

Comparison of Postpartum Sexual Function in Patients who had Undergone Episiotomy and had Perineal Tears

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Abstract

BACKGROUND/AIMS: To make a comparison regarding postpartum sexual function according to the presence of episiotomy and the degree of perineal tears.

MATERIALS AND METHODS: Two hundred ninety-four primiparous patients in total between the ages of 18 and 45 who arrived at the obstetrics outpatient clinic between 2017 and 2024, underwent pregnancy follow-up and delivery, and fulfilled the inclusion criteria were analyzed in our research. The study included 131 women with perineal tears and 163 women who underwent episiotomy. Retrospectively, at 6 months postpartum, the Female Sexual Function Index (FSFI), Quality of Sexual Experience Scale (QSES), and visual analog scale (VAS) for dyspareunia values of all individuals were reviewed from participant files.

RESULTS: The VAS, QSES, and FSFI values were significantly greater in the episiotomy (+) group than the episiotomy (-) group ($p<0.01$). The VAS value was significantly greater in the episiotomy (+) group in comparison with the other groups ($p<0.01$). The QSES and FSFI values were significantly smaller in the tear degree 4 group than those in the other groups ($p<0.01$). The values of arousal and lubrication were significantly smaller in the tear degree 4 group than those of the other groups ($p<0.01$). The orgasm and satisfaction values were significantly smaller in the tear degree 4 group compared with the other groups ($p<0.01$).

CONCLUSION: Sexual dysfunction in the postpartum period can be affected by social, physical, psychogenic, and demographic factors. Our study showed that preventing advanced-stage tears through episiotomy might contribute positively to sexual function aspects. Prospective studies with larger samples are also needed to evaluate the effects of other maternal, demographic, and cultural factors that might influence females' sexual functions in the postpartum period.

Keywords: Episiotomy, perineal tear, postpartum, sexual function

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INTRODUCTION

A complex component of total wellbeing, sexuality has social, emotional, mental, and physical components. Pregnancy and childbirth herald numerous changes in females' sense of well-being and quality of life including physical, psychosocial, and cultural changes.¹ Studies that have been extensively evaluated indicate that many females have a drop in their sexual health following childbirth, as well as a decrease in their frequency of sexual activity, desire, and enjoyment throughout pregnancy and the postpartum period. There is evidence that childbirth alters sexual dynamics between couples and that these changes are caused by a variety of variables.² Perineal discomfort, exhaustion, depression, urine incontinence, and abnormalities in sexual function are common among new mothers.³ Numerous sociodemographic factors that affect postpartum sexual health and the delivery experience also have an impact on this complex phenomenon. This might raise the chance of episiotomy or perineal tears.⁴ After giving birth, nursing may have some impact on sexual function, and sexual function alterations are common during the postpartum period.⁵ Both vaginal lubrication and libido may be impacted by hormonal changes that take place during lactation.⁶ All aspects of sexuality, including sexual desire, vaginal bleeding or discomfort during intercourse, trouble attaining orgasm, dyspareunia, and lack of vaginal lubrication, are noticeably declining in the postpartum period.^{7,8} In the first three months following birth, however, 41-83% of females had sexual dysfunction experience.⁹ In the absence of an episiotomy or perineal tear, postpartum sexual function is only slightly compromised in females who give birth vaginally.^{10,11} Perineal tissue damage significantly impacts women's sexual lives, leading to dyspareunia. Compared to females who suffer from perineal injuries such as tears or episiotomy, those who have an intact perineum typically resume sexual activity earlier.¹² Although there is presently inadequate evidence to link episiotomy to sexual dysfunction, postpartum dyspareunia has also been associated with perineal injuries from episiotomy or tears, which may increase the risk of sexual dysfunction.¹³ It is currently unclear how postpartum perineal damage, dyspareunia, and the time of postpartum sexual function recovery are related.¹⁴ Comparing postpartum sexual function based on the degree of perineal tears and the existence of episiotomy was the goal of our study.

