Reasons for performing episiotomy during eutocic deliveries: an integrative literature review

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ABSTRACT
Introduction: The labor process is a crucial phase in a pregnant woman’s life. However, it is often perceived as a frightening experience due to routine procedures carried out without her consent and the potential for traumatic experiences that can have long-lasting effects. Nursing, particularly midwifery, is responsible for providing support and care that upholds the dignity of women.

Objectives: This integrative literature review aims to identify and analyze the reasons health professionals identify for the practice of episiotomy in eutocic births and the situations in which it would be appropriate to perform it.

Methodology: An integrative review was performed according to the PRISMA protocol on CINAHL Complete, PubMed, and Web of Science platforms.

Results: Eight articles were selected for analysis after a detailed review of 200. The review found that health professionals perform episiotomies for various reasons related to the fetus, the pregnant/parent, the health professional, and the birth. The most common reasons given by the participants were physical damage and maternal physical characteristics.

Conclusion: These results provide a better understanding of practice gaps, enlighten the need to improve knowledge and evidence-based care practices, and encourage health professionals to examine their practices.
Introduction

Episiotomy is a procedure commonly used during the expulsive phase of labor to widen the birth canal. However, the practice of episiotomy, which is performed on almost all pregnant women to maintain the integrity of the pelvic floor and reduce lacerations, has historical roots in old obstetric practices that have endured to date but are not supported by evidence. The frequent use of the procedure does not prevent anal sphincter injury in vaginal delivery and is even considered a risk. Cunningham et al. provide a list of indications for performing the procedure. These include nulliparity, shoulder dystocia, breech delivery, fetal macrosomia, the second stage of prolonged labor, previous obstetric injury to the anal sphincter, and the need for rapid delivery, such as in cases of fetal distress or precipitous labor. Evidence suggests benefits when the technique is performed according to these specifications. However, professionals often misuse this technique, as demonstrated by the World Health Organization’s Maternal Health and Safe Motherhood Programme. Routine use of this technique is associated with an increased incidence of grade 3 and 4 anal sphincter injuries. According to White’s article published in 2018, the rate of obstetric anal sphincter injury (OASIS) ranged from 0.6% to 11% in 85% of women who had epidurals. The incidence of injury was higher in primiparous women (90.4%) than in multiparous women (43.9%).

Several studies have compared the use of restrictive episiotomy with routine episiotomy. For instance, Ahmed conducted a study in Iran that compared a group of parturients who underwent selective episiotomy with a group who underwent routine episiotomy. The study concluded that the rate of short-term maternal complications, such as lacerations and pain severity, was lower in the former group than in the latter. Similarly, a Cochrane review in 2017 concluded that elective episiotomy resulted in a 30% lower rate of perineal trauma compared to routine episiotomy. Therefore, routine use of the procedure should be discontinued, and selective use is recommended. As noted by Ali et al., episiotomy has more consequences as it tears the perineum and requires surgical intervention. Therefore, it is not recommended to perform routine episiotomy, especially in primiparous women, and the need for the procedure must be determined on a case-by-case basis.

Thus, performing the episiotomy procedure only when clinically necessary is essential. Health professionals must assess the need for episiotomy on a case-by-case basis. Pereira & Arthuzo suggest that health professionals should provide care based on the most up-to-date scientific evidence to focus their care on the individual parturient while respecting the uniqueness of each one.

The World Health Organization recommends that the rate of episiotomies should be 5% or less. However, in
Portugal, the rate was 31.89% between May 2022 and May 2023, according to Portuguese Obstetric Data Consortium

Therefore, developing and applying care based on the most recent knowledge is crucial. Through scientific research, health professionals can develop critical thinking skills, improve clinical knowledge, become more autonomous and critical, and justify the interventions their interventions. This reflective practice enables them to provide better care. This integrative literature review aims to identify and analyze the reasons health professionals identify for the practice of episiotomy in eutocic births and the situations in which it would be appropriate to perform it. The results may help identify gaps in practice and guide the improvement of the quality of obstetric care.

