

# RIASE

REVISTA IBERO-AMERICANA DE SAÚDE E ENVELHECIMENTO  
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**A SCOPING REVIEW PROTOCOL ON STRATEGIES USED  
BY OBSTETRIC NURSES TO PROMOTE PERINEAL INTEGRITY  
IN VAGINAL BIRTH**

**UM PROTOCOLO DE SCOPING REVIEW SOBRE ESTRATÉGIAS  
DOS ENFERMEIROS OBSTETRAS PARA A PROMOÇÃO  
DA INTEGRIDADE PERINEAL NO PARTO VAGINAL**

**UN PROTOCOLO DE REVISIÓN EXPLORATORIA SOBRE LAS  
ESTRATEGIAS DE LAS ENFERMERAS OBSTÉTRICAS PARA  
PROMOVER LA INTEGRIDAD PERINEAL EN EL PARTO VAGINAL**

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## Abstract

**Introduction:** Perineal tears are a common complication of vaginal delivery and can negatively impact maternal health. The role of obstetric nurses in preventing these injuries is essential. **Objective:** Map the strategies used by obstetric nurses to promote perineal integrity in the context of labor. **Methodology:** This protocol will follow the PRISMA-P checklist and is registered on the Open Science Framework platform (DOI: 10.17605/OSF.IO/H7KFZ). The Scoping Review will adopt the Joanna Briggs Institute method and the PRISMA for Scoping Reviews guidelines. The research team will conduct the research between March and June 2025, in the PubMed, Scopus, and EBSCOhost databases. Two reviewers will independently select and extract data using the RAYYAN manager. **Results:** Studies that identify practices adopted by obstetric nurses to reduce the incidence of perineal tears, contributing to the improvement of childbirth care, will be included. **Conclusion:** This review will allow us to systematize the available evidence, identify gaps in knowledge, and support the development of evidence-based guidelines for promoting perineal integrity in vaginal childbirth.

**Keywords:** Evidence-Based Nursing; Lacerations Nurse Midwives; Parturitions; Perineum.

## Resumo

**Introdução:** As lacerações perineais são uma complicação frequente do parto vaginal e podem impactar negativamente a saúde materna. A atuação dos enfermeiros obstetras na prevenção destas lesões é essencial. **Objetivo:** Mapear as estratégias utilizadas pelos enfermeiros obstetras para a promoção da integridade perineal no contexto do trabalho de parto. **Metodologia:** Este protocolo seguirá a lista de verificação PRISMA-P e encontra-se registrado na plataforma *Open Science Framework* (DOI: 10.17605/OSF.IO/H7KFZ). A *Scoping Review* adotará o método do Joanna Briggs Institute e a diretriz PRISMA for Scoping Reviews. A equipa de investigação realizará a pesquisa entre março e julho de 2025, nas bases de dados PubMed, Scopus e EBSCOhost. Dois revisores procederão, de forma independente, à seleção e a extração de dados, utilizando o gestor RAYYAN. **Resultados:** Serão incluídos estudos que identifiquem práticas adotadas pelos enfermeiros obstetras com o intuito de reduzir a incidência de lacerações perineais, contribuindo para o aperfeiçoamento da assistência ao parto. **Conclusão:** Esta revisão permitirá sistematizar a evidência disponível, identificar lacunas no conhecimento e apoiar o desenvolvimento de diretrizes baseadas em evidência para a promoção da integridade perineal no parto vaginal.

**Palavras-chave:** Enfermagem Baseada em Evidências; Enfermeiros Obstétricos; Lacerações; Parto; Períneo.

## Resumen

**Introducción:** Las laceraciones perineales son una complicación frecuente del parto vaginal y pueden afectar negativamente a la salud materna. La actuación de los enfermeros obstetras en la prevención de estas lesiones es esencial. **Objetivo:** Mapear las estrategias utilizadas por las enfermeras obstétricas para promover la integridad perineal en el contexto del parto. **Metodología:** Este protocolo seguirá la lista de verificación PRISMA-P y está registrado en la plataforma Open Science Framework (DOI: 10.17605/OSF.IO/H7KFZ). La revisión exploratoria adoptará el método del Joanna Briggs Institute y la guía PRISMA para revisiones exploratorias. El equipo de investigación llevará a cabo la búsqueda entre marzo y junio de 2025 en las bases de datos PubMed, Scopus y EBSCOhost. Dos revisores procederán, de forma independiente, a la selección y extracción de datos, utilizando el gestor RAYYAN. **Resultados:** Se incluirán estudios que identifiquen prácticas adoptadas por enfermeras obstetras con el fin de reducir la incidencia de laceraciones perineales, contribuyendo a la mejora de la asistencia al parto. **Conclusión:** Esta revisión permitirá sistematizar la evidencia disponible, identificar lagunas en el conocimiento y apoyar el desarrollo de directrices basadas en la evidencia para la promoción de la integridad perineal en el parto vaginal.

