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# Assessing the quality of life of postpartum mothers with episiotomy in the first six postpartum weeks: a descriptive cross-sectional study

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## **Abstract**

**Background** An episiotomy is making a controlled incision to the perineal region to enlarge the vaginal opening to facilitate difficult childbirths. According to evidence-based guidelines from the World Health Organization (WHO), it is not recommended that this procedure be performed routinely due to its detrimental effects on mothers' postpartum quality of life (QOL). Therefore, this study aims to examine the QOL of postpartum mothers who experienced episiotomy during normal vaginal (NVD) delivery in a Tertiary care hospital in Sri Lanka.

**Methods** A descriptive cross-sectional study was conducted with postpartum mothers (n = 131) who had experienced an episiotomy during NVD in a Tertiary care hospital, in Sri Lanka. Data were collected from November 2023 to January 2024, using the Maternal Postpartum QOL Instrument (MPQOL-1), a previously validated questionnaire comprising five sub-scales. Participants were voluntarily recruited from postpartum mothers attending postnatal clinics in the above setting. The collected data were analyzed by using SPSS software version 26.

**Results** The study found that the majority of participants (71%) reported a high level of QOL related to episiotomy, while 28.2% had a moderate level. Factors such as parity, postpartum period, and number of episiotomies experienced significantly influenced QOL (p < 0.05). Women in the first postpartum week and those with fewer episiotomies reported higher QOL scores. Episiotomy complications are significantly associated with QOL, particularly regarding breastfeeding, newborn care, and bonding (p < 0.05).

**Conclusions** Postpartum mothers generally report a high QOL following episiotomy, with parity, postpartum period, and the number of episiotomies influencing outcomes. Early postpartum women and those with fewer episiotomies experience better QOL. Episiotomy complications, however, negatively impact key aspects of maternal well-being, including breastfeeding, newborn care, and bonding, highlighting the importance of minimizing complications.

**Keywords** Episiotomy, Quality of life, Postpartum mother



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# **Background**

Pregnancy is the period during which a fetus develops inside a woman's uterus, typically lasting around 40 weeks [1]. A normal birth is characterized by its spontaneous onset, with the labor being low-risk at the beginning and remaining so throughout the delivery process [2]. Once the baby is born, the mother enters the postpartum phase, which refers to the period following childbirth. This can include women who deliver through normal vaginal delivery (NVD) or assisted delivery methods such as a lower segment cesarean section (LSCS), forceps, or vacuum delivery. Concerning NVD, episiotomy is a controlled surgical incision made into the perineal region to enlarge the vaginal opening to facilitate childbirth during the second stage of labor [3, 4]. Thus it is assumed that an easily repairable incision will be obtained compared to an uncontrolled vaginal tear [5]. Despite these expected positive outcomes of the procedure, the established evidence-based practice guidelines by the World Health Organization [6] do not recommend routine episiotomy during spontaneous NVD due to its physical and psychological discomfort for mothers that underway its positive effects. Due to the episiotomy wound physically mothers may experience severe pain while walking and sitting, difficulty in defecation, and interference with breastfeeding. They may psychologically suffer from long-term anxiety, reduced confidence in undergoing another vaginal delivery, and dissatisfaction with their sexual life [7]. These factors can negatively impact women's overall quality of life (QOL) after childbirth. Further, episiotomy adversely affects pelvic floor function and causes impaired sexual performance, perineal pain, increased blood loss, and negativities in the QOL by affecting postpartum comfort [8]. For instance, a study by [9] indicates that almost all women experiencing episiotomy suffer from postpartum pain, which tends to be greater than in the case of spontaneous tearing, pointing out that physical morbidity is increased by episiotomy and can affect mental health as well. Further, it identified that episiotomy contributes to sexual dysfunction and pelvic floor issues in Vietnamese women, thus extending its effects beyond the initial postpartum recovery [10]. However, some studies reported a lack of correlation between episiotomy and positive breastfeeding outcomes, raising questions about the overall impact of episiotomy on maternal-infant relationships [11].

In light of this evidence of complications due to episiotomy worldwide, the episiotomy rates in vaginal births are still high in most middle-income countries: including 69.7% in China, 73% in Lebanon, and 71.3% in France [12]. However, the low prevalence of episiotomy was reported in developed countries, including Spain (49.4%) [13], Saudi Arabia (52.2%) [14] and the United Kingdom (12–15%) [15]. Considering the episiotomy prevalence

in Sri Lanka it was considerably higher than in other regions. It was reported as 97.8% for primiparous women and 94% for multiparous women [16].