Methodology

This is an integrative literature review conducted according to the PRISMA protocol, which was initially developed in 2009. The PRISMA protocol helps researchers describe the steps taken and studies found to develop the review.

The initial question was structured using the PICO strategy to define a more focused question. Therefore, we needed to define the participants (P), the type of interventions (I), any comparisons (C), and the outcomes (O) obtained, forming the acronym PICO. This strategy requires that the specificities of the population, interventions, comparisons, and outcomes are outlined. The research question was, 'What are the main reasons health professionals give for practicing episiotomy in eutocic deliveries?'

The MeSH descriptors were used to develop the research question using Boolean operators 'and' and 'or', resulting in the Boolean phrase: ‘episiotomy’ AND ‘childbirth’ OR ‘natural childbirth’ AND ‘health professionals’. Inclusion and exclusion criteria were then established. The inclusion criteria included studies conducted from 2019 onwards, to exclude outdated evidence. Studies had to be available in full text in either English or Portuguese. To initiate the literature search, the following databases were searched: CINAHL Complete via EBSCO, Medline via Pubmed, and Web of Science. In the third stage, articles were selected based on their title, abstract, and keywords.

Subsequently, the articles resulting from the previous step were read in full, and a detailed analysis was conducted critically and reflectively, synthesizing the information contained in each article.

After selecting the final articles for the study, their methodological quality was assessed using the appropriate ‘Critical Appraisal Skills Program checklist’.

Results

The PRISMA 2020 protocol (Figure 1) illustrates the entire process of evidence selection and displays all the steps to include studies in the integrative review.

From the 200 articles retrieved, 182 were excluded after reading the title or abstract. After analyzing the complete text, ten articles were excluded: three related to anal sphincter injury, one related to dystocia, and six did not answer the research question. From this final stage, eight articles were included for review. The assessment of each selected article is summarized in Table 1. After analyzing the data, it was possible to conclude that the eight articles included for review showed good methodological quality. This conclusion was drawn as almost all items were answered in the affirmative. Table 2 summarizes the data extracted from the included studies, identifying all relevant information related to the review’s questions and objectives, including author, year, country, title, participants, study design, objectives, and results. The studies were published between 2019 and 2022, representing recent research and information, and most of them were published in 2021.
Table 1. Analysis of methodological quality using the CASP Checklist

<table>
<thead>
<tr>
<th>Studies</th>
<th>Questions</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Seijmonsbergen-Schermers (2021)</td>
<td>✓</td>
</tr>
<tr>
<td>Maphanga (2021)</td>
<td>✓</td>
</tr>
<tr>
<td>García-Cerde (2021)</td>
<td>✓</td>
</tr>
<tr>
<td>Nunes (2019)</td>
<td>✓</td>
</tr>
<tr>
<td>Masuda (2020)</td>
<td>✓</td>
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<tr>
<td>Kämpf (2018)</td>
<td>✓</td>
</tr>
<tr>
<td>Taha (2022)</td>
<td>✓</td>
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<tr>
<td>GJY (2021)</td>
<td>✓</td>
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</tbody>
</table>

✓ Yes  X No  ○ Unclear  Note: This study presents an assessment of the methodological quality of eight articles using the CASP checklist mod el. It can be inferred that all articles have good methodological quality since almost all items are answered affirmatively. The only exception is question 10, which asks whether the benefits are worth the harm and costs.

