

# The effect of infant temperament on mothers' sexual satisfaction

## Bebek mizacının annelerin cinsel doyumları üzerine etkisi

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### ABSTRACT

**OBJECTIVE:** The aim of this study is to examine the effects of an infant's temperament on a mother's sexual satisfaction.

**MATERIAL and METHODS:** This descriptive and correlational study was conducted between 03/15/2024–07/01/2024. The study included 187 mothers who were reached by the snowball sampling method through the online platform. The inclusion criteria were voluntary participation in the study, being literate, having a baby between the ages of 0 and 1, having an active sexual life, having a cell phone and the ability to use social media platforms such as WhatsApp/Instagram. Data were collected using the "Sociodemographic Questionnaire Form", "New Sexual Satisfaction Scale-Short Form (NSSS-SF)" and "Infant Behavior Scale (IBS)".

**RESULTS:** The mean age of the mothers was 28.84±5.37 years. The mean score of the Positive Affect sub-dimension of the BIS was 28.84±5.37, while the mean score of the Negative Affect sub-dimension of the BIS was 71.44±19.63. The mean total score of NSSS-SF was 58.24±16.85. NSSS-SF relationship quality subscale mean score was 19.89±5.44, harmony with partner subscale mean score was 10.38±2.59 and sexual pleasure subscale mean score was 10.85±4.34. A low level negative significant correlation was found between the mean score of "IBS" negative affect subscale and the mean scores of "NSSS-SF" scale relationship quality and harmony with partner subscales.

**CONCLUSION:** The findings showed that there was a significant relationship between the particularly negative effects on infant temperament and maternal sexual satisfaction. It turned out that infants with negative temperament can reduce a mother's sexual satisfaction. Nurses can develop interventions that support a mother's mental health and sexual satisfaction by integrating infant temperament and maternal sexual health into routine care. Furthermore, promoting open communication between parents about sexual health and parenting challenges may help reduce negative effects on sexual satisfaction.

**Keywords:** infant temperament, sexual satisfaction, sexual behaviour

### ÖZ

**AMAÇ:** Bu çalışmanın amacı, bebeklerin mizacının annelerin cinsel doyumları üzerindeki etkilerini inceleyerek, annelerin cinsel yaşamında bebek mizacının oynadığı rolü ortaya koymaktır.

**GEREÇ ve YÖNTEMLER:** Bu tanımlayıcı ve ilişkisel çalışma 15/03/2024–01/07/2024 tarihleri arasında yürütülmüştür. Çalışmaya, online platform üzerinden kartopu örnekleme yöntemi ile ulaşılan 187 anne dâhil edilmiştir. Dâhil edilme kriterleri; çalışmaya gönüllü olarak katılmak, okuryazar olmak, 0–1 yaş arasında bebeği olmak, aktif bir cinsel yaşama sahip olmak, cep telefonuna ve WhatsApp/Instagram gibi sosyal medya platformlarını kullanma becerisine sahip olmaktır. Veriler "Sosyodemografik Anket Formu", "Yeni Cinsel Doyum Ölçeği-Kısa Formu (YCDÖ-KF)" ve "Bebek Davranış Ölçeği (BDÖ)" kullanılarak toplanmıştır.

**BULGULAR:** Annelerin yaş ortalaması 28,84±5,37'dir. BDÖ-Pozitif Etkilenim alt boyut puan ortalaması 28,84±5,37 iken BDÖ negatif etkilenim alt boyut puan ortalaması 71,44±19,63'tür. YCDÖ-KF toplam puan ortalaması 58,24±16,85'tir. Ayrıca, YCDÖ-KF ilişki kalitesi alt boyut puan ortalaması 19,89±5,44, partnerle uyum alt boyut puan ortalaması 10,38±2,59 ve cinsel haz alt boyut puan ortalaması 10,85±4,34'tür. "BDÖ" negatif duygulanım alt boyutu puan ortalaması ile "YCDÖ-KF" ölçeği ilişki kalitesi ve partnerle uyum alt ölçekleri puan ortalamaları arasında düşük düzeyde negatif yönde anlamlı bir ilişki bulunmuştur.