Considering the high prevalence of substandard practices around the globe that negatively impact postpartum mothers' QOL, the WHO recommends that the episiotomy rate should be limited to 10% of NVD and should be performed under anesthesia to minimize pain [17]. However, in Sri Lanka, it was found that nearly 97% of women undergoing NVD experienced episiotomy without any form of anesthesia, such as local or infiltration of Lidocaine, before the procedure [18]. These statistics highlight the substandard practice of episiotomy procedures among healthcare professionals in Sri Lanka. Performing the procedure without adhering to WHO guidelines exposes many postpartum mothers to unnecessary complications. This represents a significant health issue in maternity care that demands close research attention. However, adequate attention has not been paid to studying the QOL in relation to episiotomy experience among postpartum mothers in Sri Lanka. On this ground, assessing the QOL related to episiotomy surgical procedures performed under substandard conditions during this critical time is paramount to understanding how it impacts their postpartum life.

In this light, the current study aimed to assess the QOL and its related factors of postpartum mothers who experienced episiotomy during their childbirth.

### Method

## Study design

The current study was a descriptive cross-sectional study that aimed to assess postpartum mothers' QOL related to episiotomy in a Teaching Hospital in Sabaragamuwa province, Sri Lanka.

## Setting

This study was conducted in three postnatal clinics in a Teaching Hospital in Sabaragamuwa province, Sri Lanka, from November 2023 to January 2024. Those clinics provide services for approximately 150 postpartum mothers for a month with the assistance of three Obstetricians, Medical Officers, and Midwifery Qualified Nursing Officers.

## **Population**

The target population for this study included all postpartum mothers who had experienced episiotomy and attended the three postnatal clinics during their puerperium up to six weeks of the period.

## Inclusion and exclusion criteria

The inclusion criteria for selecting the sample for the study were all postpartum mothers who delivered their babies through vaginal delivery which the baby is born through the birth canal (vagina) without the need for surgical intervention during the past 6 weeks, undergone episiotomy procedures, and attended the postnatal clinics during the data collection period. The exclusion criteria of this study were postpartum mothers who were suffering from cognitive impairment or had any psychological disorders and mothers who experienced any difficulty that disturbed their participation at the time of data collection.

# Sample size and sampling technique

A non-probability, convenience sampling technique was used to enroll the participants. The sample size was calculated as 131 postpartum mothers by using the statistical formula  $n = \frac{Z^2 \times p(100-p)}{d^2}$  [19]. Where n= estimated sample size, z= confidence Interval at 95% (1.96), p= proportion of postpartum mothers who will have a higher QOL (no previous evidence thus estimated as 50%, and d= required level of precision taken as 9%. It was assumed to have 10% of refusals from invited subjects [20]. Therefore, 10% of participants were added to accommodate non-response.

# Data collection tool

A self-administered questionnaire comprising two main sections was utilized for data collection. Section A focused on gathering socio-demographic and obstetric profiles of the participants, based on previous studies [21, 22] which included ten items: age, civil status, education level, parity, mode of delivery, postpartum period by the time of answering the questionnaire, birth outcome, any complications associated with episiotomy, and number of episiotomies experienced. Section B assessed the QOL of postpartum mothers using the Maternal Postpartum Quality of Life (MPQOL-1) Instrument [23]. This tool has been previously validated, with internal consistency measures, including Cronbach's alpha and McDonald's Omega, both exceeding 0.7 [23]. The MPQOL-1 has been psychometrically evaluated for many countries worldwide to examine mothers' postpartum QOL [12]. The instrument includes 16 items under five subscales to examine postpartum mothers' QOL. The structural validity of the tool has been ensured by confirmatory factor analysis, indicating the acceptable goodness of fit indices in a previous study [12]. The MPQOL-I was found to be a reliable tool, indicating acceptable internal consistency with the Cronbach alpha value and McDonald's omega of 0.83 and 0.8, respectively for the current study.

The five sub-scales in the tool are Perceived support, sexual relationship, bonding with newborn, breastfeeding and newborn care, and managing activities of daily life.

The available subscales were modified according to the research objectives as follows,

- QOL related to perceived support received from partner for impaired activities due to episiotomy wound.
- 2. QOL-related to the impact of episiotomy on the sexual relationship.
- QOL-related to the impact of episiotomy on bonding with the newborn.
- 4. QOL-related to the impact of episiotomy on breastfeeding and newborn care.
- QOL-related to the impact of episiotomy on managing activities of daily life.

These sub-scales were graded by using a five-point Likert scale where 1 stands for (not at all), 2 (somewhat), 3 (moderate), 4 (probably), and 5 (extremely) for assessing postpartum mothers' episiotomy-related QOL, with the maximum and minimum scores respectively being 16 and 80 [23]. A higher score denotes a higher QOL. The score of QOL was operationalized for this study categorizing as poor QOL (16–37 marks), moderate QOL (38–59 marks), and high QOL (60–80 marks).