Table 2. Included studies

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Title</th>
<th>Participants</th>
<th>Type of Study</th>
<th>Aims</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seijmonsbergen-Schermers, A.</td>
<td>Netherlands</td>
<td>Understanding the perspectives and values of midwives, obstetricians, and obstetric registers regarding episiotomy; qualitative interview study</td>
<td>20 midwives, obstetricians, obstetrician/gynecologists, and obstetric nurses</td>
<td>Qualitative study with a constructivist paradigm</td>
<td>Gain insights into the perspectives and values of healthcare providers regarding episiotomy</td>
<td>Fetal distress; Prematurity; Prolonged second stage; Maternal exhaustion; Instrumental delivery; History of obstetric anal sphincter injury (OASIS); History of episiotomy; Tight perineum; Short perineum; Prevention of long-term damage; Prevention of spontaneous ruptured anal sphincter injuries (no history of anal sphincter injuries); Prevention of instrumental delivery; Shoulder dystocia; Pelvic presentation; Multiple gestation; Macrosomia; Interest of care provider; Specific maternal history</td>
</tr>
<tr>
<td>Maphanga, C.</td>
<td>South Africa</td>
<td>The perception and knowledge about episiotomy: A cross-sectional survey involving healthcare workers in a low- and middle-income country</td>
<td>142 midwives and 66 physicians</td>
<td>Observational study</td>
<td>To assess the knowledge, perception, and practice of episiotomy by healthcare workers</td>
<td>Lack of time; Concerns about 3rd and 4th-degree lacerations; Lack of training in delivering women with an intact perineum</td>
</tr>
<tr>
<td>García-Cerde, R., Torres-Paredes, P.</td>
<td>Mexico</td>
<td>Health care workers’ perceptions of episiotomy in the era of respectful maternity care: a qualitative study of an obstetric training program in Mexico</td>
<td>32 general practitioners, gynecologists, and nurses</td>
<td>A descriptive and interpretative qualitative study</td>
<td>Understand how and why episiotomy persists despite shifts in knowledge and attitudes facilitated by implementing an obstetric training program.</td>
<td>Macrosomic baby; Lack of prenatal care; Genetic characteristics; Primiparous women; Narrow pelvic outlet; Preventing complications in childbirth; Preventing fetal distress; Preventing the woman from having to push too hard during childbirth; Prevent the occurrence of lacerations; Prevent pelvic floor dysfunction; Prevent significant bleeding caused by lacerations; Relieve pressure on the umbilical cord; Easier repair of an episiotomy than an irregular incision caused by a natural laceration</td>
</tr>
<tr>
<td>Dias Nunes, R., Mapelli, A., Nazario, N., Traebert, E., Seemann, M.</td>
<td>Brazil</td>
<td>Evaluation of the determining factors for episiotomy in vaginal delivery</td>
<td>330 vaginal births</td>
<td>Cross-sectional study</td>
<td>To identify the factors associated with episiotomy in a maternity hospital in southern Brazil</td>
<td>Patient’s age; Higher level of education - individuals with less financial power are those who work more in crafts or jobs that require more strenuous physical activity, and therefore work with greater physical movement, stimulating the perineal muscles.</td>
</tr>
<tr>
<td>Masuda, C., Ferolin, S., Maphanga, K., Smith, C. &amp; Matsui, M.</td>
<td>Philippines</td>
<td>Evidence-based intrapartum practice and its associated factors at a tertiary teaching hospital in the Philippines, a descriptive mixed-methods study</td>
<td>170 deliveries and semi-structured interviews with 16 doctors, 19 midwives and 4 nurses</td>
<td>Mixed-methods study</td>
<td>Describe the practice of evidence-based intrapartum care and its associated factors, as well as exploring the perceptions of healthcare providers in a tertiary hospital in the Philippines</td>
<td>Prevent severe, zigzag or multiple lacerations; Macrosomic baby; Primiparous women; Second stage of labor lasting more than 30 minutes</td>
</tr>
<tr>
<td>Kämpf, C. &amp; Dias, R. (2018)</td>
<td>Brazil</td>
<td>Episiotomy from the perspective of humanized obstetrics: reflections based on social sciences of study and technology</td>
<td>Seven obstetricians</td>
<td>Qualitative study</td>
<td>To analyze of the way obstetricians who defend the humanization of childbirth in Brazil understand and analyze the practice of episiotomy</td>
<td>Protect the female genital organs from serious lacerations; Facilitating the passage of the fetus through the birth canal; Lack of theoretical and practical knowledge about the physiology of the perineum and the second stage of labor; Medical training, which understands pregnancy as a disease and part of it as necessarily dysfunctional and dangerous.</td>
</tr>
<tr>
<td>Ali, F., Taha, N. (2022)</td>
<td>Sudan</td>
<td>Midwives’ perceptions, experience, and reasons for routine Episiotomy in Maternity Teaching Hospitals - Khartoum State: Sudan</td>
<td>86 midwives</td>
<td>Observational study</td>
<td>To explore midwives’ perceptions, experiences, and reasons for routine episiotomy</td>
<td>Primiparous; Preventing tearing of the perineum; Prevent urinary and fecal incontinence; Reduce fetal distress; Reduce maternal distress; Reduce complications during shoulder dystocia; Reduce bleeding; Insufficient time; Training, experience, and knowledge influence midwives’ decisions about the practice of episiotomy</td>
</tr>
<tr>
<td>GJY, L. S., S., Sandrasagaran, S., VJT, A., R., J. S., S., M. S. &amp; NA. D. (2021)</td>
<td>Malaysia</td>
<td>Knowledge and Practices of Episiotomy amongst House Officers, Student Midwives and Experienced Midwives in Low-Risk Obstetrics Practice – A Cross-Sectional Study in a Tertiary Hospital in Malaysia</td>
<td>128 participants (36 house officers, 45 student midwives and 44 experienced midwives)</td>
<td>Cross-Sectional Study</td>
<td>To assess knowledge and practices amongst house officers, student midwives and experienced midwives</td>
<td>Reduce 3rd and 4th degree perineal lacerations; Thickened/inflamed perineum; Shortens the 2nd stage of labor; Easier to suture than a laceration; Fetal distress; Nulliparous women; Difficulty in changing doctors’ behavior, which can often prevent practices from evolving.</td>
</tr>
</tbody>
</table>
The studies were published in various countries, including Africa, the Americas, Asia, and Europe. The number of participants in the included studies varied from 20 to 142 health professionals, such as obstetricians, nursing students, and midwives. The total number of participants in the analyzed articles was 953. Furthermore, the selected articles involved between 170 and 330 epidurals. Regarding methodology, we selected articles with various study types, including qualitative, descriptive, cross-sectional, and mixed methods studies. Table 2 presents the analyzed studies, which identified four central themes: 1) factors related to the fetus, 2) factors related to the pregnant woman/parent, 3) factors related to the health professional, and 4) factors related to labor. We will explore these themes in the following sections.

