

PREGNANTWOMEN'SPERCEPTIONSOFPRENATALATTACHMENTANDBREASTFEEDINGSELF-EFFICIENCY:A CROSS-SECTIONALSTUDY

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ABSTRACT

Purpose: The aim of this study is to assess pregnant women's perceptions of prenatal attachment and breastfeeding self-efficacy.

Material and Methods: The aim of this study is to assess pregnant women's perceptions of prenatal attachment and breastfeeding self-efficacy.

Results: It was found that the Prenatal Attachment Inventory (PAI) total mean score of the pregnant women was 54.44 ± 14.67 and the prenatal breastfeeding self-efficacy scale (PBSES) mean score was 68.32 ± 13.65 . There was a positive correlation between PAI and PBSES scores of the pregnant women (p<0.0001, r=0.817).

Conclusion: Some sociodemographic and obstetric characteristics of the pregnant women were determined to affect both prenatal attachment and prenatal breastfeeding self-efficacy levels.

Keywords: Breastfeeding self-efficacy, pregnant, prenatal attachment, prenatal

INTRODUCTION

Pregnancy is a one-of-a-kind moment in a woman's life, and it is a physiological and healthy life event that she goes through during her reproductive years. The woman's acceptance of pregnancy, fetus, and parenthood continues throughout the pregnancy, and she begins to consider what she should do to give birth to a healthy baby in her second trimester and experiences a sense of creative energy in this process (1). The first significant maternal sentiments for the child during pregnancy are referred to as attachment, and they provide the groundwork for attachment theory. Attachment is a powerful bond between two individuals, and attachment that begins during the prenatal period enables the baby to

continue his life with the mother reliably after delivery (2). Attachment, founded on a sense of trust between the baby and the mother, is a significant notion that develops long before birth and influences postnatal attachment (2, 3). Prenatal attachment is the cognitive, emotional, and behavioral attachment between a pregnant woman and the fetus. Infants of pregnant women with a high level of attachment during this period show healthier behaviors in a positive way (3).Feeling the baby's movements, recognizing him as an individual, and ultrasound follow-ups are all factors that increase the mother's attachment to her child throughout the prenatal period (4). Prenatal attachment is critical for the growth and health of the infant (5).

Socio-Demographic Characteristics (n =320)	n(%)	X±SD	Test and p value
Education level			
Primary school	127(39.7)	51.76±16.51	
Secondary school	75(23.4)	52.41±14.04	12.170*
High school	69(21.6)	53.79±12.13	0.001 [‡]
University	49(15.3)	65.38±7.41	
Employment status			
Employed	32(10)	63.50±10.37	3.755†
Unemployed	288(90)	53.43±14.75	0.001 [‡]
Perceptions of Income status			
Income less than expenses	65(20.3)	50.30±15.99	19.257*
Income equal to expenses	199(62.2)	52.90±14.17	0.001 [‡]
Income more than expenses	56(17.5)	64.67±9.65	
Gravidity			
1	124(38.8)	68.06±12.39	
2	67(20.9)	71.34±13.62	2.752*
3	56(17.5)	69.62±13.04	0.05 [‡]
4 and more	73(22.8)	65.01±15.55	
Status of planning pregnancy			
Planned	207(64.7)	71.51±12.76	5.953 [†]
Unplanned	113(35.3)	62.48±13.34	0.05 [‡]
Gestational Week			
20-27 weeks	46(14.4)	75.21± 9.89	3.775 [†]
28-40 weeks	274(85.6)	67.17±13.86	0.05 [‡]
Gender of infants			
Girl	124(38.8)	68.95±13.62	5.853*
Воу	176(55.0)	66.84±13.66	0.05 [‡]
Unknown	20(6.2)	77.50± 9.79	

 Table 1. Comparison of Prenatal Attachment Mean Scores and Socio-Demographic-Obstetric Characteristics of the

 Pregnant Women

Bold values indicate a statistically significant difference. X: arithmetic mean; SD: standard deviation. *: One-way anova test †: t Test ‡: Significance (p value)

The future of society continues with the existence of healthy individuals and the healthy birth of children. Breastfeeding is one of the most important factors in building a healthy individual and society for children. Breastfeeding, according to UNICEF, not only gives all children a better start in life but also leads to fewer healthcare expenses, healthier families, and a more competent workforce (6).To promote breastfeeding, WHO underlines that, although breast milk is the baby's first vaccination after birth, babies should only be breastfed for the first six months and up to two years (7). Breastfeeding self-efficacy shapes the mother's expectations, competence, behaviors, tasks to be undertaken, and confidence in breastfeeding. Four significant sources affect mothers' expectations of breastfeeding self-efficacy: Performance accomplishments (past breastfeeding experiences), vicarious experiences, verbal persuasion (others' encouragement), and psychological responses

