# **Original** Article

# **Episiotomy-related perineal pain and** breastfeeding self-efficacy among postpartum mothers

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# ABSTRACT

Introduction: Episiotomy-related perineal pain may significantly impact breastfeeding self-efficacy, influencing new mothers' ability to successfully initiate and maintain breastfeeding. The aim of this study was to determine the relationship between MPO-SF and postpartum BSES-SF scores.

Methods: This descriptive study was conducted at a maternity hospital in Istanbul and involved 208 volunteer mothers who had undergone an episiotomy during childbirth. Data were collected using a "Participant Information Form," the "McGill Pain Questionnaire-Short Form," the "Postpartum Breastfeeding Self-Efficacy Scale-Short Form," and the "Visual Analogue Scale." The data were analyzed using a statistical program, with significance set at P-value  $\leq 0.05$ .

**Results:** The average age of the mothers was  $27.29 \pm 5.88$  years, with 44.7% experiencing their first childbirth. Severe perineal pain was reported by 9.1% of the mothers, and 35.6% indicated that this pain affected their ability to breastfeed. A significant relationship was found between perineal pain and both the McGill Pain Questionnaire score and breastfeeding self-efficacy score (P-value < 0.05). Additionally, there was a negative correlation between postpartum McGill Pain Questionnaire scores and postpartum breastfeeding self-efficacy scores (P-value < 0.05).

Conclusion: Postpartum perineal pain affected mothers' breastfeeding self-efficacy. It is recommended to take measures to reduce perineal pain that negatively affects mothers' breastfeeding.

Keywords: breastfeeding; episiotomy; perineal pain; postpartum; self-sufficiency

# **INTRODUCTION**

Perineal pain is common in mothers who have a vaginal delivery. Episiotomy and perineal laceration are one of the most common causes of early postpartum perineal pain. Postpartum perineal pain significantly affects mothers' breastfeeding process and breastfeeding self-efficacy (Işık et al, 2018). Although routine episiotomy is not recommended for vaginal deliveries, episiotomy rates differ from country to country. Although episiotomy usage has reduced in some developed countries, it is known that episiotomy is used at a high rate around the world. Episiotomy rates both primiparous and multiparous women are reported to range from 9.7% (Sweden) to 100% (Taiwan) (Woretaw et al., 2021). According to studies conducted in our country, the frequency of episiotomy has been reported to vary between 69.7% and 88.6%. This percentage was reported to have changed to 89.7% in nulliparous and 87.7% in multiparas (Demirel & Gölbaşı, 2015). It is indicated that episiotomy causes early postpartum perineal problems and higher perineal pain scores (Kaya Şenol & Aslan, 2016). According to the literature, it has been stated that mothers have difficulties while breastfeeding

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their babies due to episiotomy-related perineal pain (Işık et al., 2018). Alleviating the perineal pain of mothers is important for breastfeeding comfort and self-efficacy.

Many mothers who give birth vaginally experience perineal pain in the early postpartum period (Kaya Şenol & Aslan, 2016). Structured interviews showed that 90% of these women reported some level of perineal pain, with 37% describing the pain as moderate to severe (East et al., 2012). While postpartum perineal pain is severe in the first 24 hours, it is reported that it gradually decreases after 48 hours. Swain and Dahlen (2013) detected perineal pain in 77% of women in the first 24 hours after birth. Perineal pain negatively affects the mother's sitting, movement, micturition and defecation, especially during the first three postpartum days. Over a third of women experienced moderate to severe perineal pain, particularly when walking (33%) or sitting (39%) (East et al., 2012). In a study conducted in Turkey, it was determined that perineal pain affected the daily activities of 86% of primiparous mothers and 96% of multiparous mothers (Kaya Senol & Aslan, 2016).

Perineal pain affects mothers' daily activities, as well as breastfeeding behavior and breastfeeding self-efficacy (Nasrabadi et al., 2019). Breastfeeding self-efficacy refers to a mother's confidence, attitude, and behavior towards breastfeeding. It plays a crucial role in both initiating and sustaining breastfeeding (Brockway et al., 2017; Aluş Tokat et al., 2010). Rahmatnejad and Bastani (2012) found this rate as 49% while Evcili and Kaya (2019) found that the breastfeeding self-efficacy scores of postpartum mothers were low.