Factors related to the fetus

Some studies have shown that fetal distress is one of the main reasons for performing an episiotomy21, which is consistent with several other findings22,23,24. In the Seijmonsbergen-Schermers et al. study21, fetal macrosomia and other physical characteristics were criteria for performing episiotomy. This finding is consistent with the studies conducted by other authors22,25. Additionally, performing the episiotomy in eutocic deliveries was found to be dependent on the genetic characteristics of the fetus. As noted by García-Cerde et al.22, children in the area of Mexico where the study was conducted had macrolephaly and broad shoulders, which made episiotomy necessary to prevent severe injuries to the perineum.

Factors related to the pregnant and postpartum woman

It is worth noting that some authors also consider maternal suffering as a predisposing factor for the practice of episiotomy21, which demonstrates that maternal exhaustion can influence the practice of episiotomy22,23. However, the studies indicate that episiotomy is a protective practice against the incidence of severe perineal lacerations. Episiotomy is a practice that can prevent or reduce physical damage to the mother, with results similar to those of studies carried out by others.

Obstetric history, particularly a history of previous episiotomies, may also be a factor in deciding whether an episiotomy is performed. According to different studies22,24, the use of the technique of widening the birth canal is associated with the lack of antenatal care and nulliparity, respectively, due to the increased risk of severe lacerations in the perineal area. To avoid this, some authors suggest that specific maternal physical characteristics, such as a narrow perineum, may lead to episiotomy21,24. Similarly, other researchers22,25,28 have noted that in primiparous women, the perineum’s lack of elasticity and the high risk of anal sphincter injury are factors that influence the need for an episiotomy.