**Descriptores:** Enfermeras Obstétricas; Enfermería Basada en la Evidencia; Laceraciones; Parto; Períneo.

## Introduction

Childbirth is a profoundly significant and unique moment in the life of a woman and her family. However, this event is often associated with possible complications, such as perineal trauma resulting from vaginal delivery. The female perineum is the region between the anus and the posterior limit of the vulvar vestibule. During pregnancy, this area experiences increased blood flow, making it more susceptible to injury. At the time of delivery, the intense stretching to which the perineum is subjected can result in trauma. It is estimated that about 85% of women experience some degree of perineal injury, with at least one-third of these occurring spontaneously<sup>(1)</sup>.

Perineal tears can affect not only the perineum, but also the labia minora and majora, the vagina, and the cervix. Although most of these injuries heal without causing long-term consequences, the most severe cases can lead to persistent pain, sexual dysfunction, and embarrassment for women. Thus, identifying risk factors is essential for implementing effective preventive strategies in obstetric care<sup>(1,2)</sup>.

Among the maternal factors that contribute to a higher risk of perineal tears, maternal age, primiparity, high body mass index (BMI), history of cesarean section, and Asian ethnicity stand out. Regarding fetal factors, birth weight over 4000 grams and fetal head circumference are noteworthy, due to the need for greater distension of the perineum during fetal passage<sup>(1)</sup>. In addition to maternal and fetal factors, aspects related to labor and obstetric care significantly influence the occurrence of perineal tears.

Among the intrapartum factors, the most notable are induction or acceleration of labor, use of epidural anesthesia, and maternal position at the time of delivery<sup>(1)</sup>. The use of obstetric instruments is also considered one of the main risk factors, as is poor fetal positioning, especially when the fetus is in a posterior occipital presentation. Midline episiotomy is also associated with a higher risk of severe perineal injuries, while mediolateral episiotomy has not been shown to be consistently protective<sup>(3,4)</sup>. Therefore, selective use of episiotomy is recommended, reserved

for situations with clear clinical indication, such as in instrumental vaginal deliveries, where mediolateral episiotomy can reduce the risk of obstetric anal sphincter injuries<sup>(4,5)</sup>.

The World Health Organization (WHO), in its guidelines for labor care, recommends the use of techniques that promote perineal integrity and favor a more spontaneous delivery. During the second stage of labor, interventions such as perineal massage, the application of warm compresses, and active manual support of the perineum are suggested. These practices should be adapted to the woman's preferences and the conditions of the health services, ensuring a woman-centered approach and a safer and more humanized birth<sup>(6)</sup>.

In this context, obstetric nurses play an essential role in preserving perineal integrity through early identification of risk factors, the application of evidence-based interventions, and emotional support for women before, during, and after childbirth. In line with the guidelines of international organizations such as the WHO, this respectful care for motherhood promotes an integrated and culturally sensitive approach to childbirth<sup>(6,7)</sup>.

Preserving perineal integrity has come to play a central role in promoting positive birth experiences and reducing postpartum complications. Several studies have contributed to deepening knowledge about effective strategies for its preservation, including interventions such as perineal massage, the application of warm compresses, manual support of the perineum, and the adoption of physiological positions during childbirth. Based on the available evidence and this protocol, the aim is to systematize the available evidence, identify gaps in knowledge, and support the development of evidence-based guidelines for promoting perineal integrity in vaginal childbirth, promoting increasingly informed, empathetic, and woman-centered clinical practice.

In this sense, this review aims to map the strategies used by obstetric nurses to promote perineal integrity in the context of labor. We chose to use the term “obstetric nurses” instead of “nurses specializing in maternal and obstetric health nursing” because it

is shorter, frequently used in Portugal, and constitutes a descriptor that facilitates the identification and retrieval of the included studies. For the purposes of this review, the term will be used broadly to refer to all professionals with specialized competence in this area.

## Methodology

### 1. Scoping Review

A Scoping Review is a type of evidence synthesis that systematically identifies and maps the breadth of evidence available in a given area of research. This method allows for the clarification of fundamental concepts, the exploration of definitions found in the literature, the identification of key characteristics or factors associated with a topic, and the examination of gaps in existing knowledge<sup>(8)</sup>. In this sense, this type of review encourages researchers to develop new studies that contribute to the advancement of knowledge and the improvement of clinical practice, making it a valuable tool for obstetric nurses.