Breastfeeding self-efficacy (anxiety, fatigue) (8). pertains to a mother's perceived ability to breastfeed her baby and the mother may be encouraged to breastfeed using interventions to promote breastfeeding throughout the prenatal period. The length of breastfeeding can be predicted. In their study, Şenol and Pekyiğit (9) determined that the training given during the prenatal period increased the pregnant women's perception of prenatal breastfeeding self-efficacy. In this context, assessing breastfeeding self-efficacy and providing training in the prenatal period may be beneficial in improving maternal self-efficacy in the transition to parenthood to evaluate interventions and assure the mother's orientation to breastfeeding (10).

In this case, starting midwife and nurse-led training and practices during the prenatal period contributes to the healthy progression of mother-newborn attachment, promotes breastfeeding and neonatal

Socio-Demographic Characteristics (n =320)	n(%)	X±SD	Test and p value
Education level			
Primary school	127(39.7)	66.14±14.89	
Secondary school	75(23.4)	65.45±12.52	12.920*
High school	69(21.6)	68.11±11.22	0.001 [‡]
University	49(15.3)	78.69±10.05	
Employment status			
Employed	32(10)	76.09±13.01	3.450 [†]
Unemployed	288(90)	67.46±13.46	0.05 [‡]
Perceptions of Income status			
Income less than expenses	65(20.3)	65.01±14.07	20.342*
Income equal to expenses	199(62.2)	66.62±12.98	0.001 [‡]
Income more than expenses	56(17.5)	78.21±10.95	
Gravidity			
1	124(38.8)	68.06±12.39	2.752*
2	67(20.9)	71.34±13.62	0.05 [‡]
3	56(17.5)	69.62±13.04	
4 and more	73(22.8)	65.01±15.55	
Status of planning pregnancy			
Planned	207(64.7)	71.51±12.76	5.953 [†]
Unplanned	113(35.3)	62.48±13.34	0.05 [‡]
Gestational Week			
20-27 weeks	46(14.4)	75.21± 9.89	3.775 [†]
28-40 weeks	274(85.6)	67.17±13.86	0.05 [‡]
Gender of infants			
Girl	124(38.8)	68.95±13.62	5.853*
Воу	176(55.0)	66.84±13.66	0.05 [‡]
Unknown	20(6.2)	77.50± 9.79	

 Table 2. Comparison of Socio-Demographic-Obstetric Characteristics and Prenatal Breastfeeding Self-Efficacy Mean

 Scores of The Pregnant Women

Bold values indicate a statistically significant difference. X: arithmetic mean; SD: standard deviation. *: One-way anova test †: t Test ‡: Significance (p value)

care, and contributes to the development of healthy persons in all aspects in the future (11). Furthermore, Demir and Taspınar (12) found that prenatal breastfeeding education significantly affects breastfeeding success and duration, highlighting the importance of early intervention. Similarly, Selvi et al., (13) demonstrated that targeted educational pregnancy interventions during enhance breastfeeding self-efficacy in expectant mothers. These studies support the notion that prenatal education can positively influence breastfeeding outcomes, emphasizing the originality of our research in exploring specific training methodologies and their impact on maternal self-efficacy. This study assessed pregnant women's perceptions of prenatal attachment and breastfeeding self-efficacy.

MATERIAL AND METHODS Study Design

The study was conducted as descriptive crosssectional type. The research was approved by the Faculty of Health Sciences Ethics Committee of Atatürk University (Date: 30.12.2016, No: 2016/12/05) and institutional permission from Erzurum Provincial Health Directorate were obtained before the study. All participants provided informed consent in accordance with the Declaration of Helsinki. They were guaranteed the right to withdraw from the research at any time and the confdentiality of their personal information.