Factors related to healthcare professionals

Recent evidence suggests that birth instrumentation is a necessary condition for performing an episiotomy due to the increased risk of perineal injuries and lacerations when it is not performed. According to the study carried out by Seijmonsbergen-Schermers et al.21, complications may arise in cases of dystocic births using a suction cup, and there is a 60% probability of developing fecal incontinence within 20-25 years if there is an injury to the anal sphincter. The potential risks involved in the procedure, particularly facing the parturient eventual denial, should be noted. Masuda et al.25 noted that in an assisted vaginal birth, the rapid descent of the fetal head and the insertion of the suction cup can extend the birth canal, increasing the likelihood of injuries at the level of the anal sphincter (OASIS). As a preventative measure for lacerations, healthcare professionals may perform episiotomy. However, it has been suggested22,24 that an episiotomy incision is more straightforward to repair than a spontaneous laceration without a clear path.

Health professionals may view episiotomy as a means to expedite labor and reduce crowding in delivery rooms23. A study conducted in Cambodia revealed a 94.5% episiotomy rate due to concerns over perineal lacerations, time constraints, and overcrowding23.

Health professionals often cite a lack of training in performing eutocic births without an episiotomy as a reason for using the technique. This results in a lack of confidence during labor without instrumentation. Other authors26,27 suggest that the recurrent practice of episiotomy may be due to a lack of theoretical and practical knowledge about the physiology of the perineum and the expulsive period of labor. The education of health professionals23 and their experiences and training also influence the decision to perform this procedure.

Factors related to childbirth

Seijmonsbergen-Schermers et al.21 state that episiotomy may be necessary to prevent fetal suffering in cases of prematurity and that it may also be necessary in cases of prolonged labor to facilitate a faster delivery, which is consistent with the findings of Masuda et al.25 and other studies22,24,26. This practice reduces maternal effort and prevents fetal distress, thereby facilitating labor27.

Additionally, in cases of multiple gestation or breech presentation, episiotomy may be necessary to accelerate labor and prevent maternal-fetal suffering21.
Discussion

This integrative literature review included eight articles to address the main reasons health professionals give for performing episiotomies. The analysis of the studies revealed that all factors were related to the pregnant/postpartum woman, five to the fetus, seven to the health professional, and seven to the labor.

Fetal distress is a possible complication during labor. An episiotomy may be used to expedite labor and facilitate fetal progression through the birth canal, potentially preventing more severe complications. Evidence suggests that this procedure can reduce compression of the fetal head on the perineum, thereby mitigating the risk of brain and perinatal injuries, particularly in cases of fetal distress and shoulder dystocia. In addition to these benefits, it prevents neonatal asphyxia. Carvalho et al. demonstrated that the technique is not associated with fetal distress or fetal characteristics, such as changes in APGAR or weight. However, other authors argue that it is a crucial procedure for situations in which there is fetal distress. Furthermore, it is important to note that there is evidence challenging this claim. In situations where the newborn’s weight exceeds 4,000 grams, there is a high risk of perineal injuries.

The present study confirms that maternal physical damage and characteristics are the main reasons for performing episiotomy in eutocic births. Six studies identified maternal physical damage as a reason, while five studies identified maternal physical characteristics. Several studies suggest that health professionals continue to use episiotomy as a preventive measure for perineal injuries. However, Hsieh et al. concluded that recent literature contradicts this practice. Graça had already contraindicated the recurrent use of episiotomy, which does not reduce the risk of severe lacerations at the perineum.