**SONUÇ:** Bulgular, bebek mizacının özellikle olumsuz etkileri ile annenin cinsel tatmini arasında önemli ilişki olduğunu göstermiştir. Negatif mizaca sahip bebeklerin, annelerin cinsel doyumlarını azaltabileceği ortaya çıkmıştır. Hemşireler, bebek mizacı ve annenin cinsel sağlığını rutin bakımına entegre ederek annelerin zihinsel sağlığını ve cinsel tatminini destekleyen müdahaleler geliştirebilirler. Ayrıca, ebeveynler arasında cinsel sağlık ve ebeveynlik zorlukları hakkında açık iletişimi teşvik etmek, cinsel tatmin üzerindeki olumsuz etkileri azaltmaya yardımcı olabilir.

**Anahtar Kelimeler:** bebek mizacı, cinsel doyum, cinsel davranış

## INTRODUCTION

Pregnancy is a period marked by significant hormonal and physical changes in women. Following childbirth, rapid changes occur during the postnatal period, which can impact women's sexual health.<sup>[1]</sup> Sexual health is defined by the World Health Organization.<sup>[2]</sup> (WHO, 2023) as 'a state of physical, emotional, mental, and social well-being in relation to sexuality, and not merely the absence of disease, dysfunction, or disability.' It plays a crucial role in women's

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**Geliş/ Received:** 24.08.2024

**Kabul/ Accepted:** 06.09.2024



lives and is influenced by various factors.<sup>[3]</sup> Evidence suggests that physiological and psychological changes associated with pregnancy and childbirth, experiences common among women of reproductive age, can affect sexual functioning.<sup>[4,5]</sup> Sexual dysfunction is prevalent, with rates reported as 45.6–48.3% in Türkiye,<sup>[6]</sup> 17–50% in the USA,<sup>[7]</sup> and 50–69.3% in Australia.<sup>[8]</sup>

Challenges in women's sexual lives often arise during the postpartum period due to physiological changes.<sup>[9]</sup> Fuentealba-Torres et al. reported that 88.7% of women experience low vaginal lubrication postpartum, which can lead to dyspareunia.<sup>[4]</sup> Another study highlighted that postpartum dyspareunia correlates with body image dissatisfaction, hormonal changes related to breastfeeding, and decreased vaginal lubrication.<sup>[10]</sup> Research on breastfeeding women indicated that ongoing breastfeeding is associated with reduced vaginal lubrication, increased pain during intercourse, and longer time to resume sexual activity.<sup>[11]</sup> Moreover, the abrupt hormonal shifts in the postpartum period are linked to increased risk of postpartum depression, which often diminishes sexual desire in affected women.<sup>[9,12]</sup>

In the literature, it is reported that various birth-related factors such as the type of delivery, number of births, and episiotomy, alongside the onset of lactation and changes in body image during the postpartum period, significantly impact women's sexuality.<sup>[1]</sup>

A study determined that the marital adjustment of individuals without an infant was better than those with an infant.<sup>[13]</sup> It has been reported that temperamental difficulties experienced during infancy affect the mother's mental state in the postpartum period.<sup>[14]</sup> However, it is not only the mother who is affected, but also the father. In a study conducted in the USA, it was reported that difficult infant temperament affected the father's mental state, leading to increased stress for both parents.<sup>[15]</sup> So that hormonal changes and physical fatigue resulting from infant care are also believed to affect maternal sexual well-being. Furthermore, the care and temperament of the infant are intertwined with maternal sexuality, with studies exploring this relationship through attachment theory, a key framework for understanding interpersonal dynamics.<sup>[16]</sup> Attachment theory suggests that early mother-infant interactions influence individuals' relationship patterns throughout life. The study by Nieto et al. revealed that maternal postpartum stress factors may contribute to challenging infant temperament. Both mother and father are either affected by or contribute to difficult infant temperament.<sup>[17]</sup> However, while men are more comfortable separating paternal and

partner roles, women experience more sexual difficulties in this situation.<sup>[18]</sup> Understanding sexual issues in the postpartum period, a natural phase for women, is crucial for addressing challenges that may impact sexual health and influence infant temperament. Therefore, this study was conducted to determine the effect of infant temperament on mothers' sexual behaviors.