MATERIALS AND METHODS

The present study was designed as a retrospective case-control study. The study was designed according to the Helsinki Declaration and signed informed consent forms were obtained from all patients. The study received approval from the Non-Interventional Research Ethics Committee of Buca Seyfi Demirsoy Training and Research Hospital (approval no: 2025/404, date: 29.01.2025). Clinics between 2017 and 2024, underwent pregnancy follow-up and delivery, and fulfilled the requirements for inclusion were analyzed in our research. The research included 131 females with perineal tears and 163 who underwent episiotomy. The study's subjects were split into two groups based on whether or not they had episiotomies, and four groups according to the degree of perineal tears. Patients with perineal tears detected in stages 2, 3, and 4 were divided into subgroups. Age, body mass index (BMI), birth weight, week of birth, and time of resumption of sexual intercourse after birth were evaluated retrospectively for all patients. All data of all females who delivered birth during this time interval and satisfied the requirements for inclusion were retrospectively evaluated at the 6th month postpartum check-up. At 6 months postpartum, the

Female Sexual Function Index (FSFI), Quality of Sexual Experience Scale (QSES), and visual analog scale (VAS)-dyspareunia values of each participant were reviewed from patient files retrospectively. The VAS values span from 0 (no symptoms at all) to 10 (worst possible symptoms). Participants rated dyspareunia on a scale of 0-10. The FSFI questionnaire, which uses a scale ranging from 0 (no sexual activity within the previous four weeks) or 1 (very-dissatisfied) to 5 (extremely happy) to evaluate 6 distinct domains: pain/discomfort, satisfaction, orgasm, lubrication, arousal, and desire. The investigation evaluated sexual function using a full-scale score that ranged from 2.0 (severe dysfunction) to 36.0 (no dysfunction); higher FSFI scores were assumed to be linked to a reduction in symptoms. To differentiate between females with and without present sexual dysfunction, Wiegand et al.¹⁵ established an appropriate cut-off score of 26. Higher quality is indicated by higher QSES ratings, which range from 7 to 49.¹⁶ In the study, females with first-degree tears, those having a perineal surgery record, and the presence of fetal death, extensive congenital anomalies, genital condyloma, extensive vulvar varicose veins, lower genital tract pathology, and lacerated episiotomy were considered as criteria for exclusion.

Statistical Analysis

The SPSS software program (IBM Inc., Chicago, IL, USA) was used to conduct statistical analyses. The Kolmogorov-Smirnov test was used to assess the data distribution's normality. The Kruskal-Wallis and Mann-Whitney U post hoc tests were used to investigate parameters that were not normally distributed. Quantitative data for all patients are presented as median (range: minimum-maximum). Results were evaluated within a 95% confidence interval (CI). The p-value considered statistically significant was <0.05.

RESULTS

The BMI value was significantly higher (26.1 kg/m²) in the episiotomy (+) group than that of the episiotomy (-) group (p<0.01). The birth weight was significantly lower (3.050 g) in the episiotomy (+) group than that of the episiotomy (-) group (p<0.01). The sexual intercourse time was significantly later (59 days) in the episiotomy (+) group in comparison with the episiotomy (-) group (p<0.01) (Table 1).

The VAS value was significantly greater in the episiotomy (+) group in comparison with the episiotomy (-) group (p<0.01). The QSES value was significantly higher in the episiotomy (+) group in comparison with the episiotomy (-) group (p<0.01). The FSFI value was significantly higher in the episiotomy (+) group in comparison with the episiotomy (-) group (p<0.01). The desire and arousal values were significantly greater in

Table 1. Comparison of demographic and obstetric characteristics of the groups			
Variables	Episiotomy (+) (n=163, 55.4%)	Episiotomy (-) (n=131, 44.6%)	p-value
Age (years)	28 (18-45)	28 (18-45)	0.08
BMI (kg/m ²)	26.1 (25-26)	25 (20.7-28.2)	<0.01
Birth weight (g)	3050 (2000-3800)	3250 (2250-3950)	<0.01
Birth week	38 (32-41)	38 (32-41)	0.22
Sexual intercourse time (days)	59 (45-90)	55 (45-90)	<0.01
BMI: Body mass index.			

the episiotomy (+) group in comparison with the episiotomy (-) group ($p=0.02$ and $p<0.01$, respectively). The lubrication and orgasm values were significantly greater in the episiotomy (+) group in comparison with the episiotomy (-) group ($p<0.01$) (Table 2).