The argument that median episiotomy prevents injuries is no longer valid, as the technique carries the risk of lacerations. In some cases, it may even act as a protective measure against rectal lacerations in nulliparous. Evidence suggests that episiotomy is not a harmless procedure and presents several risks, including severe lacerations at the perineum due to the extension of the episiotomy, vaginal prolapse, recto-vaginal fistula, abundant blood loss, infection, dyspareunia, and pain. The procedure does not prevent or eliminate associated complications. However, it presents benefits when used correctly, according to recent evidence and indications, such as in cases of shoulder dystocia. In situations where there is a need for rapid expulsion of the fetus, such as fetal distress, instrumented birth, or prolonged second stage of labor, episiotomy may be performed. It may also be performed in cases of the breech position of the fetus, ineffective maternal efforts during expulsion, fetal macrosomia, nulliparity, and severe vaginal bleeding to prevent serious injuries. However, Ali et al. argue against the notion that episiotomy should be routinely performed on primiparous women. They suggest that health professionals assess each parturient individually to determine the need for the technique. Similarly, Mahgoub et al. refute Nunes et al. claims that performing the procedure on primiparous women increases the risk of obstetric injuries to the anal sphincter. Additionally, Garcia-Cerde et al. have demonstrated that performing an episiotomy can prevent dysfunction and preserve the elasticity of the pelvic floor. This is consistent with the findings of Lima et al., who suggest that episiotomy can reduce the risk of uterine prolapse, cystocele, and rectocele, while also protecting the vaginal structures and reducing the duration of the second stage of labor. Although there are indications for the procedure, each case must be evaluated individually. The use of episiotomy does not prevent injuries to the anal sphincter in vaginal births, creating a risk factor for them.

Figueiredo et al confirm that frequent use of episiotomy does not provide as many benefits as professionals claim. The procedure carries a high risk of infection in women who undergo it, as well as a risk of severe injuries to the perineum and abundant blood loss. Additionally, the practice of episiotomy without considering the evidence-based indications for all women is an iatrogenic measure that does not consistently provide benefits. The authors emphasize that scientific evidence links episiotomy with complications in the genital area rather than protecting it.

The data found confirm that episiotomy is used to speed up labor. In response to this situation, the World Health Organization issued new guidelines in 2018 to reduce unnecessary interventions during labor and prevent health professionals from accelerating labor, except in situations of apparent complications. Contrary to the claims made by Kämpf & Dias that episiotomy is a measure to facilitate labor and protect the perineum from injuries, the World Health Organization recommends specific techniques to prevent lacerations during the perineum level. Therefore, pregnant women in the second stage of labor are offered perineal massages, warm compresses, and ‘hands-on’ techniques to protect the perineum. Masuda et al. concluded that performing an episiotomy can protect against severe natural or zig-zag lacerations. Garcia-Cerde et al. suggest that repairing a precise incision caused by an episiotomy than an irregular one characteristic of a natural injury. However, previous studies have not validated this argument. According to Islam et al., episiotomy is only easier to repair is more straightforward than a spontaneous laceration if it does not pose risks to the pregnant woman. Lacerations that occur when not performing episiotomy are more accessible to repair, requiring less suture material and time.

This review has limitations, mainly due to the lack of robust evidence on health professionals on the reasons for...
health professionals to perform episiotomy in eutocic births and selection bias, characteristic of this type of studies. Another limitation of this study is that only two databases were used. We recognize that using additional databases could improve the quantity and quality of the results, leading to a more comprehensive understanding of the phenomenon. Additionally, the inclusion of different or additional terms may have resulted in varying outcomes.

**Conclusion**

The aim of this integrative review to identify and analyze the reasons health professionals identify for the practice of episiotomy in eutocic births and the situations in which it would be appropriate to perform it was achieved.

There is much controversy surrounding the reasons for performing episiotomy, as many are not scientifically supported. Despite the various results, all selected studies suggest that episiotomy should only be performed selectively and never routinely.

This study aimed to identify and analyze the reasons health professionals identify for the practice of episiotomy in eutocic births and the situations in which it would be appropriate to perform it. Despite the controversy, health professionals seek to ensure more effective and safe care for the well-being of women, families, and newborns. Results provide a better understanding of practice gaps, enlighten the need to improve knowledge and evidence-based care practices, and encourage health professionals to examine their practices critically. Further investigation is necessary to obtain consistent results and enable evidence-based care, in order to avoid unnecessary episiotomy procedures.

The authors will provide supporting data upon request.

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