## MATERIAL and METHODS

### Study design

This descriptive and correlational study was conducted between 03/15/2024–07/01/2024.

### Purpose of the Study

This study was aimed to determine the effect of infant temperament on mothers' sexual behaviour.

### Population and Sampling

The study included mothers who were reached by snowball sampling method through the online platform between 03/15/2024–07/01/2024, who were literate in Turkish, had a mobile phone, used social media platforms (WhatsApp or Instagram) and volunteered to participate in the study. According to the snowball sampling method, firstly, a suitable mother known to the researchers was reached and informed about the study. With the help and suggestion of the mother who agreed to participate in the study, the data collection process was completed by reaching other mothers.

### Research Questions

The specific objectives of our study were:

- To assess maternal perceptions of infant temperament.
- To evaluate levels of sexual satisfaction among mothers.
- To assess the relationship between infant temperament and mothers' sexual satisfaction in the first year after birth.

### Inclusion Criteria

1. Volunteering to participate in the study.
2. Being literate.
3. Having an infant between the ages of 0–1.
4. Having an active sex life.
5. Having a cell phone and being able to use social media platforms (WhatsApp/ Instagram).

## Exclusion Criteria

1. Not volunteering to participate in the study.

## Data Collection Tools

The data were collected using the “Sociodemographic Form”,<sup>[1,17]</sup> “New Sexual Satisfaction Scale Short Form”<sup>[19]</sup> and “Infant Behavior Scale”.<sup>[20]</sup>

*Sociodemographic Form:* This form was developed by the researchers and comprises eight questions designed to assess the sociodemographic characteristics of the mothers.

*The New Sexual Satisfaction Scale Short Form (NSSS-S):* The Turkish validity and reliability of the scale were established by Okçi, Saatçioğlu, and Çelikel in 2016.<sup>[19]</sup> The scale comprises 12 items divided into three sub-dimensions. It utilizes a 5-point Likert scale, with scores ranging from 5 (very satisfied) to 1 (not at all satisfied). The NSSS includes three subscales. A higher total score on the NSSS-S indicates a greater level of sexual satisfaction. The Cronbach’s alpha coefficient reported by Okçi et al. was 0.91.<sup>[19]</sup> In the current study, the Cronbach’s alpha coefficient is 0.87.

*Infant Behavior Questionnaire –Very Short Form (IBQ-VSF):* The validity and reliability study of the scale was conducted by Fazlıoğlu and Yalçinkaya Alkar in 2023.<sup>[20]</sup> The scale consists of 28 items and 2 sub-dimensions. The sub-dimensions of the scale are as follows: “Positive Affectivity” ve “Negatif Affectivity”. The scale is a Likert-type scale ranging from 1 to 7 with an additional “not suitable” response option. An increase in the scores of the scale’s sub-dimensions indicates that the effect related to that sub-dimension is high. Cronbach’s alpha value was 0.84.<sup>[20]</sup> The Cronbach’s alpha value of the current study is 0.89.

## Data Collection

Following the approval of the ethics committee, the data were collected online via social media platforms (WhatsApp, Instagram) by sending the link to the online survey form to the mothers. After the participants were informed about the purpose and content of the study at the beginning of the online questionnaire, they were asked to voluntarily participate in the study and their consent was obtained. Then, the survey items will be tabbed and the mothers will be asked to read and answer the questions. After the mothers gave their consent, the data collection form and scale items appeared on the mothers’ screens respectively. If the mothers left the study at any stage, the data were not recorded. After all the survey questions were completed, the data belonging to the mother were sent to the researchers with the ‘Send’ button. Sociodemographic information of the mothers was not recorded.