The VAS value was significantly greater in the episiotomy (+) group than those of other groups ($p<0.01$). The QSES value was significantly smaller in the tear degree -4 group than those of other groups ($p<0.01$). The FSFI value was significantly smaller in the tear degree -4 group in comparison with the other groups ($p<0.01$). The values arousal and lubrication were significantly smaller in the tear degree -4 group than those of the other groups ($p<0.01$). The scores of orgasms and satisfaction were significantly lower in the tear degree -4 group than those of other groups ($p<0.01$) (Table 3).

DISCUSSION

This study examined the connection between factors associated with sexual health and the occurrence of second, third, and fourth-degree tears, as well as episiotomies, during delivery. In our study, it was found that the time to first sexual intercourse in the postpartum period was significantly longer in the episiotomy (+) group than in the episiotomy

(-) group. The VAS (dyspareunia) value was significantly greater in the episiotomy (+) group than in the episiotomy (-) group. The QSES and FSFI values were significantly greater in the episiotomy (with) group than in the episiotomy (without) group. The satisfaction, orgasm, lubrication, arousal, and desire values, were significantly greater in the episiotomy (+) group than those of the episiotomy (-) group. VAS (dyspareunia) values were significantly greater in the episiotomy (+) group than those of the other groups. QSES and FSFI values were significantly smaller in the tear-degree -4 group in comparison with the other groups. Also, arousal, lubrication, orgasm, and satisfaction values, were significantly smaller in the tear degree 4 group in comparison with the other groups.

Rezaei et al.¹⁷ showed that the majority (76.3%) of participants in the postpartum period experienced sexual dysfunction. Studies in the literature have reported that sexual dysfunction is seen at rates of 41-83% in postpartum women.¹⁷ The features of the measures used to assess FSF might be one reason for the varying prevalence of postpartum sexual dysfunction. Additionally, cultural and societal disparities may affect women's postpartum sexual behavior, which might have varying effects on other communities. The research results also demonstrated a relation among FSF and demographic characteristics such as age, education, family income, breastfeeding, and parity.^{3,18} In our study, demographic parameters including education, family income, and breastfeeding were not evaluated.

Yee et al.¹⁹ observed in their research that multiparous females had better sexual function in the areas of desire, orgasm, arousal, and satisfaction. Some studies associated primiparity with a greater risk of female sexual dysfunction^{20,21}, but others observed a greater risk in multiparous females.^{22,23} Based on our results, we cannot make any inferences about the effect of parity because only primiparous females were included in the sample group.

Botros et al.²⁴ argued that the most common sexual dysfunction among their research objects was found to be related to desire for sexual activity. This tendency was observed by Pourakbaran and Yazdi²⁵ as well. It's possible that the fatigue and emotional stress of motherhood had a role in the postpartum decline in sexual desire.²⁴ Barrett et al.⁸ observed a decrease in sexual desire in the 3 months after childbirth and a subsequent increase by 6 months after childbirth; however, there was no full recovery to pre-pregnancy levels. In our research, contrary to the literature, no significant difference was seen in the desire scores of the participants when the presence of episiotomy or the severity of tear degree was taken into account. We attributed the difference between the literature data and our study, to the fact that the first evaluation in our patient group was made at the 6th postpartum month.

In the study by Nyaloko et al.⁴, women who underwent episiotomy waited 1-2 weeks longer to initiate sexual intercourse than the other groups. Fernández and de Medina-Moragas²⁶ also showed a significant relation among the resumption of sexual activity after delivery and the incidence of 2nd-degree tears in the perineum in contrast to episiotomy. Delays in resuming sexual activity can be caused by a number of psychological factors, such as pain, low self-esteem, and worries about relationship dynamics. On the other hand, postpartum resumption of sexual activity is also influenced by physical factors, including hormone imbalances and recuperation. Postpartum sexual activity is also influenced by sociocultural elements, including communication within the couple and cultural standards. Spaich et al.²⁷ reported the existence of a significant decrease in sexual activity between 3 and 6 months after

Table 2. Comparison of sexual function indexes according to the presence of episiotomy

Variables	Episiotomy (+) (n=163, 55.4%)	Episiotomy (-) (n=131, 44.6%)	p-value
VAS	4 (2-7)	3 (2-7)	<0.01
QSES	38 (36-40)	37 (32-40)	<0.01
FSFI	25 (17-30)	24 (12-29)	<0.01
Desire	5 (3-6)	4 (3-6)	0.02
Arousal	4 (2-5)	4 (2-5)	<0.01
Lubrication	4 (2-5)	4 (2-5)	<0.01
Orgasm	4 (2-5)	4 (2-5)	<0.01
Satisfaction	4 (2-5)	4 (2-5)	<0.01
Pain	4 (3-5)	4 (3-5)	0.2

VAS: Visual analog scale, QSES: Quality of sexual experience scale, FSFI: Female sexual function index.

