



Alexithymia and Fetal Attachment in Expectant Fathers

Bebek Bekleyen Baba Adaylarında Aleksitimi ve Fetal Bağlanma

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ABSTRACT

Introduction: Although studies mostly focus on mothers, fathers also experience emotional problems and bond with their unborn babies in the antenatal period.

Objective: The aim of this study is to examine alexithymia and fetal attachment in expectant fathers.

Materials and methods: The study was carried out online via social media with 145 expectant fathers. Data were collected using Toronto Alexithymia Scale-20, and Paternal Antenatal Attachment Scale.

Results: The prevalence of alexithymia in expectant fathers was 24.8%. Alexithymia scores of university graduates had lower, while those with insufficient income and those who have two or more children were found to have less total attachment scores. A significant negative relationship was found between alexithymia scores and attachment scores.

Conclusion: Fathers with alexithymic characteristics tend to have less attachment to the fetus. Supporting fathers with alexithymic features may positively affect attachment to the fetus.

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ÖZET

Giriş: Çalışmalar çoğunlukla annelere odaklansa da babalar da antenatal dönemde duygusal sorunlar yaşar ve doğmamış bebeklerine bağlanırlar.

Amaç: Bu çalışmanın amacı bebek bekleyen baba adaylarında aleksitimi ve fetal bağlanmanın incelenmesidir.

Gereç ve Yöntem: Çalışma sosyal medya aracılığıyla ulaşılan 145 baba adayı ile online yürütülmüştür. Veriler Toronto Aleksitimi Ölçeği-20 ve Paternal Antenatal Bağlanma Ölçeği ile toplanmıştır.

Bulgular: Aleksitimi prevalansı baba adaylarında %24.8 bulunmuştur. Üniversite mezunlarının aleksitimi puanları, yetersiz gelire sahip olan ve iki ve daha fazla çocuğu olanların bağlanma puanları daha düşük bulunmuştur. Aleksitimi puanları ile bağlanma puanları arasında negatif yönde anlamlı ilişki bulunmuştur.

Sonuç: Aleksitimik özelliklere sahip baba adayları fetüse daha az bağlanma duygusuna sahip bulunmuştur. Bu özelliğe sahip babaları desteklemek fetal bağlanmayı olumlu etkileyebilir.

1. Background

Alexithymia, a Greek word, first used by Sifneos (1972), means “absence of words for emotions”(1). It is mostly defined as cognitive and emotional difficulties in recognizing, understanding, expressing, and regulating emotions (2). The early studies of alexithymia have emerged mainly as a result of studies with the clinical population and especially with psychosomatic patients (3). With the occurrence of alexithymia outside of the clinical population, studies conducted with healthy individuals have started to increase significantly (4,5). In studies, it is noted that the prevalence of alexithymia varies between 9-25% (4,6,7) and the prevalence is higher in men (6,8).

When the characteristics of individuals with alexithymia were examined, it is stated that the society they live in may affect gender

(9). In Turkish society, fathers are mostly responsible for making a living for the family while mothers are responsible for the care and raising of the baby. Being emotional and compassionate is kept outside of the fatherhood concept (10). Fathers tend to bond less with their babies compared to mothers (11).

Researchers agree that the basis of attachment begins during pregnancy (12,13). Although the early studies generally focused on attachment between mother and baby, there has been an increase in studies conducted on paternal antenatal attachment in recent years (14,15). Attachment feelings towards the unborn baby of the father are of great importance in establishing a healthy father-child relationship after birth (16). Healthy established relationships provide support to children’s behavioral and emotional

development (17). Therefore, there is a need to investigate factors that may be related to paternal antenatal attachment.

The aim of this study is to examine alexithymia and attachment to the fetus in expectant fathers during pregnancy. For this purpose, study questions include:

- (1) What is the prevalence of alexithymia in expectant fathers during pregnancy?
- (2) Is there a relationship between alexithymia and attachment to the fetus in expectant fathers?
- (3) Do socio-demographic variables such as age, educational status, income level, week of gestation, and number of children have any effect on alexithymia and attachment?

2. Materials and Methods

2.1. Design of research

The study, cross-sectional and analytical type, was carried out between 01 – 21 January 2021 (3 weeks) using an online Google survey form via social media (Facebook, WhatsApp, Instagram) to reduce the risk of face-to-face infection due to the Covid-19 pandemic.