Although mothers are given postpartum lactation consulting in Turkey, they often experience breastfeeding

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problems. Breastfeeding problems are often related to breast problems, pain or failure in milk production. Pain is common after spontaneous tears, surgical incision-episiotomy or operative vaginal delivery. Perineal pain can make it difficult for mothers to initiate and maintain infant care and breastfeeding. Mothers who have breastfeeding problems and difficulties cannot breastfeed their babies at all or may stop breastfeeding early (Molakatalla et al., 2017). However, many infants and children do not receive optimal feeding. For instance, between 2015 and 2020, only about 44% of infants aged 0-6 months worldwide were exclusively breastfed (WHO, 2020). According to the Hacettepe University Institute of Population Studies (HUIPS) research, in Turkey, only 41% of infants younger than six months were shown to be breastfed (HUIPS, 2020). At the same time, breastfeeding problems affect the mother's perception of breastfeeding self-efficacy, thoughts, and feelings about breastfeeding. Although the frequency of episiotomy in vaginal deliveries is high in the world and in our country, no study has been found examining the effect of perineal pain on breastfeeding and breastfeeding self-efficacy. This study, it was aimed to determine the effect of perineal pain due to episiotomy on breastfeeding self-efficacy of mothers and to contribute to the practices of midwives and nurses who provide breastfeeding counseling.

# **METHODS**

#### Design

A descriptive cross-sectional study was performed.

#### Sample and Setting

The study population consisted of mothers who had delivered vaginally at the hospital and were hospitalized in the postpartum clinic. The sample included both primiparous and multiparous mothers who had undergone an episiotomy and met the study's inclusion criteria. These criteria required participants to be breastfeeding mothers who had an episiotomy and who agreed to participate in the study. Mothers who declined to participate or who did not fully complete the study forms were excluded. Ultimately, 33 mothers were excluded due to incomplete forms, resulting in a final sample of 208 participants.

Data were collected through face-to-face interviews conducted between the 4th and 8th hours postpartum, with each interview lasting approximately. The sample size was calculated using the G\*Power 3.1 program with parameters set at  $\alpha = 0.05$ ,  $\beta = 0.95$ , and an effect size of 0.23, which resulted in a required sample size of 196 participants. To account for potential data loss, non-probability sampling was employed until the target sample size was achieved. By the conclusion of data collection, the total sample size was 208. A post hoc sample adequacy calculation confirmed the robustness of the sample with  $\alpha = 0.05$ ,  $\beta = 0.99$ , and an effect size of 0.3. This research was conducted at a maternity research and training hospital in Istanbul over a period of approximately eight months, from April 15, 2016, to December 30, 2016.

## **Data Collection**

The data were collected using a "Participant Information Form", the "McGill Pain Questionnaire-Short Form (MPQ-SF)", the "Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF)" and the "Visual Analogue Scale (VAS)". The McGill Pain Questionnaire is generally used to assess perineal pain, while the VAS is used to assess the overall pain status of mothers. In the study, it was thought that it would be more accurate to use both scales together.

Participant Information Form: This form was developed by the researcher based on existing literature (Aluş Tokat et al., 2010; Bicici & Gunes, 2012).

McGill Pain Questionnaire (MPQ-SF): Developed by Melzack (1987), the MPQ-SF is used for a multidimensional assessment of pain. It evaluates the sensory properties, severity, and effects of pain. The validity and reliability of the Turkish version of the MPQ-SF were tested by Bicici (2010). The questionnaire includes 15 criteria for pain assessment: the first 11 parameters assess the sensory dimension, while the last four assess the perceptual dimension of pain (rated as 0 = none, 1 = mild, 2 = moderate, 3 = severe). The Cronbach's alpha for the sensory and perceptual dimensions of the MPQ-SF was 0.75 in Bicici's study, and 0.91 in the current study (Bicici & Gunes, 2012).

Breastfeeding Self-Efficacy Scale (BSES-SF): This 14item scale, developed by Aluş Tokat et al. (2010), measures breastfeeding self-efficacy. Scores range from 14 to 70, with higher scores indicating greater breastfeeding self-efficacy. It uses a 5-point Likert scale where responses are rated from 1 (not sure) to 5 (always sure). All items are positively coded. The Cronbach's alpha for the scale was 0.87 before delivery and 0.86 after delivery, with a value of 0.89 in this study (Aluş Tokat et al., 2010).

Visual Analogue Scale (VAS): The VAS assesses pain severity on a 10 cm scale, where 0 represents "no pain" and 10 represents "worst imaginable pain." Pain severity is categorized as: <3 for mild pain, 3-6 for moderate pain, and >6 for severe pain (Yaray et al., 2011).

#### **Data Analysis**

Data were analyzed with SPSS 21.0. Normality tests (Kolmogorov-Smirnov, Shapiro-Wilk) indicated nonparametric conditions, so Mann-Whitney U and Kruskal-Wallis tests were used. Spearman's correlation, simple linear regression, and chi-squared tests were applied, along with descriptive statistics (means, standard deviations, frequencies, percentages). Results were evaluated with a 95% confidence interval and a significance level of 0.05.