## **Ethical consideration**

The ethical clearance was granted by the Ethics Review Committee of Sabaragamuwa University of Sri Lanka (ERC/H/7/2023/04) and the prior permission was taken from the relevant hospital authorities. All the participants were informed and written informed consent was taken before distributing the questionnaire.

# Data collection

A sealed box was allocated in the postnatal clinic to collect the completed self-administered questionnaires. During the data collection process, the participants' anonymity and confidentiality were protected by providing serial numbers instead of using their personal names and personal information. Voluntary participation of the postpartum mothers was encouraged. Data security was ensured by limiting access to the collected data and granting access only to the researchers. Computerized data were password protected, and physical data forms were kept under lock and key. After 05 years, electronic data will be permanently deleted, and physical data will be shredded and destroyed.

# Data analysis

The data analysis was done using Statistical Package for Social Sciences (SPSS) software version 26. Since the data set is not normally distributed, Descriptive statistics were utilized to obtain percentages, medians, and the interquartile range (IQR) to describe sample characteristics.

**Table 1** Socio-demographic and obstetric profiles of the participants (n = 131)

Variable	ltem	Frequency (n)	Percentage (%)
Age	17–24 Years	24	18.3
	25–34 Years	91	69.5
	35–45 Years	16	12.2
Educational level	No school education	1	1
	< grade 8	5	3.8
	Up to Ordinary Level	41	31.3
	Up to Advanced Level	42	32.1
	Diploma/Degree	42	32.1
Parity	Primiparous	77	58.8
	Multiparous	54	41.2
Mode of last delivery	Normal Vaginal	125	95.4
·	Interventional vaginal delivery	06	4.6
Postpartum period	Less than one week	22	16.8
	2-3 weeks	46	35.1
	4-6 weeks	63	48.1
Any complications related to episiotomy	No complications	111	84.7
	Episiotomy + Laceration	13	9.9
	Infected episiotomy	7	5.3
Number of episiotomies experienced during past labor events	One	83	63.4
	Two	37	28.2
	Three	11	8.4

**Table 2** Episiotomy-related quality of life levels of the participants (n = 131)

Level of QOL	Cutoff marks	Frequency	Percentage (%)
Low	≤ 37 marks	01	0.8
Moderate	38–59 marks	37	28.2
High	≥ 60 marks	93	71

Associations between variables were measured using the Kruskal-Wallis Test and the Mann-Whitney Test. The significant threshold was set as p < 0.05.

# Results

Of the enrolled participants, all responded to the questionnaire (n = 131, 100%).

# Socio-demographic and obstetric profile of the participants

Table 1 presents the Socio-demographic and Obstetric profiles of the participants. Of the participants, the majority (69.5%, n=91) were aged between 25 and 34 years old. Educational levels varied among participants, with a notable proportion having completed up to the GCE A/L (32.1%, n=42). More than half of them (58.8%, n=77) reported the current pregnancy as the first pregnancy. Almost all postpartum mothers had NVD (95.4%, n=125), with a minimum requiring interventional vaginal delivery (4.6%, n=6).

Almost half of the participants were in the postpartum period of four to six weeks (48.1%, n = 63), and most of the participants (63.4%, n = 83) had experienced only one episiotomy, while 28.2% (n = 37) had undergone the procedure twice. The complications related to episiotomies

were relatively low, with only 9.9% (n = 13) experiencing a laceration alongside the episiotomy.

# Postpartum mothers' episiotomy-related QOL

The total median score of the episiotomy-experienced postpartum mothers' QOL was 65 (IQR=14). The postpartum mothers' QOL was categorized into three levels as mentioned in Table 2. Of the participants, 28.2% (n=37) of postpartum mothers experienced a moderate QOL, 71% (n=93) of postpartum mothers experienced a high QOL, and only one postpartum mother experienced a low QOL (0.8%).

# Episiotomy-related quality of life across sub-scales of the MPQOL-I questionnaire

Table 3 presents the varying levels of QOL related to the episiotomy. The median score for QOL related to perceived support from the partner was 19 (IQR 4), while for understanding of sexual relationships by the partner, the median score was 14, (IQR 3). Regarding bonding with the newborn, the median score was 13 (IQR 4). The median score for breast-feeding and caring for the newborn was 11 (IQR 6), while for managing activities of daily life, the median score was also 11 (IQR 4).