2.2. Participants

The sample of the study was determined using the snowball sampling method, and the sample size was determined with the sample size calculation formula ($n = (t^2 \times Pq) / d^2$) in groups whose population is unknown (18). In a study by Mattila et al. (2007), the prevalence of alexithymia in men was reported to be 7.6% (19). Therefore, considering the prevalence of the event as 8%, a total of 112 fathers were determined to be sufficient for the study, and the study was conducted with 145 expectant fathers who were over the age of 18, using the internet, live their pregnant spouse, and did not have any diagnosed psychological problems.

2.3. Procedure and measures

Fathers were invited to the research by sharing the link to the survey form created online via Google Forms on social media accounts such as Facebook, WhatsApp, and Instagram. With the snowball sampling method, fathers were asked to share the survey with other fathers they knew.

Individual information forms containing the introductory characteristics of the fathers, the Toronto Alexithymia Scale (TAS-20), and The Paternal Antenatal Attachment Scale (PAAS) were used for the collection of data.

The individual information form consists of six questions on the age, educational status, income level, employment status, week of gestation, how many children they have, and whether there is any health problem during pregnancy of the spouses.

TAS-20 is a Likert-type self-reported scale scored between 1-5 and consists of 20 items, developed by Bagby, Parker, & Taylor (1994) and Bagby, Taylor, & Parker (1994) (20,21). It has three subscales which are difficulty identifying feelings (DIF), difficulty describing feelings (DDF), and externally-oriented thinking (EOT). High scores indicate a high level of alexithymia. Güleç et al. (2009) adapted the scale to Turkish society and found Cronbach's alpha value as 0.78 while for the subscales between 0.57-0.80 (22). Güleç and Yenel (2010) stated that considering the score of "59" as the high end for alexithymia is deemed appropriate for the cut-off point. In this study, the Cronbach alpha reliability coefficient was found to be 0.77 (23).

PAAS, developed by Condon (1993) and adapted into Turkish, measures the feelings, attitudes, and behaviors of expectant fathers about the fetus during the antenatal period and consists of 16 questions and 2 sub-dimensions (1. *Quality of attachment and 2. Time spent in attachment mode*) (24). Questions are scored between 1 and 5 points, with a total attachment score ranging from 16-80. As the scores increase, the attachment to the fetus also increases. In the adaptation of the scale to Turkish by Gulec Şatır and Kavlak (2021), Cronbach's alpha value of the scale was found to be 0.79 and for the sub-dimensions was 0.62-0.77 (25). In this study, it was found to be 0.78.

2.5. Statistical analyses

Analysis of the data was performed on the computer using the Statistical Package for Social Science (SPSS) 25 package program. Number, percentage, average, and standard deviation values were used for the evaluation of socio-demographic data. Skewness and kurtosis z scores are calculated for the evaluation of the normal distribution of the data (26). Accordingly, the Independent Sample t -test was used in comparisons of the two groups and the One-way ANOVA with Bonferroni's post hoc test in multiple comparisons, while Pearson's correlation coefficient was calculated to evaluate the relationship between scale scores. Results were evaluated at a 95% confidence interval and a significance level of $p < 0.05$.

2.6. Ethics

Necessary permission has been obtained from the authors to be able to use the scales. Approval was obtained from Ege University Medical Research Ethics Committee (24.09.2020-E.244144). The informed consent form was added to the online link and those who volunteered to participate in the study were asked to read and confirm before proceeding to the data collection forms.

3. Results

In the study, 46.9% of the fathers were between the age of 28-37, 62.8% of them were university graduates, 60.0% of them had a high income, and 61.4% of them did not have any children. A total of 50.4% of the spouses were in the last trimester of pregnancy and 86.9% of the spouses did not have any health problems in their pregnancy.

TAS-20 scale total score mean of the fathers was found to be 49.46 ± 10.40 , and the score of 24.8% of them was equal to and above the cut-off point of (≥ 59). The total score average of the PAAS was found to be 64.51 ± 7.19 , and the sub-dimension mean scores are given in Table 1.

When the alexithymia and attachment according to socio-demographic variables were examined, a statistically significant difference was found between educational status and TAS-20 total score mean ($p < 0.05$). TAS-20 scale total scores of university graduates were lower compared to primary/secondary school and high school graduates. A statistically significant difference was found between the income level and the number of children and the total scores of the PAAS ($p < 0.05$). Fathers with insufficient income and those who have two or more children were found to have less total scores on the scale (Table 2).