#### **Ethical Clearance**

Participants were given detailed information about the study and provided verbal informed consent. They were assured that the research posed no material or moral risk. The study adhered to research and publication ethics principles.

## RESULTS

Perineal pain is one of the most important factors affecting the breastfeeding self-efficacy of mothers in the early postpartum period. The mean age of the participants was  $27.29 \pm 5.88$  years, and 13% were thirty-five years old or older. As many as 34.6% of the mothers were primary school graduates, 12 were employed at a permanent job, 25.5% had lower income than their expenses, and 95.7% found their husband's support sufficient; 66.3% were having their first pregnancy, and 44.7% were having their first birth.

It was determined that 99% of the mothers who participated in the study were willing to breastfeed, 88.5% breastfed within the first 60 minutes and 71.6% received

Table 1. Mothers	'Perspectives	on Postpartum	Experiences	and Breastfee	eding $(n=208)$
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Perspectives	n	%
Breastfeeding Training Status		
Yes	149	71.6
No	59	28.4
Mother' willingness to breastfeed		
Very willing	206	99.0
Unwilling	2	1.0
Timing of First Breastfeeding After Birth		
<60 min	184	88.5
>60 min	24	11.5
Difficulty while sitting		
Yes	22	10.6
No	186	89.4
Severe pain in the perineum		
Yes	19	9.1
No	189	90.9
Effect of perineal pain on breastfeeding		
Yes	74	35.6
No	134	64.4

Table 2. Mean Scores of MPQ-SF Dimensions, BSES-SF, and VAS in Postpartum Women (n=208)

Scales and Sub-dimensions	Mean±SD	Min-Max
MPQ-SF emotional score	9.31±7.90	0.0-33.0
MPQ-SF perceptual score	2.78±3.75	0.0-12.0
MPQ-SF total score	$12.09 \pm 10.98$	0.0-45.0
BSES-SFb total score	61.43±8.82	14.0-70.0
VASc	$6.06{\pm}2.47$	0.0-10.0

breastfeeding education. In the study, 10.6% of the mothers stated that they had difficulty sitting because of perineal pain, 9.1% felt severe perineal pain and 35.6% stated that perineal pain affected their breastfeeding (Table 1).

In the study, the mean scores of sensory and perceptual subscales were respectively  $9.31\pm7.90$  and  $2.78\pm3.75$ ), while the mean total score of SF-MPQ was  $12.09\pm10.98$ . The mean total score was  $61.43\pm8.82$ , and the mean VAS score was  $6.06\pm2.47$  (Table 2).

There was a significant relationship between the number of births, the status of receiving prenatal breastfeeding education, willingness to breastfeed, difficulty in sitting, the effect of perineal pain on breastfeeding and the first breastfeeding minute and the postpartum BSES-SF scores of the mothers (P-value <0.05).

There was a weak negative correlation between the postpartum MPQ-SF scores and the BSES-SF scores (Table 4). The contribution of the postpartum MPQ-SF pain score to the variance was significant (F=20.19; *P*-value 0.001). MPQ-SF explained 0.5% of the variance in breastfeeding self-efficacy. In other words, 0.5% of breastfeeding self-efficacy depended on MPQ-SF pain sensation. The contribution of the postpartum VAS pain score to the variance was significant (F=2.383; *P*-value 0.124). The VAS pain score explained 0.01% of the variance in breastfeeding self-efficacy. In other words, 0.01% of breastfeeding self-efficacy depended on VAS pain perception.

# DISCUSSION

The physical and emotional state of mothers and social support affect their breastfeeding behaviors (Alus Tokat et al., 2010). The results of this study were discussed in line with the literature. It is recommended that stable newborns breastfeed immediately after birth (WHO, 2020). It is known that breastfeeding counseling given to mothers increases their breastfeeding self-efficacy. It was determined that most of the mothers in this study received prepartum breast milk-breastfeeding training, and 88.5% of them breastfed in the first sixty minutes. Yang et al. (2018) stated that mothers participated in prenatal breastfeeding classes and that breastfeeding education should be started in the prenatal period and continued in the early postnatal period (Yang et al., 2018). Turan and Bozkurt (2020) found very few mothers received breastfeeding training during pregnancy, and that 56.3% of mothers started breastfeeding within the first hour after birth. In different studies, breastfeeding success and breastfeeding self-efficacy of women who received breastfeeding training were found to be high (Aluş Tokat et al., 2010; Evcili & Kaya, 2019). In this study, it was observed that the rate of breastfeeding in the first hour was higher than the results of Turan and Bozkurt, and the hospital's status as a baby-friendly hospital was effective in the early breastfeeding of babies.