**Table 3** Episiotomy-related quality of life across five sub-scales of the MPQOL-I questionnaire

Sub-scale	n	Median	IQR	Min.	Max.
Level of QOL with episiotomy wound related to perceived support of the partner	131	19	4.0	7	20
Level of QOL with episiotomy wound related to understanding sexual relationships by the partner	131	14	3.0	3	15
Level of QOL with episiotomy wound related to bond with the newborn	131	13	4.0	3	15
Level of QOL with episiotomy wound related to breast-feeding and care for the newborn		11	6.0	3	15
Level of QOL with episiotomy wound related to managing activities of daily life	131	11	4.0	3	15

**Table 4** Total score of Episiotomy-Related QOL across Socio-demographic variables and obstetric profiles of participants (n = 131)

Variable	Frequency (n)	Total QOL	<i>p</i> value	
		Median	IQR	
Age				
17–24 Yrs	24	64	18	
25–34 Yrs	91	67	15	0.837
35-45 Yrs	16	63	8.75	
Educational level				
< grade 8	5	61	23	
Up to GCE OL	41	66	19	
Up to GCE AL	42	68.5	10.25	0.418
Diploma/Degree	42	63	12.25	
Parity				
Primiparous	77	63	19	
Multiparous	52	66.75	11.87	0.026
Mode of delivery				
NVD	125	67	56.5	
Interventional Vaginal delivery	06	14	21.5	0.084
Postpartum period				
< one week	22	72.5	9	
2–3 weeks	46	64	9.5	0.003
4–6 weeks	63	62	19	
Any complications related to episioto	my			
Yes	111	62	22.75	
No	20	67	14	0.081
Number of episiotomies experienced				
One	83	63	17	
Two	37	69	9	0.016
Three	11	66	14	

# Episiotomy-related quality of life across sociodemographic variables and obstetric profiles of the participants

As shown in Table 4, the findings revealed several significant associations between specific variables and the Total QOL. Parity was significantly associated with QOL (p = 0.026), where multiparous women reported a higher median QOL score of 66.75. (IQR 11.87). Similarly, the mode of delivery showed a significant impact on QOL (p = 0.084), with women who were undergoing NVD having a higher median QOL score of 67, IQR = 56.5) than those with interventional vaginal deliveries (14, IQR = 21.5).

The postpartum period was also significantly associated with QOL (p = 0.003), as women in the first week postpartum reported the highest median QOL score (72.5) compared to those in subsequent weeks. Additionally,

episiotomy-related complications significantly affected QOL (p=0.081), with women experiencing only episiotomy reporting a higher median QOL of 67 (IQR=14) than those experienced complications of the episiotomy (62, IQR=22.75). Furthermore, the number of episiotomies experienced was significantly associated with QOL (p=0.016), as women who experienced two episiotomies reported a higher median QOL score of 69.

# Association between obstetric profile variables and the sub-scales in MPQOL-I

Table 5. presents the Association Between Obstetric Profile Variables and the Sub-scales in MPQOL-I.

Women with their first pregnancy who experienced an episiotomy wound for the first time reported the lowest median score of their QOL (9, IQR=7) related to the subscale of breastfeeding and newborn care. The median

Table 5 Association between obstetric profile and the mean scores of sub-scales in the MPQOL-I

the p Medi	Perceived support from the partner		Understanding of the sexual relationships		Bonding with the newborn		Breastfeeding and newborn care		Managing activi- ties of daily life	
	Median (IQR)	р	Median (IQR)	p	Median (IQR)	р	Median (IQR	р	Median (IQR)	p
Parity										
Primiparous	20 (3.5)	0.096	13 (4)	0.389	13 (4)	0.170	9 (7)	0.007	10 (4)	0.007
Multiparous	18.5 (5.75)		14 (3)		14 (3)		12 (4)		12 (2.5)	
Number of epis	iotomies experie	nced								
One	20 (3)	0.013	13 (4)	0.176	13 (4)	0.168	9 (7)	0.001	10 (4)	0.000
Two	18 (4.5)		14 (3)		14 (3)		12 (3.5)		12 (2)	
Three	12 (11)		13 (4)		14 (3)		13 (4)		13 (3)	
Complications i	related to episiot	omy								
No	19 (5)	0.217	14 (3)	0.181	14 (3)	0.001	12 (6)	0.006	11 (4)	0.096
Yes	20 (2)		12 (4)		10.5 (5.5)		6 (7)		9.5 (6)	

score of QOL in the same subscale has increased with advancing parity. There is a statistically significant association between parity and the QOL (p = 0.007) related to breastfeeding and newborn care and managing activities of daily life.

Additionally, women with their third pregnancy who experienced an episiotomy wound for the third time reported the lowest median score of their QOL (12, IQR=11) related to the sub-scale of perceived support from the partner. The median score of QOL of the sub-scale shows an increment with a decrease in their number of experienced episiotomies. It shows a statistically significant positive correlation between the number of episiotomies experienced and the QOL (p=0.007). These results indicate that women's episiotomy-related QOL decreases with the number of episiotomies they have experienced.

