In our study, the SAI and TAI total mean score of participating pregnant women was close to the average score of the scale. Pregnant women are reported to experience various symptoms of anxiety during the prenatal period.[5] Rondung et al[11] reported high anxiety levels in primiparous pregnant women, which is in line with the results of our study. The study conducted by de Almeida Schiavo et al[20] with primigravida and multigravida pregnant women reported higher total SAI and TAI mean scores than those of the present study.

In our study, adaptation to pregnancy was found to be better in pregnant women who were university graduates, who had been married for ≤2 years, who resided in the city center, who attended childbirth preparation classes, and whose husbands worked. Demirbaş and Kadıoğlu[4] found that pregnant women who had high school/university education and those who received information about their pregnancy adapted to pregnancy better. Çıtak Bilgin[21] reported that the participants who attended the childbirth preparation classes adapted to pregnancy better than those who did not.

Table 2. State-Trait Anxiety Inventory and Prenatal Self-Evaluation Questionnaire Total and Subscale Scores of Primiparous Pregnant Women

Scales	Mean ± SD	Scale Minimum–Maximum Scores	Marked Minimum–Maximum Scores
STAI			
State Anxiety Inventory (SAI)	38.53 ± 7.69	20-80	23-59
Trait Anxiety Inventory (TAI)	42.38 ± 7.95	20-80	25-58
PSEQ			
Concern for well-being of self and baby	21.93 ± 6.07	10-40	10-37
Acceptance of pregnancy	21.13 ± 5.78	14-56	14-41
Identification of a motherhood role	23.02 ± 5.27	15-60	15-42
Preparation for labor	17.74 ± 4.33	10-40	10-32
Fear of labor	20.41 ± 5.14	10-40	10-35
Relationship with mother	15.06 ± 5.27	10-40	10-40
Relationship with her husband	16.65 ± 5.31	10-40	10-33
Total	135.95 ± 25.43	79-316	82-230

PSEQ, Prenatal Self-Evaluation Questionnaire; STAI, State-Trait Anxiety Inventory.

Table 3. S Comparison of the Descriptive Characteristics of the Primiparous Pregnant Women with Prenatal Self-Evaluation Questionnaire and State-Trait Anxiety Inventory Total Scores

	PSEQ		SAI		TAI	
Characteristics	**Mean ± SD**	**Test and *P*-Value (*t*/*F*)**	**Mean ± SD**	**Test and *P*-Value (*t*/*F*)**	**Mean ± SD**	**Test and *P*-Value (*t*/*F*)**
Age (years)						
18-23	134.72 ± 24.12	*F* = 0.655 *P* = .521	37.38 ± 6.71	*F* = 1.596 *P* = .212	42.07 ± 6.89	F = 0.335 *P* = .717
24-29	134.71 ± 26.25		39.28 ± 7.40		43.33 ± 8.90	
≥ 30	141.00 ± 27.84		40.44 ± 9.95		41.81 ± 9.18	
Education status						
Primary school graduate[a]	144.70 ± 27.13	*F* = 3.580 ***P* = .016** (d-c)	39.50 ± 7.90	*F* = 3.748 ***P* = .013** (c-b)	43.20 ± 7.44	F = 2.433 *P* = .068
Secondary school graduate[b]	140.16 ± 21.84		41.13 ± 7.01		44.53 ± 7.60	
High school graduate[c]	131.00 ± 23.71		36.46 ± ± 8.45		40.84 ± 9.14	
University graduate[d]	125.62 ± 28.00		36.08 ± 5.77		40.00 ± 6.17	
Employment status						
Employed	131.14 ± 33.69	*t* = −0.748 *P* = .455	36.50 ± 9.09	*t* = −1.047	39.21 ± 8.58	t = −0.899
Unemployed	136.52 ± 24.43		38.77 ± 7.52	*P* = .297	42.74 ± 7.38	*P* = .116
Duration of marriage (years)						
≤ 2[1]	129.86 ± 25.68	*F* = 4.860 ***P* = .009** (3-1)	36.21 ± 6.73	*F* = 8.092 ***P* < .001** (1-2, 1-3)	41.28 ± 7.33	F = 1.511 *P* = .244
3-4[2]	141.59 ± 26.17		40.45 ± 5.68		43.81 ± 8.13	
≥ 5[3]	143.82 ± 22.08		41.68 ± 8.90		43.56 ± 8.78	
Family type						
Nuclear family	135.09 ± 25.15	*t* = −0.863 *P* = .390	38.14 ± 7.57	*t* = −1.293	42.26 ± 8.13	*t* = −0.361
Extended family	140.04 ± 26.92		40.37 ± 8.12	*P* = .198	42.91 ± 7.19	*P* = .718
Place of residence stayed longest						
Village/town/County	141.85 ± 27.31	*t* = 2.049 ***P* = .042**	37.83 ± 7.67	*t* = −0.796	42.63 ± 7.37	*t* = 0.274
Province	132.65 ± 23.84		38.93 ± 7.71	*P* = .428	42.24 ± 8.30	*P* = .784
Income perception						
Income < expenditure	134.52 ± 23.08	*t* = −0.458 *P* = .648	38.38 ± 7.13	*t* = −0.157	42.88 ± 8.77	*t* = 0.510
Income = expenditure	136.66 ± 26.58		38.60 ± 7.13	*P* = .875	42.14 ± 7.56	*P* = .611
Spouse's employment status						
Employed	133.42 ± 24.38	*t* = −3.945	37.94 ± 7.29	*t* = −2.974	41.92 ± 7.84	*t* = −2.174
Unemployed	162.25 ± 21.60	***P* < .001**	44.66 ± 9.30	***P* = .003**	47.08 ± 7.91	***P* = .031**
Participation in the childbirth education class						
Yes	128.47 ± 22.87	*t* = 3.703 ***P* < .001**	37.12 ± 7.33	*t* = −2.231	41.31 ± 8.00	*t* = −1.623
No	143.92 ± 25.76		40.03 ± 7.82	***P* = .027**	43.51 ± 7.79	*P* = .107
Gestational age						
Second trimester	134.62 ± 23.88	*t* = −0.341 *P* = .734	37.84 ± 7.10	*t* = −0.581	43.43 ± 6.99	*t* = 0.857
Third trimester	136.38 ± 25.99		38.75 ± 7.88	*P* = .562	42.05 ± 8.23	*P* = .393