Thus, this Scoping Review will be conducted in accordance with the Joanna Briggs Institute (JBI) methodology for scoping reviews and will follow the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) checklist. The PRISMA flowchart will be used to describe the flow of information throughout the different phases of the review, including inclusion and exclusion criteria, the number of studies selected and eliminated, as well as the reasons underlying these decisions. This protocol will follow the PRISMA-ScR checklist<sup>(9)</sup>.

The development of the protocol began in March 2025, the literature review will be conducted between March and June 2025, and the Scoping Review is expected to be completed in July 2025. This protocol is registered on the Open Science Framework (OSF) platform with the following registration number: DOI 10.17605/OSF.IO/H7KFZ.

### 1.1. Research question and objectives

According to Peters<sup>(10)</sup>, it is recommended to use the mnemonic “PCC” for the formulation of research questions, covering three fundamental elements: Population, Concept, and Context. Based on this approach<sup>(10)</sup>, the following research question was defined: “What strategies have been described in the literature as used by obstetric nurses to promote perineal integrity in the context of labor?”

Thus, the application of the “PCC” model allowed us to structure the research question clearly, ensuring the inclusion of essential aspects, as can be seen in Table 1.

Table 1: PCC Mnemonic.

P	Population	Woman in labor
C	Concept	Strategies of obstetric nurses for promoting perineal integrity
C	Context	Labor

### 1.2. Inclusion and Exclusion Criteria

Studies addressing strategies used by obstetric nurses to promote perineal integrity in women in labor will be included in the review. Articles published in Free Full Text, in Portuguese, English, or Spanish, involving women in labor and describing specific interventions applied by nurses will be considered.

The time limit was set at the last five years, since the strategies of obstetric nurses for promoting perineal integrity in vaginal delivery are a widely explored topic in the literature. This time limit aims to ensure the inclusion of the most recent evidence, reflecting current clinical practices and the most up-to-date guidelines. This decision is also justified by the rapid evolution of obstetric care practices and the emergence of new international recommendations in the field of perineal protection.

On the other hand, studies in which the participation of obstetric nurses in childbirth care is not clearly verified will be excluded, as well as qualitative studies or experience reports that do not present interventions or strategies used by obstetric nurses. Studies focused solely on the description of perineal

complications, without mention of strategies for preventing these injuries, will also be disregarded. Table 2 presents the inclusion and exclusion criteria.

Table 2: Inclusion and Exclusion Criteria.

Inclusion Criteria	Exclusion Criteria
Studies addressing strategies used by obstetric nurses to promote perineal integrity.	Studies in which the participation of obstetric nurses in childbirth care is not clearly verified.
Studies involving women in labor.	Qualitative studies or experience reports that do not describe strategies/interventions applied by obstetric nurses.
Studies describing interventions/strategies applied by obstetric nurses.	Studies focused exclusively on the description of perineal complications, without reference to prevention strategies.
Publications in Portuguese, English, or Spanish.	
Articles available in open access (Free Full Text).	
Studies published in the last 5 years.	

### 1.3. Research Strategy

Initially, an exploratory search was conducted on the PubMed platform, integrating several databases specializing in health sciences and selecting all of its databases. In addition, gray literature was consulted to identify terms and keywords frequently used in the titles and abstracts of relevant studies.

Subsequently, a structured and systematic search will be conducted in the PubMed, Scopus, and EBSCOhost databases, accessed through the Online Catalog | EDS of the University of Évora using the Complementary Index, MEDLINE Ultimate, Open AIRE, Supplemental Index, J-STAGE, and Directory of Open Access Journals databases. The search strategy will involve combining DeCS/MeSH terms and keywords using the Boolean operators “OR” and “AND” in the aforementioned databases.

The selection of studies will be conducted based on predefined inclusion and exclusion criteria. As the search is conducted in each database, the selected articles will be imported into the RAYYAN review manager. This system will automatically remove duplicates, and any undetected duplicates will be eliminated manually. In the RAYYAN manager, an analysis of the texts will be carried out based on the title and abstract, classifying them as “included,” “excluded,” or “maybe,” according to the previously established inclusion criteria. This analysis will be carried out by

two independent reviewers. In the event of a tie or conflict, a third reviewer will be introduced. Reviewers will follow a consensus protocol to ensure consistency in the application of article evaluation criteria in accordance with the research question.