Also, complications related to episiotomy significantly affect bonding with the newborn (p = 0.001) and breast-feeding and newborn care (0.006) with lower median scores (10.5,6) among those experiencing complications related to episiotomy.

# Discussion

The current study assessed the QOL among postpartum mothers who experienced episiotomies, identifying key socio-demographic and obstetric factors influencing their QOL. The findings provide valuable insights into the postpartum recovery experience, specifically the impact of episiotomies on maternal well-being.

More than half of the participants were aged 25–34 years. This finding highlights that the majority of women in this population are likely to have experienced child-birth during their peak reproductive years [6]. A similar study also found that the mean age of the women who bore children was 28.65±5.60 years [24]. Complications related to episiotomies were relatively low, with only a small proportion experiencing lacerations and infections. These findings are important as they highlight that while

episiotomies are common, the incidence of complications remains relatively low in the current context. However, the presence of complications such as lacerations or infections may significantly affect a woman's quality of life during recovery and may need further investigation [25].

The overwhelming majority of participants reported a high quality of life, indicating that for most women, the recovery from episiotomy did not severely affect their overall well-being. Importantly, suggesting that overall postpartum recovery was favorable. This distribution is particularly notable when contrasted with existing literature, demonstrating that postpartum complications, including a complication of episiotomy, are likely to produce lower quality-of-life scores in a variety of different parameters.

However, the presence of complications notably alters this perception. Among those reporting complications, the overall quality of life takes a downturn, approximately 85% of participants reported no complications, while about 10% experienced complications from an episiotomy coupled with laceration stress on recovery. This supports the assertion that complications, such as infections, can exacerbate pain and emotional distress, leading to a negative influence on QOL [5, 23].

Considering the sub scales of QOL support from partners appear to play a crucial role. Participants reported a high median score in perceived partner support, reflecting the importance of emotional and social backing during recovery. This indicates that postpartum mothers in the current study expressed their pleasure in having supportive partners to share their physical and emotional feelings [26]. These findings highlight the crucial role of emotional and relational support from the partner in enhancing the psychological well-being of postpartum mothers, resulting in high QOL [26]. Supporting these findings, the findings of a cross-sectional survey conducted to assess the affective well-being of Chinese urban postpartum women found that positive affect had

an association with spousal support [7]. Therefore, it is important to encourage partners' involvement in the daily routine work of postpartum mothers and newborn care. The link of this support to QOL is also observed in the domain of intimacy, where partner comprehension dismantles fear of intimacy, previously shown to be influenced by episiotomy pain [27]. Further, Challenges in bonding with newborns and breastfeeding may be attributed to pain associated with episiotomies and the psychological implications of coping with these outcomes [28].

The results of this study also show significant associations between episiotomy related QOL and socio-demographic factors. The comparison between primiparous and multiparous women revealed a statistically significant difference in total QOL scores, with multiparous women reporting higher scores compared to primiparous women. This finding is consistent with existing literature indicating that multiparous women tend to have better QOL outcomes post-delivery due to greater experience and potentially better-coping mechanisms during and after childbirth [29]. Evidence suggests that women's experiences and perceptions related to childbirth can improve with subsequent pregnancies, reducing anxiety and improving physical recovery times associated with deliveries and complications, including episiotomy [29-31].

Further, postpartum period also showed significant variation in QOL, precisely between the individuals in the first week postpartum and 2–3 weeks postpartum. This is in concurrence wit studies indicating the physiological and psychological transformation of mothers immediately following delivery [7]. Mental health, physical well-being concerns, and recovery are aspects that affect perceived QOL as levels of stress might be high in the postpartum period. Thus, the provision of care and support during this period in the early stage has been determined to enhance perceived QOL for postpartum women [7, 32].

Additionally, the significant differences in total QOL based on the number of episiotomies experienced also reveal noteworthy implications. This indicates a complex relationship where women undergoing multiple episiotomies may have varying perceptions of pain, recovery, and overall satisfaction with their birthing experiences [31, 32].

The current results shed light on several associations between subscales of QOL and the obstetric profiles of the participants. The impact of parity on the "Breastfeeding and newborn care" and "Managing activities of daily life" sub-scales are statistically significant. This suggests that first-time mothers may struggle significantly more with these aspects than those who have had more previous pregnancies, aligning with findings that indicate the

complexity of maternal experiences, where first pregnancies often entail greater adaptation challenges [23, 33, 34].