Tamhane's T2 post hoc analysis was conducted to determine the group that made a difference. Bold numbers indicate statistically significant differences at the *P* < .05 level.
ANOVA, Analysis of Variance; *F*, 1-way ANOVA test; PSEQ, Prenatal Self-Evaluation Questionnaire; SAI, State Anxiety Inventory; *t*, Independent-sample *t*-test; TAI, Trait Anxiety Inventory.

Table 4. Correlation between Prenatal Self-Evaluation Questionnaire and State Anxiety Inventory and Trait Anxiety Inventory Total Scores

	PSEQ	
Scales	***r***	***P***
SAI	0.480	**<.001**
TAI	0.527	**<.001**

Pearson correlation analysis was performed. Bold numbers indicate statistically significant differences at the *P* < .05 level.
PSEQ, Prenatal Self-Evaluation Questionnaire; *r*, Pearson's correlation coefficient; SAI, State Anxiety Inventory.

Of all the participating women, those who were secondary school graduates, who had been married for more than five years, whose husbands did not work, and who did not attend the childbirth preparation classes had higher SAI mean scores. The participants whose husbands did not work also had higher TAI mean scores. Sel et al[22] found that pregnant women with a higher education level experienced less anxiety. The results of a systematic review revealed that in low- and middle-income countries, having a higher education level and having an employed husband protected pregnant women from experiencing anxiety symptoms by 0.5 times (RR = 0.5; *P* = .03) and

Table 5. Multiple Linear Regression Analysis of the Current Variables, Anxiety and Pregnancy Adaptation of Pregnant Women

						95% CI	
Predictors	**B**	**SH**	β	***t***	***P***	**Lower**	**Upper**
Constant	65.484	13.489	–	4.855	**<.001**	38.798	92.170
Participation in the childbirth education class	−10.290	3.466	−0.202	−2.953	**.004**	−17.089	−3.377
Spouse's employment status	−11.929	6.198	−0.133	−1.925	.056	−24.191	0.333
Place of residence stayed longest	−10.929	6.198	−0.195	−2.925	**.004**	−17.250	−3.329
State Anxiety Scale	0.846	0.253	0.256	3.340	**.001**	0.345	1.347
Trait Anxiety Scale	1.110	0.240	0.347	4.632	**<.001**	0.636	1.584

$R = 0.666$; $R^2 = 0.444$; adjusted $R^2 = 0.423$; $F = 20.759$; $P < .001$. Backward linear regression analysis was performed. Bold numbers indicate statistically significant differences at the $P < .05$ level. Participation in the childbirth education class, 0 = No, 1 = Yes; place of residence stayed longest, 0 = Village/town/county, 1 = Province. β, standardized regression coefficient; B, nonstandardized regression coefficient; CI, confidence interval; SH, standard error; *t*, dependent-sample *t*-test.