## Data Analysis

Statistical analysis of the study data was performed using the IBM Statistical Package for Social Sciences (SPSS) program version 26.0 software. The Kolmogorov-Smirnov test was used to assess the normality of numerical variables. Descriptive statistics included arithmetic mean and standard deviation for normally distributed numerical variables, median, minimum, and maximum values for non-normally distributed data, and frequency and percentage values for qualitative variables. The relationship between independent and dependent variables was tested using Pearson correlation.

## Ethical Considerations

The study was performed according to the “Declaration of Helsinki”. Prior to commencing the study, formal approval was secured from the Başkent University Institutional Review Board and Ethics Committee on February 28, 2024, with reference number 24/54. Additionally, written permission to use the assessment scales implemented in the study was obtained from the researchers who conducted the Turkish validity and reliability assessments of these scales. The purpose of the study was explained to the participating mothers, and their consent was obtained through an online form.

## RESULTS

### Sociodemographic Characteristics

The mean age of the mothers was  $28.84 \pm 5.37$  years. The majority (97.9%) of the participants were married. Regarding education levels, 43.9% of the mothers were primary school graduates, 23.5% were high school graduates, and 32.6% had undergraduate or graduate degrees. Only 24.1% of the mothers were employed. In terms of education level, 43.9% of the mothers were primary school graduates, 23.5% were high school graduates and 32.6% had a bachelor’s or graduate degree. Additionally, 62.0% of the participants stated that their income was sufficient. Birth method statistics showed that 38.0% of the mothers gave birth vaginally, while 62.0% gave birth by caesarean section.

### Scale Score Averages

The mean score of the Infant Temperament-Positive Affect scale was  $28.84 \pm 5.37$ , while the mean score of the Infant Temperament-Negative Affect scale was  $71.44 \pm 19.63$ . The mean total score of the NSSS-S scale was  $58.24 \pm 16.85$ . Additionally, the mean scores for the Relationship Quality

**Table 1.** Sociodemographic characteristics of mothers (n=187)

Variable	Characteristics	n	%
Age (min-max)	28.84±5.37 (16–44)		
Marital status	Married	183	97.9
	Single	4	2.1
Education status	Primary school	82	43.9
	High school	44	23.5
	Graduate/ postgraduate	61	32.6
Employment status	Yes	45	24.1
	No	142	75.9
Perceived Economic Situation	Income more than expense	22	11.8
	Income equals expense	116	62.0
	Income less than expense	49	26.2
Social insurance	Yes	131	70.1
	No	56	29.9
Mode of delivery	Vaginal	71	38.0
	Cesarean	116	62.0

\*Min.: Minimum, Max: Maximum, n: number, %: percent.

**Table 2.** Scale mean scores

Scales	n	Min.	Max	Mean	SD
Infant Temperament – Positive Affect	187	16.00	44.00	28.84	5.37
Infant Temperament – Negative Affect	187	16.00	118.00	71.44	19.63
NSSS-S-Relationship Quality	187	6.00	30.00	19.89	5.44
NSSS-S-Harmony with Partner	187	3.00	15.00	10.38	2.59
NSSS-S-Sexual Pleasure	187	3.00	56.00	10.85	4.34
NSSS-S-Total Score	187	20.00	119.00	58.24	16.85

\*Min.: Minimum, Max: Maximum, n: number, %: percent, SD: Standard Deviation, NSSS-S: The New Sexual Satisfaction Scale Short Form.