Table 3. Comparison of sexual function indexes according to the presence of tear degree

Variables	Episiotomy (+) (n=163, 55.4%)	Tear degree -2 (n=44, 15%)	Tear degree -3 (n=45, 15.3%)	Tear degree -4 (n=42, 14.3%)	p-value
VAS	4 (2-7)	3 (2-6)	4 (2-7)	3 (2-6)	<0.01 ^a
QSES	38 (36-40)	37 (33-39)	38 (36-40)	34 (32-38)	<0.01 ^b
FSFI	25 (17-30)	25 (21-29)	25 (20-28)	21 (12-28)	<0.01 ^b
Desire	5 (3-6)	4 (3-6)	4 (3-6)	4.5 (3-6)	0.08
Arousal	4 (2-5)	4 (4-5)	4 (4-5)	3 (2-4)	<0.01 ^b
Lubrication	4 (2-5)	4 (4-5)	4 (3-5)	3 (2-5)	<0.01 ^b
Orgasm	4 (2-5)	4 (4-5)	4 (4-4)	3 (2-4)	<0.01 ^b
Satisfaction	4 (2-5)	4 (4-5)	4 (4-5)	3 (2-4)	<0.01 ^b
Pain	4 (3-5)	4 (3-5)	5 (3-5)	4 (3-5)	0.01 ^c

VAS: Visual analog scale, QSES: Quality of Sexual Experience Scale, FSFI: Female sexual function index. a: Group 1 has a statistically significant. b: Group 4 has a statistically significant. c: Statistically significant difference between group 2-3.

birth and it returned to normal by 12 months. According to Banaei et al.²⁸ meta-analysis of 22 research, the prevalence of postpartum dyspareunia was 35%, and it declined as postpartum duration increased. In their study, Gutzeit et al.²⁹ showed how delivery affects sexual function. In comparison with multiparous females, primiparous females had higher rates of dyspareunia. The increased prevalence of assisted delivery and serious perineal injuries in primiparous females may help to explain this. Lagaert et al.³⁰ stated that primiparous females generally felt less confident regarding postpartum sexual life because of lack of experience. In our study, in order to focus on the effects of the presence of episiotomy and tear degrees, parity was not considered as a confounding factor. Therefore, only primiparous patients were evaluated.

There are studies in the literature with the observation that the sexual functions of females who have had an episiotomy are no different from those of females with an intact perineum.^{24,31} However, there is also research suggesting that, compared to females with intact perineums or first-degree tears, those who have had an episiotomy are more likely to experience dyspareunia and reduced sexual function three months after giving birth.^{32,33} In the study by Fernández and de Medina-Moragas²⁶, when females with second-degree tears and those who had episiotomy were compared, there was no discernible change in sexual function or dyspareunia. According to the same study, sexual initiative, arousal, orgasm, desire, absence of anticipatory anxiety, penetration, and sexual pleasure were all linked to decreased dyspareunia.²⁶ Romashchenko et al.³⁴ stated in their research that dyspareunia reduced sexual desire in females. Our study adds a new perspective to the disparate results in the literature. In our sample group, although the VAS (dyspareunia) scores were greater in the episiotomy group, no difference was found with regard to desire scores. The reason for this can be interpreted as the continued maintenance of the desire element by females, due to psychogenic and hormonal drives, regardless of their physical symptoms.