Subsequently, two independent reviewers will read the texts in their entirety. In the event of disagreement, a third reviewer will be brought in to break the tie. In accordance with JBI guidelines (2020), there will be no critical assessment of the methodological quality of the included studies, since the main objective of a Scoping Review is to map and describe the existing evidence, regardless of its methodological robustness. This decision is justified by the exploratory nature of this approach, which focuses on identifying the scope of available knowledge<sup>(10)</sup>.

To document all stages of the selection process in a systematic and transparent manner, a flowchart based on the PRISMA-ScR guideline will be used, as recommended by the JBI, clearly presenting all phases carried out and results achieved<sup>(10)</sup>.

Table 3 shows an example of a search strategy used in PubMed, EBSCOhost, and Scopus.

Table 3: Results of the search strategy applied on March 15, 2025.

Platform	Search formula	Filters applied	Number of results
PubMed	S1: (Midwifery OR "Nurse Midwives" OR "Obstetric Nursing" OR midwife OR midwives OR "nurse midwife" OR "obstetric nurse") AND (Perineum OR "Perineal Trauma" OR "Perineal Protection" OR "Perineal Care" OR "Perineal Outcomes") AND ("Labor, Obstetric" OR Childbirth OR Labour, Obstetric OR "Normal Birth") AND (Prevention OR "Protective Strategies" OR "Clinical Strategies" OR "Midwifery Techniques")	– Last 5 years; – Portuguese, English, and Spanish; – Free full text.	27
	S2: ("Labor, Obstetric" OR "Delivery, Obstetric" OR Childbirth OR Labour) AND ("Midwifery" OR "Midwives" OR "Midwife" OR "Obstetric Nursing") AND ("Perineal Techniques" OR techniques OR "Perineal Protection" OR Prevention OR "Preventive Strategies") AND ("Perineal Injuries" OR Perineum OR "Perineal Trauma" OR "Perineal Tear" OR "Perineal Laceration" OR "Perineal Integrity")	– Last 5 years; – Portuguese, English, and Spanish; – Free full text.	165
EBSCOhost Using databases: – Complementary Index – MEDLINE – Ultimate – Open AIRE – Supplemental Index – J-STAGE – Directory of Open Access Journals	S1: TX (Midwifery OR "Nurse Midwives" OR "Obstetric Nursing" OR midwife OR midwives OR "nurse midwife" OR "obstetric nurse") AND AB (Perineum OR "Perineal Integrity" OR "Perineal Trauma" OR "Perineal Protection" OR "Perineal Care" OR "Perineal Outcomes") AND TX ("Labor, Obstetric" OR Childbirth OR "Delivery, Obstetric" OR "Normal Birth") AND TX (Prevention OR "Protective Strategies" OR "Clinical Strategies" OR "Midwifery Techniques")	– Last 5 years; – Full text via editor; – Portuguese, English, and Spanish; – Scientific journals (peer-reviewed).	191
	S2: TX ("Labor, Obstetric" OR "Delivery, Obstetric" OR Childbirth OR Labour) AND TX ("Midwifery" OR "Midwives" OR "Midwife" OR "Obstetric Nursing") AND AB ("Perineal Techniques" OR techniques OR "Perineal Protection" OR Prevention OR "Preventive Strategies") AND TX ("Perineal Injuries" OR Perineum OR "Perineal Trauma" OR "Perineal Tear" OR "Perineal Laceration" OR "Perineal Integrity")	– Last 5 years; – Full text via editor; – Portuguese, English, and Spanish; – Scientific journals (peer-reviewed).	362
Scopus	("Labor, Obstetric" OR "Delivery, Obstetric" OR Childbirth OR Labour) AND ("Midwifery" OR "Midwives" OR "Midwife" OR "Obstetric Nursing") AND ("Perineal Techniques" OR techniques OR "Perineal Protection" OR Prevention OR "Preventive Strategies") AND ("Perineal Injuries" OR Perineum OR "Perineal Trauma" OR "Perineal Tear" OR "Perineal Laceration" OR "Perineal Integrity").	– Last 5 years; – English and Spanish; – All Open Access.	55

#### 1.4. Data Extraction

In order to summarize and organize the information extracted from each article included in this review, a data extraction table will be constructed based on the JBI guidelines<sup>(10)</sup>. This table presents the source reference, authors, title, year of publication, objectives, methodology, context, strategies used by obstetric nurses in promoting perineal integrity, and, finally, the main conclusions/recommendations suggested by the studies analyzed. The table will be applied to all articles selected in the research, allowing for a structured and comparative analysis of the relevant data. Table 4 presents an example of a data extraction table with two selected studies, in order to test the clarity and adequacy of the defined fields and anticipate any difficulties in categorizing the strategies described<sup>(10)</sup>.