The number of episiotomies experienced by the women also showed significant correlations with the scores on various MPQOL-I sub-scales. Specifically, women who had experienced one episiotomy reported a mean score of 9 (IQR 7) in breastfeeding and newborn care, while the median score for managing activities of daily life was 10 (IQR 4). These results suggest that even a single episiotomy can have lasting effects on maternal quality of life concerning both infant care and personal management [34, 35]. Conversely, this impact appears to intensify with increased numbers of episiotomies, as indicated by the diminishing scores in functional areas for higher episiotomy experiences, illustrating a direct correlation between obstetric interventions and postpartum adaptation [36, 37].

## **Conclusion**

In conclusion, the findings of this study provide valuable insights into the socio-demographic and obstetric characteristics of postpartum mothers who experienced episiotomy, as well as their related QOL. The overall QOL of episiotomy postpartum women was generally high, and most participants had moderate to high QOL scores. The median QOL score among the participants was 65, and parity, mode of delivery, postpartum period, and number of episiotomies were significantly associated with QOL outcomes. Especially, women in their second pregnancy had greater QOL scores, and women who had experienced two episiotomies had better QOL.

The postpartum period was also a significant factor, and women in the first weeks of postpartum had the best QOL scores.

Besides, the study determined that complications from episiotomy, which are infection- or laceration-related, had a detrimental impact on QOL, particularly bonding with the newborn and breastfeeding. Multiple episiotomy experience was also inversely associated with QOL, with the higher number of episiotomies corresponding to lower scores in various aspects of their lives, for instance, coping with activities of daily living. The results show that complications related to episiotomy and the frequency of performing episiotomy have a major impact on the quality of life of postpartum mothers, particularly in caring for newborns, breastfeeding, and carrying out daily activities. The results highlight the importance of adequate postnatal care, especially in managing complications of episiotomy, in improving the QOL of postpartum mothers. Further, parity and mode of delivery need to be considered in the assessment and management of QOL during postpartum period Suffer from postpartum pain, which tends to be greater than in the case of spontaneous tearing, pointing out that physical morbidity is increased by episiotomy and can affect mental health as well because of increased recovery times.

## Limitations and strengths of the study

Findings of this study cannot be generalized to postpartum mothers in other regions with different cultural, social, or healthcare settings because this study was conducted using only one ethnic group (Sinhalese) attending to the postnatal clinics of a Teaching Hospital in Sri Lanka. Further, the findings of this study may not capture the full range of experiences and challenges faced by postpartum mothers in the later stages of the postpartum period because the researcher only examined a short postpartum period of six weeks. Therefore, recall bias is possible.

#### **Abbreviations**

QOL Quality of Life

WHO World Health Organization

MPQOL-I Maternal Postpartum Quality of Life I

NVD Normal Vaginal Delivery
CVI Content Validity Index

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## **Author contributions**

Umesha Dharmasiri (UD) and Pramuditha Madhavi (PM) conceptualized and designed the study. D.K.M. De Silva (DKMDS) conducted the statistical analyses, interpreted the findings, and revised the manuscript. UM and DKMDS served as the primary authors of the manuscript, while PM and DKMDS provided guidance on methodological approaches, statistical analysis interpretation, and manuscript organization. Additionally, PM and DKMDS contributed to interpreting the results and conducted a critical review of the manuscript. UD, PM, were involved in survey implementation and data collection. All authors have reviewed and approved the final version of the manuscript.

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## Data availability

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

# **Declarations**

# Ethics approval and consent to participate

The current study was ethically cleared by the Ethics Review Committee of Sabaragamuwa University of Sri Lanka under the ERC/H/7/2023/04 reference number. Written informed consent was obtained from each participant before data collection.

## Consent for publication

Not applicable.

## **Competing interests**

The authors declare no competing interests.