**Table 3.** Inter-scale correlations

		Infant Temperament		The New Sexual Satisfaction Scale Short Form (NSSS-S)			
		Positive Affect	Negative Affect	Relationship Quality	Harmony with Partner	Sexual Pleasure	Total Score
Infant Temperament – Positive Affect	Pearson Correlation	1	0.536**	-0.087	-0.070	-0.005	-0.062
	Sig. (2-tailed)		0.000	0.239	0.344	0.946	0.399
	N		187	187	187	187	187
Infant Temperament – Negative Affect	Pearson Correlation		1	-0.212**	-0.225**	-0.093	-0.197**
	Sig. (2-tailed)			0.004	0.002	0.205	0.007
	N			187	187	187	187
NSSS-S-Relationship Quality	Pearson Correlation			1	0.805**	0.590**	0.929**
	Sig. (2-tailed)				0.000	0.000	0.000
	N				187	187	187
NSSS-S-Harmony with Partner	Pearson Correlation				1	0.537**	0.857**
	Sig. (2-tailed)					0.000	0.000
	N					187	187
NSSS-S-Sexual Pleasure	Pearson Correlation					1	0.824**
	Sig. (2-tailed)						0.000
	N						187
NSSS-S-Total Score	Pearson Correlation						1
	Sig. (2-tailed)						
	N						

\* NSSS-S: The New Sexual Satisfaction Scale Short Form, \*\*Correlation is significant at the 0.01 level (2-tailed).

subscale were  $19.89 \pm 5.44$ , the Harmony with Partner subscale were  $10.38 \pm 2.59$ , and the Sexual Pleasure subscale were  $10.85 \pm 4.34$ .

### Correlations Between Scales

Examining the correlations between the scales revealed no significant relationship between the mothers' mean scores on the Infant Temperament-Positive Affect scale and the total scores on the NSSS-S scale ( $p=0.399$ ,  $r=-0.062$ ). However, there was a significant negative relationship between the mean scores on the Infant Temperament-Negative Affect scale and the total scores on the NSSS-S scale ( $p=0.007$ ,  $r=-0.197$ ).

No significant correlation was found between the Infant Temperament-Positive Affect scale and the NSSS-S subscales, nor between the Infant Temperament-Negative Affect scale and the NSSS-S subscale for Sexual Pleasure ( $p=0.399$ ,  $r=-0.062$ ) ( $p>0.005$ ). However, a significant relationship was found between the Infant Temperament-Negative Affect scale and the NSSS-S subscales of Relationship Quality ( $p=0.004$ ,  $r=-0.212$ ) and Harmony with Partner ( $p=0.002$ ,  $r=-0.225$ ).

## DISCUSSION

The present study investigated the relationship between maternal postpartum sexual experiences and infant temperament. Our findings revealed significant correlations between various dimensions of infant temperament and maternal sexual satisfaction, contributing to understanding how maternal well-being in the postpartum period can influence infant behavior and development.

Research has shown that the postpartum period causes significant physiological and psychological changes in women, often leading to sexual dysfunction.<sup>[4,6]</sup> The majority of new mothers reported a decreased frequency of sexual activity and various sexual concerns due to changes in body image, child rearing, insomnia, differences in sexual desire, and decreased time for sexual activity.<sup>[21,22]</sup> The infant's temperament also plays a role in the difficulties faced by the mother in the postnatal period. It increases sexual problems by triggering negative emotions such as depression experienced by the mother.<sup>[23]</sup> The current study adds to this body of knowledge by identifying the specific influence of infant temperament on mothers' sexual experiences. The results revealed a significant negative correlation between the Infant Temperament-Negative Affect scale and the total scores on the NSSS-S. This suggests that mothers who perceive their infants as having a more

negative temperament experience lower levels of sexual satisfaction. Conversely, no notable correlation was identified between the sexual satisfaction of mothers who perceive their infants as having a more positive temperament. The absence of a notable correlation between the Infant Temperament-Positive Affect scale and NSSS-S scores may suggest that positive infant behaviors do not directly contribute to maternal, sexual satisfaction. However, negative behaviors may have a detrimental impact on this aspect of maternal well-being. This is consistent with the findings of Nieto et al., who reported that maternal postpartum stress, which a challenging infant temperament can exacerbate, hurts maternal mental health and, consequently, sexual well-being.<sup>[17]</sup>