	Scales				
Variables		MPQ-SF		BSES-SF	
	n -	Median (IQR) Z-p-va	Z-p-value	Median (IQR)	Z-p-value
Number of Childbirths					
First birth	93	10.0 (4.0-18.0)	0.780	63.0 (55.0-67.0)	2.757
Two or more birth	115	9.0 (3.0-17.0)	0.436	66.0 (59.0-68.0)	0.006
Receiving prenatal breastfeeding training si	tuation				
Yes	149	9.0 (4.0-16.5)	0.235	65.0 (14.0-70.0)	2.091
No	59	9.0 (3.0-17.0)	0.814	63.0 (14.0-70.0)	0.037
Mother' willingness to breastfeed					
Yes	206	9.0 (3.75-16.3)	2.254	64.0 (57.0-67.0)	2.091
No	2	37.5 (25.5-30.8)	0.024	14.0 (10.5-18.8)	0.037
Difficulty while sitting					
Yes	22	14.0 (5.0-29.0)	1.628	54.5 (43.8-60.5)	2.439
No	186	9.0 (3.0-16.0)	0.104	65.0 (58.0-67.0)	0.015
Severe pain in the perineum					
Yes	19	8.0 (3.0-16.0)	3.300	64.0 (57.0-67.0)	0.481
No	189	22.0 (10.0-32.0)	0.001	66.0 (57.0-68.0)	0.630
Effect of perineal pain on breastfeeding					
Yes	74	14.0 (5.8-21.3)	4.038	59.0 (54.5-67.0)	3.042
No	134	6.00 (3.0-12.3)	0.000	66.0 (60.8-67.0)	0.002
Timing of First Breastfeeding After Birth					
<60 min	184	9.0 (3.0-17.0)	0.253	65.0 (57.0-68.0	2.705
>60 min	24	9.0 (5.0-24)	0.800	57.5 (55.0-64.7)	0.007

Table 3. Comparison of MP	Q-SF and Post	partum BSES-SF Sco	ores Across Various Materi	nal Variables (	n=208)
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Table 4. Relationship Between MPQ-SF and Postpartum BSES-SF Scores (n=208)

	Postpartum BSES-SF <sup>b</sup> score		
Scale Scores	r-value <sup>d</sup>	<i>P</i> -value	
MPQ-SF <sup>a</sup> score	-0.155*	0.026	
VAS <sup>c</sup> score	-0.068	0.328	

Many factors arising from birth and delivery management cause postpartum perineal pain (Francisco et al., 2011). It was determined that 10.6% of the mothers had difficulty sitting due to perineal pain in the postpartum period, 9.1% perceived severe perineal pain, and 35.6% perineal pain affected their breastfeeding. The literature reported a modest increase in perineal discomfort after vaginal delivery and higher perineal pain scores during breastfeeding. It has been found that perineal pain usually occurs in the first hours after delivery and persists for several months (Wen et al., 2015). Some studies reported that 9.8% of women experienced perineal pain within the first hour after delivery (Almeida & Riesco, 2008). This incidence increased to 92% during the first 24 hours postpartum, decreased to 7% by six weeks (Macarthur & Macarthur, 2004), and was 48% two months after birth (Declercq et al., 2008). Additionally, research from the Health Science Center at the University of New Mexico found that 98% of women reported perineal pain at hospital discharge, 61% after six weeks, and 79% three months following vaginal delivery (Leeman et al., 2009). Francisco et al. (2011) found the prevalence of perineal pain associated with episiotomy as 18.5% and the frequency of moderate perineal pain as

51.8%. Pereira et al. (2017) found pain in the perineal region due to episiotomy was reported in 81.4% of women who delivered vaginally. It has been shown that perineal pain restricts women when sitting, walking, sleeping, and caring for the newborn. East et al. (2012) reported that more than one-third of mothers experienced moderate or severe perineal pain while walking or sitting. The results of the study were in parallel with those reported by other studies. Perineal pain affected the breastfeeding behavior of the mothers more than having difficulty sitting.

Perineal pain due to episiotomy may affect mothers' pain scores and breastfeeding self-efficacy scores (Eshkevari et al., 2013). In the study, both the mean score ( $12.09\pm10.98$ ) and the BSES-SF mean score ( $61.43\pm8.82$ ) of the mothers were found to be high. The lowest possible score in the original BSES-SF is 14, and the highest score is 70 (Aluş Tokat et al., 2010). High scores indicate good breastfeeding self-efficacy. Nursan et al. (2014) determined the BSES-SF mean score ( $57.85 \pm 8.84$ ) of mothers who gave birth vaginally (Nursan et al., 2014). Evcili and Kaya (2019) found that dimension scores were low in primiparous women. In the study, while the application of episiotomy increased the score, giving breastfeeding counseling to all mothers after birth direction positively affected the BSES-SF score.