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#### References

- Bianchi D, The Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD). Healthy pregnancies. Healthy children. Healthy and optimal lives. 2017 Dec 21. Available from: https://www.nichd.ni h.gov/health/topics/factsheets/pregnancy
- World Health Organization. Care in normal birth: A practical guide. Geneva: Department of Reproductive Health and Research; 1996.
- 3. Woretaw E, Teshome M, Alene M. Episiotomy practice and associated factors among mothers who gave birth at public health facilities in Metema district, northwest Ethiopia. Reprod Health. 2021;18(1):142. Available from: https://doi.org/10.1186/s12978-021-01194-9
- Kalis V, Laine K, de Leeuw J, Ismail K, Tincello D. Classification of episiotomy: towards a standardization of terminology. BJOG. 2014;119(5):522–4.
- Goh R, Goh D, Ellepola H. Perineal tears A review. Aust J Gen Pract. 2018;47(1–2):35.
- World Health Organization. WHO Recommendation on Episiotomy Policy. WHO Report Heal Libr [Internet]. 2018;1–10. Available from: https://extranet. who.int/rhl/topics/preconception-pregnancy-childbirth-and-postpartum-care/care-during-childbirth/care-during-labour-2nd-stage/who-recommendation-episiotomy-policy-0
- He S, Jiang H, Qian X, Garner P. Women's experience of episiotomy: A qualitative study from China. BMJ Open. 2020;10(7):e033354. Available from: https://doi.org/10.1136/bmjopen-2019-033354
- Chayachinda C, Titapant V, Ungkanungdecha A. Dyspareunia and sexual dysfunction after vaginal delivery in Thai primiparous women with episiotomy.
   \*\*J Sex Med\*\*. 2015;12(5):1257–7.
- Karaçam Z, Eroğlu K. Effects of episiotomy on bonding and mothers' health. J Adv Nurs. 2003;43(4):384–94. https://doi.org/10.1046/j.1365-2648.2003.02727. x.
- Quoc Huy NV, Phuc An LS, Phuong LS, Tam LM. Pelvic floor and sexual dysfunction after vaginal birth with episiotomy in Vietnamese women. Sex Med. 2019;7(4):514–21. https://doi.org/10.1016/j.esxm.2019.09.002.
- Yılmaz Esencan T, Yıldırım AD, Yıldız M. The effect of episiotomy applied in vaginal delivery on breastfeeding self-efficacy and mother-infant attachment in the postpartum period. Z Geburtshilfe Neonatol. 2025. https://doi.org/10.1 055/a-2532-3897.
- Gazari T, Apiribu F, Afaya RA, Awenabisa AG, Dzomeku VM, Mensah ABB, Amooba PA, Kukeba MW. Qualitative exploration of the challenges and the benefits of the nursing process in clinical practice: A study among registered nurses in a municipal hospital in Ghana. Nurs Open. 2021;8:3281–90. https:// doi.org/10.1002/nop2.1043.
- Ballesteros-Meseguer C, Carrillo-García C, Meseguer-de-Pedro M, Canteras-Jordana M, Martínez-Roche ME. Episiotomy and its relationship to various clinical variables that influence its performance. Rev Lat Am Enfermagem. 2016;24:e2686. https://doi.org/10.1590/1518-8345.0334.2686.
- Saadia Z. Rates and indicators for episiotomy in modern Obstetrics a study from Saudi Arabia. Materia Socio-Medica. 2014;26(3):188–90. https://doi.org/ 10.5455/msm.2014.26.188-190.
- Djusad S, Permatasari II, Futihandayani A, Shahnaz P, Hadiwinata D, Herianti HF. Analysis of episiotomy incidence and risk factors in vaginal deliveries: a single-center. AJOG Glob Rep. 2024;4(3):100371. https://doi.org/10.1016/j.xag r2024.100371
- Hewage SA, Abeysena C, Ziard H, Rishard M. Does routine episiotomy for vaginal births prevent major degree perineal tears? Summary of the evidence and its application to Sri Lanka. J Postgrad Inst Med. 2018;5(2):76. https://doi. org/10.4038/jpgim.8169.
- Woretaw E, Teshome M, Alene M. Episiotomy practice and associated factors among mothers who gave birth at public health facilities in Metema district, Northwest Ethiopia. Reprod Health. 2021;18(1):142. https://doi.org/10.1186/s 12978-021-01194-9.
- Perera YAG, Fernando TRN. Comparison of episiotomy rates, practice of analgesia and the maternal complications within first 24 hours at two tertiary care units: A comparative, descriptive and a retrospective study. Sri Lanka J Obstet Gynaecol. 2013;35(1):10–5. Available from: https://doi.org/10.4038/sljo g.v35i1.5997
- Lwanga SK, Lemeshow S, World Health Organization. Sample size determination in health studies: A practical manual. Geneva: World Health Organization; 1991. Available from: https://apps.who.int/iris/handle/10665/40062
- Polit DF, Beck CT. Nursing research: generating and assessing evidence for nursing practice. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins; 2012.