The WHO emphasizes that how individuals relate to and express their sexuality significantly influences their health and well-being. Challenges in navigating these aspects during the postpartum period can adversely affect the relationship between partners.<sup>[24]</sup> However, with the addition of a infant to the family, mothers constantly need to stay physically close to the infant to ensure the infant's care and comfort, which brings a series of new responsibilities and role expectations. This situation can result in mothers adopting the caregiving role and reshaping and changing roles such as being a spouse. The necessity to fulfill these responsibilities required by the new roles can lead to negative reflections on the couple's relationship, as it necessitates compromising the requirements of other roles.<sup>[25]</sup> It has been determined that during the postpartum period, couples feel more alone in their relationships, experience a decrease in sexual intimacy, and see the inability to spend enough time together as the most critical factor causing these negative changes in their relationship.<sup>[13]</sup> The infant's challenging temperament also increases the parents' stress levels and makes it more difficult for the couple to spend time together.<sup>[17]</sup> Similarly, our study revealed a notable negative correlation between the Infant Temperament-Negative Affect scale and the NSSS-S subscales of Relationship Quality and Harmony with Partner. This indicates that a challenging infant temperament can have a detrimental impact on the couple's relationship, which in turn may lead to a reduction in sexual satisfaction. This is consistent with the attachment theory framework, which posits that early mother-infant interactions influence relationship patterns.<sup>[26]</sup> A maternal relationship that is characterized by stress and strain as a result of an infant's challenging temperament can lead to a reduction in intimacy and sexual satisfaction. Studies have also reported that having children, increasing the number of children in the family, and negative mother-baby bonding negatively

affect marital adjustment and quality, similar to our study.

These perspectives highlight the significant impact of infant temperament on maternal sexual satisfaction during the postpartum period. Addressing the needs of both mothers and infants holistically is crucial for promoting maternal well-being and healthy mother-infant relationships.

## STRENGTHS and LIMITATIONS

The strengths of this study include a comprehensive approach, innovative focus, and practical implications. The study utilized validated scales to measure infant temperament and maternal sexual satisfaction, ensuring reliable and accurate data collection. By examining the relationship between infant temperament and maternal sexual behavior, this study addresses a relatively under-researched area, contributing new insights to the field. The findings provide practical recommendations for healthcare providers, emphasizing the need for holistic postpartum care. However, the small sample size and diversity limit the findings' generalizability. The study sample was limited to mothers who could be reached through social media and volunteered to participate, which may not represent the broader population. The study's cross-sectional nature limits the ability to establish causal relationships between infant temperament and maternal sexual satisfaction. By acknowledging these limitations, future research can build on these findings by utilizing more considerable, more diverse samples and longitudinal designs to elucidate further the dynamics between infant temperament and maternal sexual health.

## CONCLUSION

This study explored the intricate relationship between infant temperament and maternal sexual behavior in the postpartum period. Our findings indicated significant correlations between dimensions of infant temperament, particularly negative affect, and maternal sexual satisfaction. The results suggest that infants with higher levels of negative affect may contribute to decreased sexual satisfaction among mothers. This highlights the complex interplay between maternal well-being and infant behavior, underscoring the need for comprehensive postpartum care that addresses both maternal and infant needs. Addressing these challenges through comprehensive postpartum care can improve maternal well-being, enhance family relationships, and promote healthier infant developmental outcomes.

## IMPLEMENTATION for CLINICAL PRACTICE

Nurses can integrate the assessment of infant temperament and maternal sexual health into the routine postpartum care pathway. By recognizing the bidirectional influence between a mother's sexual well-being and her infant's temperament, nurses can develop targeted interventions that support maternal mental health and sexual satisfaction. Providing resources and counseling on managing infant temperament, alongside sexual health education, can improve overall maternal well-being. Furthermore, fostering open communication between partners about sexual health and parenting challenges can help mitigate the adverse effects on sexual satisfaction.

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### Ethics Committee Approval

The study was approved by Başkent University Institutional Review Board Ethics Committee. (date and number of approval: 28.02.2024/24/54).

### Peer-review

Externally peer-reviewed.

### Conflict of Interest

No conflict of interest was declared by the authors.

### Financial Disclosure

No financial support has been received.

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