Population and Sample of the Study

The population consisted of pregnant women (being

Table 3. The Distribution of The Possible Lowest and Highest Scores, Obtained Lowest and Highest Scores and Mean

 Scores of The Pregnant Women for Pai and Pbses/ Correlation between scales mean scores

Scale	Possible Lowest and Highest Scores of the scales	Lowest and Highest Scores they obtained from the scales	Mean scores of the scales, X±SD	
PAI	21-84	25-84	54.44±14.67	
PBSES	20-100	36-98	68.32±13.65	
Scales		PBSES		
PAI		0.817 [*]		
		0.000 [‡]		

X: arithmetic mean; SD: standard deviation. *p<0.0001 [‡]: Significance (p value) [#]: Spearman's correlation analysis.

over the 20th gestational week, having a single and healthy fetus, being open to communication, having no mental disorder, and having spontaneous conception) who came to the outpatient clinic for prenatal control examinations at a Maternity Hospital in Turkey between 01 February 2017 and 29 December 2017. In the calculation in the G.Power program, the number of samples for the One-Way Anova test was calculated as 280, taking into account the effect size (d = 0.25), 5% margin of error (α = 0.05), and 95% power (1- β = 0.95). Considering that the article might cause data loss, it started with a sample of 308 pregnant women with a 10% increase and ended with a sample of 320 pregnant women. The data were obtained by conducting face-to-face interviews. It takes 15-20 min to complete each questionnaire.

Data Collection Tools

A Personal Information Form, Prenatal Attachment Inventory (PAI), and Prenatal Breastfeeding-Self-Efficacy Scale (PBSES) were employed to collect data. The study data were collected with a 13question information form containing demographic and obstetric data. The PAI is a 4-point Likert-type scale with 21 items. Mary Muller developed the PAI in 1993 (14). The Cronbach's Alpha reliability coefficient of the scale was reported by Dereli Yılmaz and Kızılkaya Beji (15) to be 0.84. The Cronbach's alpha reliability coefficient of the scale was determined to be 0.95 in this study. The PBSES is a 5-point Likerttype scale with 20 items. Wells et al. (16) developed the scale in 2006 to determine the breastfeeding selfefficacy perceptions of pregnant women in the prenatal period. Aydın (17) conducted the scale's Turkish validity and reliability study in 2016, and

Cronbach's alpha coefficient was determined to be 0.85. The Cronbach's alpha reliability coefficient of the scale was determined to be 0.95 in this study.

Data Analysis

The SPSS 24.0 program was used to analyze the data. Percentage distributions, mean, t-test, One-Way ANOVA, and Pearson Correlation Analysis were used to assess the data. The Bonferroni test was applied as a further analysis in the One-Way ANOVA analysis.

RESULTS

Socio-demographic data of pregnant women are given in Table 1. Table 1 compares the sociodemographic and obstetric characteristics of the pregnant women with their prenatal attachment mean scores. It was found that the PAI mean scores of pregnant women with different levels of education, income, and employment status were significant (p<0.001). The PAI mean scores of the pregnant women increased as did their education levels and income levels increase. Furthermore, a significant difference was identified between the gravidity, previous pregnancy status, pregnancy planning status, gestational week, and gender of the infant and the PAI mean score (p<0.05; Table 1).

Table 2 compares the socio-demographic and obstetric characteristics of pregnant women with the PBSES mean scores. The PBSES mean scores differed significantly by employment (p<0.05), education and income status (p<0.001). Also, there was a significant difference between the planning status of the pregnancy, the gravidity, gender of the infant, and the mean score of the gestational week

and the PBSES mean score (p<0.05) were significantly different (Table 2).

The pregnant women included in the study had minimum and maximum PAI scores of 25 and 84, respectively, and their mean score was 54.44±14.67. The minimum and maximum PBSES scores were 36 and 98, respectively, and their mean score was 68.32±13.65 (Table 3).

The correlation between the scores of the pregnant women on PAI (*Mean*=54.44, SD=14.67) and PBSES (*Mean*=68.32, SD=13.65) was measured by Pearson correlation. A high, positive, and significant correlation was found between these variables (r(n)= .817, p=0.000; Table 3).

DISCUSSION

The PAI mean score of the pregnant women in this study was 54.44, which was moderate. The study's findings were similar to those of some previous studies (5, 15, 18). Contrary to the study, some studies report low PAI mean scores (4, 11).

The PBSES mean scores of pregnant women were 68.32. The present study is compatible with previous studies, reporting mean scores of 73.5, 68.08, and 73.4, respectively (19, 20). When the studies were examined, it was observed that pregnant women had high perceptions of breastfeeding self-efficacy.