0.3 times more (RR = 0.3; $P = .002$), respectively.[23] Although the literature seems to include no data on the relationship between the duration of the marriage and prenatal anxiety, a systematic review provides information about marriage and the relationship with the husband, which are influential factors in the marriage process. Available data report that not being married increases anxiety symptoms by 3.5-5.8 times, lack of a close partner's empathy and support by 2.0-9.4 times, exposure to close partner (domestic) violence by 2.11-6.75 times, and inadequate emotional support by 2.8-6.1 times more. It is also reported that having a gentle, reliable close partner protects the pregnant woman from anxiety symptoms approximately 0.5 times more (OR = 0.52; 95% CI = 0.3-0.9).[21] In addition, in several studies conducted on the issue, childbirth preparation classes are reported to reduce pregnant women's anxiety levels.[15,24] Anxiety during pregnancy is reported to lead to preterm birth,[6] low birth weight,[7] and various adverse neurodevelopmental consequences during childhood and even adulthood.[8] However, there is no data on the anxiety assessment of pregnant women during the prenatal period. Current practice does not allow the determination of the factors affecting anxiety experienced by pregnant women in this period, which prevents the interventions from being performed. The results obtained from our study suggest that the anxiety levels of primiparous pregnant women and the effective factors should be evaluated.

This study found that participating pregnant women's adaptation to pregnancy decreased as their SAI and TAI mean scores increased. The results of this study show that the anxiety experienced by primiparous pregnant women during pregnancy affects gestational adjustment negatively. The literature includes no studies that reported the relationship between anxiety experienced by pregnant women and their adaptation to pregnancy. Therefore, we could not compare our study results. The linear regression analysis performed with the variables affecting the pregnant women's adaptation to pregnancy demonstrated that the variables affecting adaptation to pregnancy most were TAI and SAI levels, participation in the childbirth preparation classes, and the longest place of residence. In a study, maternal antenatal anxiety has been associated with the preference for a cesarean section in pregnant women.[5] Parallel to our study, another study reported that primiparous pregnant women had more difficulties adapting to pregnancy and motherhood, and their education level and information about pregnancy affected the women's adaptation to pregnancy;[4] they were also reported to experience more anxiety at this stage.[11] Childbirth preparation classes are given to prepare pregnant women for pregnancy, childbirth, the postpartum period, and parenting.[25] The literature indicates that training given in childbirth preparation classes enables pregnant women to feel more ready for childbirth.[13] These trainings also improve the acceptance of pregnancy, the acquisition of the motherhood role,[10] and positive pregnancy experiences.[26] When the expecting mother experiences anxiety during pregnancy, the process of accepting the pregnancy may lengthen, and the mother-to-be may develop negative attitudes towards the pregnancy as a result of the physical and psychosocial problems she experiences. These problems in prenatal adaptation may negatively affect maternal, fetal, and neonatal health.

This study found that the participating primiparous pregnant women adapted to their pregnancy and experienced anxiety during this period, and that the anxiety they experienced during pregnancy decreased their adaptation to pregnancy. It was also determined that pregnant women's adaptation to pregnancy was affected by factors such as anxiety experienced during the antenatal period, living outside the city center for the longest period, and not attending childbirth preparation classes. Anxiety is a common mental health problem experienced by women during the antenatal period. Maternal anxiety negatively influences adaptation to pregnancy. Maternal anxiety and a lack of adaptation to pregnancy can negatively affect the health of the mother and baby. It is important to question and determine the effects of pregnancy on the mental health of women during outpatient follow-ups and refer pregnant women to psychiatric/psychological counseling centers when deemed necessary. Health professionals' determination of the psychological needs of pregnant women by each trimester and instruction on effective coping strategies may increase pregnant women's positive pregnancy and childbirth experiences. Nurses are key health professionals who are often in contact with women during the antenatal period. Therefore, nurses are recommended to provide individualized training and consultancy to adapt pregnant women to pregnancy and reduce their anxiety in the antenatal period. Nurses are recommended to consider factors that may affect adaptation to pregnancy and anxiety during antenatal follow-ups.

Limitations

This study has some limitations. Firstly, the design of the study is descriptive. Further studies using a longitudinal study design are recommended. Secondly, the study data were collected from primiparous pregnant women who were admitted to the single state hospital for antenatal follow-ups. Thus, the results of the study cannot be generalized to all primiparous pregnant women. It is recommended that further studies be conducted.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Çukurova University (Date: July 15, 2016, Number: 2016/12-55).

Informed Consent: Written informed consent was obtained from pregnant women who participated in this study.

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