There are various results in the literature regarding the effects of episiotomy on sexual parameters. However, when independent evaluations were made using the tear degree criterion, positive results were observed in the QSES, FSFI, and general view FSFI subgroups in the episiotomy group. Signorello et al.³⁵ suggested that the severity of postpartum dyspareunia, reduced sexual sensation, sexual satisfaction, and the capacity for orgasm were all strongly correlated with the employment of obstetric equipment and the extent of perineal damage. However, it was generally believed that these results were caused by transient alterations in postpartum sexual function. Laganà et al.³⁶ showed that female sexual dysfunction resulted in significantly lower FSFI scores in females who underwent episiotomy during delivery. Regarding whether episiotomy uniquely predisposes women to sexual dysfunction, studies are divided. Connolly et al.¹⁰ reported, in their prospective study, that in primiparous females, the manner of birth and episiotomy were not linked to anorgasmia. Hartmann et al.¹³ systematic study evaluating episiotomy outcomes found no evidence to bolster the idea that episiotomy improved sexual function.

Studies in the literature have shown that the risk of female sexual dysfunction increases with instrumental vaginal birth because of the increased risk of harm that might result from this kind of delivery intervention.^{22,37} Laganà et al.³⁶ observed that females who underwent an episiotomy during vaginal delivery had fewer sexual dysfunction

issues than females without an episiotomy; this might be because the procedure lowers the incidence of third-to-fourth-degree tears, which are thought to be a contributing factor to sexual dysfunction.^{37,38} Although many scientists found that sexual dysfunction and episiotomy are not directly related^{21,29}, there are several studies reporting that 3rd-4th degree tears are linked with pelvic floor dysfunction.^{39,40} Episiotomy is a commonly performed surgical procedure to avoid severe perineal trauma. Although it is clear from the professional literature that one of the most commonly performed surgeries is episiotomy, there is ongoing debate about whether it has a protective effect against 3rd and 4th-degree tears. Gutzeit et al.²⁹ concluded that 3rd and 4th-degree tears were extensively linked to postpartum sexual dysfunction. In our study, especially in patients with 3rd and 4th-degree tears, both QSES and FSFI values, and generally, FSFI subgroup values, were significantly smaller than in the group that underwent episiotomy. A striking finding here is that, contrary to expectations, this result occurred due to the low VAS (dyspareunia) score in this group. The reason for this is that the decrease in the contact surface secondary to vaginal relaxation in advanced stage tears, decreases the dyspareunia score and simultaneously reduces sensation, creating a negative effect on sexual parameters.

Study Limitations

The small size of the sample of our study and the lack of a sufficient number of primary studies in the literature, leading to difficulties in determining the optimal sample size, potentially affected the representation of participants. The research's methodology evaluated participants' impressions at a single point in time, making it impossible to track changes over time. The use of self-reported measures may have been impacted by social desirability and expectation bias. Other potential confounders of sexual function that could affect the interpretability of the findings are limitations of the study.

CONCLUSION

The purpose of this investigation was to examine the connection between postpartum sexual health and perineal trauma. It is evident, that a variety of psychological, physical, and societal variables impact women's ability to engage in sexual activity following childbirth. However, our study showed that preventing advanced-stage tears through episiotomy might contribute positively to sexual function parameters. Future research should include prospective studies using a larger sample size to confirm these results and assess the impact of additional maternal, demographic, and cultural factors that can influence females' sexual functioning throughout the postpartum phase.

MAIN POINTS

- During the postpartum phase, sexual dysfunction may be impacted by physical factors and social, psychogenic, and demographic factors.
- The presence of an episiotomy should be considered in depth and with confounding factors in terms of its effects on sexual function in the postpartum period.
- We think that episiotomy, when indicated correctly to prevent third and fourth-degree tears, positively affects sexual function during the postpartum period.

ETHICS

Ethics Committee Approval: The study received approval from the Non-Interventional Research Ethics Committee of Buca Seyfi Demirsoy Training and Research Hospital (approval no: 2025/404, date: 29.01.2025).

Informed Consent: The study was designed according to the Helsinki Declaration and signed informed consent forms were obtained from all patients.

Footnotes

Authorship Contributions

Surgical and Medical Practices: U.A., Concept: C.A., H.A.A., Design: O.Y., Data Collection and/or Processing: B.E., Analysis and/or Interpretation: T.B.B., Literature Search: S.E., Writing: U.A.

DISCLOSURES

Conflict of Interest: No conflict of interest was declared by the authors.

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