The PAI mean score of the pregnant women increased as their education level and income status increased. Numerous studies have shown that attachment grows as pregnant women's education and income increase (21, 22). Based on these findings, it can be thought that pregnant women may become more conscious of and get attached to their babies as their education level rises. It can also be considered that the rise in the income level may have directed the attention of pregnant women to their babies without deviating to the socio-economic level. The present study indicated that the attachment levels of employed pregnant women were higher than those who were unemployed. In their research, Kartal and Karaman (18) found that employed pregnant women had a high level of prenatal attachment. Contrary to the study findings, some studies indicated that the prenatal attachment mean score of unemployed pregnant women was lower (4, 11). At the same time, the literature reported high levels of attachment in employed pregnant women (14, 21). The present study was found to be compatible with the literature. This may be attributed to disparities in

the social lives and economic freedom of employed pregnant women.

The study found that those who had a planned pregnancy had higher levels of attachment than those who did not. A few studies have also identified a significant correlation between planned pregnancy progression and attachment (3, 15, 23). The results of the present study are similar to the literature, suggesting that there is a positive correlation between the psychological preparedness for pregnancy, the healthy pregnancy process, and attachment levels of the pregnant woman.

As the education level of the pregnant women increased, so did their levels of PBSES. Further analysis revealed that the university graduate group caused the difference. In the study conducted by Aydın (17), it was stated that there was a significant correlation between the educational level and prenatal breastfeeding self-efficacy mean scores. When examining other studies, it was determined that the perceptions of PBSES were high in women with a high level of education, who were employed, and who had planned pregnancies (9, 20). Although the present study is compatible with the literature, it was observed that as mothers' education levels increased, they behaved more consciously, and their tendency to breastfeed increased.

Employed pregnant women had a higher mean score of PBSES than unemployed pregnant women in the study. Numerous studies have reported that as the increase in the socio-economic level of the mothers reduces anxiety, it also increases the perception of PBSES (9, 20).

A statistically significant difference was found between the pregnant women's income level and prenatal PBSES (p<0.001). Further analysis indicated that the group with more income than their expenses produced the difference. The study by Aydın (17) reported that pregnant women with a high income level had a higher perception of PBSES than pregnant women with a low income level. It is believed that providing pregnant women with a high or good income with easy access to health services and educational materials may be effective in breastfeeding self-efficacy.

It was observed that the gestational week and the gender of the fetus affected the perception of PBSES. Contrary to the study, they observed that some gestational weeks and gender affect the mean PBSES score (17, 20). Also, Baysal et al. (24)

reported in their study that the infant's gender did not affect breastfeeding. The difference between the results is considered to be associated with the characteristics of the pregnant women in the sample group. Further analysis of the infant's gender determined that the group who did not know the gender caused the difference. The high prenatal breastfeeding self-efficacy mean score of pregnant women who did not know the gender of the infant was thought to be associated with the fact that the infant's health condition was prioritized rather than gender.

When the correlation between the mean scores of the scales used in the study was assessed, it was found that there was a positive correlation between prenatal attachment and PBSE. As the attachment levels of the pregnant women increased, so did their PBSE.

CONCLUSION

It was determined that the prenatal attachment of the pregnant women was moderate, and their breastfeeding self-efficacy perceptions were at a reasonable level. Given the results of the study, it is recommended to provide counseling to pregnant women in the prenatal period. By identifying risky groups in the prenatal period of midwives and nurses providing health services to pregnant women and providing breastfeeding education by midwives and nurses in line with the needs of pregnant women, midwives, and nurses will reduce the anxiety of pregnant women in this period and increase their selfefficacy perceptions. The increased prenatal attachment is essential for the mother and infant to have a healthy postpartum period.

Practical Recommendations for Researchers and Practitioners

- Counselling and Support: Midwives and nurses should offer regular counselling sessions for pregnant women to discuss their concerns and provide emotional support.
- Tailored Education Programs: Develop and implement breastfeeding education programs that address the specific needs of pregnant women, particularly those identified as high-risk.
- Early Identification of Risk Groups: Utilize screening tools to identify pregnant women who may need additional support and education regarding breastfeeding.
- Ongoing Training for Healthcare Providers: Ensure that midwives and nurses receive continuous training on the latest breastfeeding

techniques and counselling methods to better support pregnant women.

• Enhancing Prenatal Attachment: Encourage activities that promote prenatal attachment, such as prenatal bonding exercises and parental education sessions.

By incorporating these practices, healthcare providers can enhance the prenatal attachment and breastfeeding self-efficacy of pregnant women, leading to improved outcomes for both mothers and infants.

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