Half of the breastfeeding failures in the first week of birth were found to be related to mothers or their babies (McFadden et al., 2017). A significant relationship was found between the intensity of perineal pain of the mothers and the effect of perineal pain on breastfeeding and the McGill scale scores. Routine episiotomy is not recommended for vaginal deliveries in the literature (Shmueli et al., 2017). However, it was stated that episiotomy is applied in almost all first deliveries in Turkey (Kaya Senol & Aslan, 2016). Postpartum perineal pain has been reported with the range from 92% to 100 % of all women (Bozdag et al., 2021). Karaçam et al. (2013) stated that application of episiotomy increases the probability of perineal pain by about five times. According to literature, the VAS score rises during breastfeeding and other activities, depending on the length of the second stage of labor and the baby's birth weight. Due to high VAS pain scores, it is well recognized that the probability of utilizing analgesic medicines increases among women who have experienced serious trauma (Dutta et al., 2021). It is thought that mothers' breastfeeding is influenced by their perception of perineal pain.

Breastfeeding the baby at the earliest period after birth affects the breastfeeding self-efficacy and breastfeeding behavior of mothers (Brockway et al., 2017). A significant relationship was found between difficulty in sitting while breastfeeding due to perineal pain, the effect of perineal pain on breastfeeding and the time of the first breastfeeding and the breastfeeding self-efficacy scale scores of the mothers. Francisco et al. (2011) stated that 18.5% of women with episiotomy who gave vaginal delivery experienced perineal pain in the early postpartum period (Francisco et al., 2011). Turan and Bozkurt (2020) found that there is a significant relationship between the first breastfeeding time after birth and breastfeeding self-efficacy scores in embracing the baby in primiparous mothers. Aslan and Ege (2016) found that the self-efficacy scores of mothers who breastfed in the first half-hour after birth were higher. Postpartum perineal pain due to episiotomy affected mothers' timing of first breastfeeding and breastfeeding self-efficacy. In the presence of any problem, mothers have difficulty breastfeeding or may easily stop breastfeeding (Özkara et al., 2016). In this study, a weak negative correlation was found between the postpartum McGill Scale score and the postpartum BSES-SF score. Evcili and Kaya (2019) found a negative correlation between the postpartum BSES-SF total scores and MPQ-SF dimension scores of women. Besides, they observed low breastfeeding self-efficacy scores among mothers who needed analgesia due to pain. The study by Isik et al. (2018) found that the breastfeeding self-efficacy scale scores in the postpartum 24th hour were higher in those who delivered vaginally compared to those who delivered by cesarean section. Postpartum perinal pain negatively affected mothers' breastfeeding self-efficacy.

The regression analysis revealed a relationship between McGill Pain Questionnaire-Short Form (MPQ-SF) pain scores and breastfeeding self-efficacy, but no relationship was found between Visual Analogue Scale (VAS) pain scores and breastfeeding self-efficacy. Structured interviews showed that 90% of women experienced some perineal pain, with 37% reporting moderate to severe pain (East et al., 2012). The intensity of perceived perineal pain impacted mothers' breastfeeding self-efficacy. Specifically, the McGill Pain score, which reflects the pressure on the perineum during

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breastfeeding, demonstrated a stronger correlation with breastfeeding self-efficacy than the VAS score.

#### Limitations

This study was conducted at a single center, so its findings may not be applicable to the broader population. Additionally, the study relied solely on self-reported data from women. Future research could benefit from incorporating qualitative methods, such as in-depth interviews, to provide more comprehensive insights. Collecting data during peak hours of perineal pain and discomfort from episiotomy may have enhanced the accuracy of the mothers' responses.

# **CONCLUSION**

At the end of this study, although almost all of the mothers were willing to breastfeed, perineal pain affected breastfeeding in one third of the women. A significant relationship was found between the effect of perineal pain on breastfeeding and MPQ-SF score and breastfeeding self-efficacy score. There was a negative correlation between the postpartum MPQ-SF score and the postpartum BSES-SF score. It is recommended that episiotomy, which causes perineal pain and negatively affects breastfeeding self-efficacy, should not be routinely performed unless necessary and qualitative studies should be conducted on this subject.

## **Declaration of Interest**

The authors declare that there is no conflict of interest.

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## **Data Availability**

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

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