Table 1. Results of TAS-20 and PAAS in expectant fathers

	Mean \pm SD	Min-Max
TAS-20		
The total score of alexithymia	49.4 ± 10.4	28-84
Difficulty identifying feelings	13.9 ± 5.0	7-29
Difficulty describing feelings	11.4 ± 3.3	5-20
Externally-oriented thinking	22.0 ± 3.8	13-33
PAAS		
The total score of PAAS	64.5 ± 7.1	40-80
Quality of attachment	28.4 ± 5.0	14-40
Time spent in attachment mode	37.7 ± 3.5	23-45

SD: Standard deviation. Min.: Minimum Max.: Maksimum. TAS-20: Toronto Alexithymia Scale, PAAS: Paternal Antenatal Attachment Scale.

Table 2. Alexithymia and total attachment scores according to variables

Variables	n (%)	TAS-20		PAAS	
		Mean \pm SD	p	Mean \pm SD	p
Age group					
18-27	32 (22.1)	49.68 ± 10.81	0.98	64.93 ± 8.03	0.12
28-37	68 (46.9)	49.55 ± 9.98		65.50 ± 6.73	
38 and above	45 (31.0)	49.29 ± 10.63		62.71 ± 7.05	
Level of Education					
Primary/secondary ¹	18 (12.4)	59.55 ± 12.49	0.000	64.55 ± 7.26	0.49
High school ²	36 (24.8)	53.11 ± 9.77		63.02 ± 7.06	
University/College ³	91 (62.8)	46.02 ± 8.30		65.08 ± 7.22	
1-3*, 2-3*					
Income level					
Sufficient income ¹	87 (60.0)	47.98 ± 8.80	0.08	64.70 ± 7.26	0.01
Modarate ²	52 (35.9)	51.32 ± 12.58		65.17 ± 6.33	
Insufficient income ³	6 (4.1)	54.66 ± 7.91		56.00 ± 8.92	
1-3*, 2-3*					
Having living children					
None ¹	89 (61.4)	49.03 ± 10.31	0.79	65.07 ± 7.29	0.01
One child ²	46 (31.7)	50.34 ± 10.33		64.80 ± 6.30	
2 and more children ³	10 (6.9)	49.20 ± 12.35		58.10 ± 7.69	
1-3*					
Pregnancy week					
0-13 week	29 (12.4)	50.00 ± 11.15	0.88	62.95 ± 8.27	0.26
14-26 week	48 (37.2)	48.87 ± 10.43		63.71 ± 7.26	
27-41 week	63 (50.4)	49.68 ± 10.28		65.53 ± 6.72	
Health problems during pregnancy					
Yes (spotting, nausea)	19 (13.1)	47.68 ± 7.88	0.44	65.00 ± 7.26	0.76
No	126 (86.9)	49.65 ± 10.81		64.44 ± 7.28	

SD: Standard deviation, TAS-20: Toronto Alexithymia Scale, PAAS: Paternal Antenatal Attachment Scale.

When the relationship between the scales was examined, a significant negative correlation was found between the TAS-20 and TAS-1 sub-dimension and the mean scores of the PAAS ($p < 0.05$) (Table 3).

Table 3. The relationship between alexithymia, subscales and total attachment

	PAAS	
	r*	p
TAS-20	-0.168	0.043
DIF	-0.177	0.033
DDF	-0.135	0.105
EOT	-0.049	0.562

*Pearson's correlation test, DIF: Difficulty identifying feelings, DDF: Difficulty describing feelings, EOT: Externally-oriented thinking.

4. Discussion

Although pregnancy and transition to parenthood are described as natural transition periods in life, the changes experienced and adaptation to the new process can cause stress and bring deeper changes compared to all other developmental stages (27). The literature supports that alexithymia is strongly associated with stressful life events (28,29).

In this study, the prevalence of alexithymia was found in 24.8% of the fathers during pregnancy. The prevalence of alexithymia in men ranges from 9.4% to 17.0% (28,30). The prevalence can be said to be higher in men preparing for fatherhood. During pregnancy, fathers may experience excitement, anxiety, and stress (31). This, in turn, may have caused them to have difficulty recognizing and expressing their feelings. In the study by Gilanifar and Delavar (2016) investigating alexithymia in pregnant women, the rate was found to be similar to the rate in this study with 27.9% (32) However, the TAS-20 scale total score mean of the fathers was found to be 49.4 ± 10.4 . In their study evaluating the alexithymia, Karukivi et al. (2015) found that the total score average of TAS-20 was 42.0 ± 9.6 in fathers and 39.8 ± 9.5 in mothers, between 18 and 20 weeks of gestation (28). Although studies during pregnancy are limited, it is believed that the level of alexithymia in parents in this process is similar and they may experience similar emotional difficulties.