- 21. Yilmaz T, Kaya HD, Karaahmat AY. The effect of episiotomy on the postpartum comfort level: A case-control study. Int J Caring Sci. 2021;14(3):1888.
- Kohler S, Annerstedt KS, Diwan V, Lindholm LH, Randive B, et al. Postpartum quality of life in Indian women after vaginal birth and Cesarean section: a pilot study using the EQ-5D-5L descriptive system. BMC Pregnancy Childbirth. 2018;18:427. https://doi.org/10.1186/s12884-018-2038-0.
- Mokhtaryan-Gilani T, Kariman N, Nia HS, Doulabi MA, Nasiri M. The Maternal Postpartum Quality of Life Instrument (MPQOL-I): Development and psychometric evaluation in an exploratory sequential mixed-method study. BMC Pregnancy Childbirth. 2022; 22:576. Available from: https://doi.org/10.1186/s 12884-022-04900-y
- Golandaj JA, Kampli MS, Kumar M, Hallad JS. Complications and implications of caesarean delivery: facts and perceptions. Clin Epidemiol Glob Health. 2024;29:101770.
- Amana IG, Tefera EG, Chaka EE, Bulto GA. Health-related quality of life of postpartum women and associated factors in Dendi district, West Shoa zone, oromia region, Ethiopia: a community-based cross-sectional study. BMC Womens Health. 2024;24(1):29.
- Fernández-Fernández MJ, de Medina-Moragas AJ. Comparative study of postpartum sexual function: second-degree tears versus episiotomy outcomes. Arch Gynecol Obstet. 2024;309(6):2761–9. https://doi.org/10.1007/s00404-02 4-07494-2.
- Hidalgo-Lopezosa P, Pérez-Marín S, Jiménez-Ruz A, López-Carrasco J, de la Cubero-Luna C, García-Fernández AM, Rodríguez-Borrego R, Liébana-Presa MA, López-Soto C. Factors associated with postpartum sexual dysfunction in Spanish women: a cross-sectional study. J Pers Med. 2022;12(6):926. https://doi.org/10.3390/jpm12060926.
- Gommesen D, Nøhr E, Qvist N, Rasch V. Obstetric perineal tears, sexual function, and dyspareunia among primiparous women 12 months postpartum: a prospective cohort study. BMJ Open. 2019;9(12):e032368. https://doi.org/10.1136/bmjopen-2019-032368.
- Fikadu K, Sidamo NB, Tadesse B, Mesele D, Aschenaki E, Toka E, Arega F, Girma T, Paulos A. Magnitude of episiotomy and associated factors among mothers who give birth in Arba minch general hospital, Southern Ethiopia: observation-based cross-sectional study. J Pregnancy. 2020;2020:8395142. htt ps://doi.org/10.1155/2020/8395142.
- 30. Macleod M, Goyder K, Howarth L, Bahl R, Strachan B, Murphy DJ. Morbidity experienced by women before and after operative vaginal delivery:

- prospective cohort study nested within a two-centre randomised controlled trial of restrictive versus routine use of episiotomy. BJOG Int J Obstet Gynaecol. 2013;120(8):1020–7. https://doi.org/10.1111/1471-0528.12184.
- Sagi-Dain L, Sagi S. Morbidity associated with episiotomy in vacuum delivery: a systematic review and meta-analysis. BJOG Int J Obstet Gynaecol. 2015;122(8):1073–81. https://doi.org/10.1111/1471-0528.13439.
- Lagadec N, Steinecker M, Kapassi A, Magnier AM, Chastang J, Robert S, Gaouaou N, Ibanez G. Factors influencing the quality of life of pregnant women: a systematic review. BMC Pregnancy Childbirth. 2018;18(1). https://doi.org/10.1186/s12884-018-2087-4.
- Minasi JM, de Barros AM, de Souza CS, Pinheiro TM, Francioni FF. Kerber NP Da C. Obstetric profile and complications of puerperas assisted in home visits. Rev Rene. 2013;14(4):757–64. https://doi.org/10.15253/2175-6783.201300040 00012
- Anstey EH, Coulter ML, Jevitt CM, Perrin K, Dabrow S, Klasko-Foster L, Daley EM. Lactation consultants' perceived barriers to providing professional breastfeeding support. J Hum Lact. 2017;34(1):51–67. https://doi.org/10.1177/0890 334417726305.
- Hawkins SS, Stern AD, Baum CF, Gillman MW. Compliance with the Baby-Friendly hospital initiative and impact on breastfeeding rates. Arch Dis Child Fetal Neonatal Ed. 2013;99(2):F138–43. https://doi.org/10.1136/archdischild-2 013-304842.
- Munn AC, Newman SD, Mueller M, Phillips S, Taylor SN. The impact in the united States of the Baby-Friendly hospital initiative on early infant health and breastfeeding outcomes. Breastfeed Med. 2016;11(5):222–30. https://doi. org/10.1089/bfm.2015.0135.
- 37. de Souza KCR, Silva TPR da, Damasceno AK, de Manzo C, Souza BF, de Filipe KV, Matozinhos MML. FP. Coexistence and prevalence of obstetric interventions: an analysis based on the grade of membership. BMC Pregnancy Childbirth. 2021;21(1). https://doi.org/10.1186/s12884-021-04092-x

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