Another finding in the study is that fathers with high education levels have lower alexithymia scores. Studies conducted with different populations also support that a low level of education is similarly associated with alexithymia (4,33). The higher the education levels individuals have the more ability they may have gained to recognize and express their feelings better.

In the study, a relationship was found between alexithymia and attachment to the fetus. Fathers with alexithymic features, especially with difficulties in identifying their feelings were also less attached to their unborn babies. Although studies on attachment have been conducted mostly with adolescents and adults, individuals with insecure, anxious, and avoidant attachments were reported to have alexithymic features (33,34). Obeid et al. (2019) stated that higher alexithymia was significantly associated with a lower secured attachment style (35). In the literature, alexithymia has been detailed to have an effect on adult attachment (33,34). And this study can be said as a new finding that alexithymia also negatively affects attachment to the fetus.

Another important finding of the study is the factors affecting attachment. The antenatal attachment scores of the expectant fathers with sufficient income and those with no children were found to be higher. In the study of Ustunsoz et al., (2010), similarly, fathers working and fathers with the first pregnancy experience were found to have higher attachment scores (11). Total attachment scores of Portuguese men, who would become parents for the first time, were also found to be higher (15). Türkmen and Güler (2021) stated that fathers who have no other children were found to have significantly higher levels of attachment to the fetus (14). Camarneiro et al. (2017) stated that in men who are about to become parents for the first time, levels of global attachment and intensity of preoccupation were significantly higher when compared to men with one or more children, but attachment quality did not vary according to the number of previous children (15). We could not find any study that mentioned the difference in attachment between those who have one or more children.

As in many societies, one of the important roles of the father in Turkish society is providing for the livelihood of the house. A good economic status can make the father feel comfortable. Therefore, it may have affected the attachment positively with the idea that as a father he can easily meet the needs of the baby. Those with poor economic status may have less attachment to the fetus, as their focus would be more on concerns such as the care and needs of the baby as well as making a living for the family. Fathers who have never had children and will experience this experience for the first time may wonder and dream more about their baby. The low attachment scores of those who have two or more children may be because fathers may be occupied with the development or needs of their current children.

There are few studies on this subject in the literature. Studies mostly focused on mothers. The main strength of this study is that

our results contribute to a small number of data on this subject. Also, the results of this study will be raising awareness among health personnel that expectant fathers may have mental problems in the antenatal period.

This study also has some limitations. Firstly, TAS-20 is a scale based on self-report. The presence of alexithymia has not been clinically tested. Secondly, since the study was conducted only on fathers using the Internet, there were more fathers with university degrees and high-income levels. Therefore, the results cannot be generalized to all expectant fathers.

5. Conclusion

This study has revealed some main outcomes. The presence of alexithymia was detected in one of every four fathers. Fathers with features of alexithymia have a lower attachment to the fetus. While educational level affects alexithymia, income level and having children affect attachment.

In the antenatal period, in order to provide family-centered care, not only the mental health of the pregnant woman should be evaluated but also the health status of the father. Fathers found to be at risk through alexithymia screening should be directed to seek professional support from experts. In this way, the emotional connection they have with the fetus can be increased. This, in turn, can be the basis for establishing a healthy relationship with the baby after childbirth.

Knowing the factors that may affect the attachment of the father to the fetus in the antenatal period is important in the healthy emotional and behavioral development of the child. Health professionals should provide a close and reassuring environment in which the father can easily express his feelings in order to ensure that the father is aware of his feelings and his feelings about the expected baby during the antenatal period. Ensuring the participation of fathers in antenatal care, and their involvement in the pregnancy process by accompanying their spouses in the birth preparation classes may positively affect attachment to the fetus. It is recommended to test the studies by conducting them with a larger sample group and to evaluate the father-infant attachment after birth by performing a follow-up.

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DGŞ: Research design, literature review, data collection, data analysis, manuscript writing.

OK: Literature review, data collection, final checks.

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