The results extracted will be presented in table format, organizing the strategies into thematic categories according to the type of intervention, accompanied by a narrative summary that will take into account the research question. This will describe the existing knowledge on the topic under study, the gaps identified in the literature, and the possible implications for health and research. Table 5 shows an example.

Given that this review is based on evidence gathered from published studies and the use of secondary data, ethical approval will not be required.

Table 4: Example of data extraction table.

Title/Authors/Year	Study objective	Methodology/Context	Strategies used by obstetric nurses	Conclusions/Recommendations suggested by the study
Perineal massage and warm compresses – Randomised controlled trial for reduce perineal trauma during labor <sup>(11)</sup> .	To evaluate the effect of perineal massage and warm compresses on perineal integrity during the second stage of labor.	Randomized clinical trial. The study was conducted at the hospital in Braga. The strategies were applied by obstetric nurses with prior training.	Intervention group: Perineal massage between contractions and application of warm compresses during contractions. Control group: Hands-on technique to control expulsion while maintaining fetal head flexion.	<ul style="list-style-type: none"> <li>– The combined strategy proved to be safe, effective, and well accepted.</li> <li>– There was an increase in the rate of intact perineums.</li> <li>– Reduction in lacerations, episiotomies, and anal sphincter injuries.</li> <li>– It is suggested that this practice be included in childbirth care and professional training.</li> </ul>
Perineal protection methods: knowledge and use <sup>(12)</sup> .	To analyze the degree of knowledge and use of perineal protection methods during the expulsive stage by healthcare professionals involved in childbirth, verifying compliance with World Health Organization (WHO) recommendations.	Quantitative, descriptive, cross-sectional study. Gynecology and Obstetrics Unit of the Santa Lucia University General Hospital (Cartagena, Spain). Developed with the aim of aligning institutional practices with international recommendations for the promotion of physiological childbirth.	Obstetric nurses demonstrated greater knowledge and use of strategies including: Hands-on technique (active manual protection of the perineum); Hands-off technique; Application of warm compresses; Adoption of physiological maternal postures; Control and delay of expulsive efforts; and use of lubricants.	Obstetric nurses demonstrated greater knowledge and implementation of evidence-based practices. A deficit in the application of these strategies was identified among physicians. The study highlights gaps in the training of some professionals, reinforcing the need for continuous training and standardization of practices according to international guidelines.



Table 5: Example of a table presenting results.

Strategy	Authors	Study number	Main results observed

### 1.5. Expected results

This Scoping Review is expected to provide a comprehensive and systematic overview of the strategies used by obstetric nurses to promote perineal integrity during labor. By mapping evidence-based strategies, the aim is not only to identify the most effective practices, but also to contribute directly to improving the quality of obstetric care.

The results obtained will have concrete applicability in the clinical practice of obstetric nurses, namely through the formulation of new guidelines, clinical protocols, and good practice manuals, both locally and nationally, reinforcing the role of obstetric nurses in promoting safer and more humanized childbirth.

This study also aims to identify gaps in existing knowledge, highlighting priority areas and encouraging future research on the topic.

In this way, we aim to reinforce the applied value of this Scoping Review, highlighting its contribution to the advancement of obstetric nursing and the qualification of maternal health care in Portugal and other international contexts.

### 1.6. Strengths and limitations of the study

This study offers several advantages, including the use of an internationally recognized methodology based on the guidelines of the Joanna Briggs Institute (JBI) and PRISMA-ScR. The research will be conducted using recognized databases, ensuring a valid survey of the existing scientific literature. In addition, the inclusion of studies published in different languages, namely Portuguese, English, and Spanish, allows for a greater reach and diversity of perspectives analyzed.

However, it is important to recognize some methodological limitations that may influence the results of this review. The exclusion of other languages, such as French, German, or Japanese, may limit the geographical and cultural scope of the results, especially in countries with relevant practices. The decision to include only open access articles or those available in full may introduce publication bias, compromising the overall representativeness of the available evidence.

The terminological heterogeneity used to designate the professionals involved (e.g., midwife, nurse-midwife, obstetric nurse) may represent a challenge in standardizing and categorizing the extracted data. It is also recognized that, as this is a Scoping Review, no critical assessment of the methodological quality of the included studies will be performed, which may limit the direct applicability of the results to clinical practice. The exclusive inclusion of articles published in the last five years in open access may restrict access to evidence that may still be relevant to clinical practice.

The methodological diversity of the included studies may pose a challenge, making it more complex to directly compare results and define consistent recommendations. Therefore, further analysis may be necessary to better understand the real impact of the identified strategies, since Scoping Reviews do not include a critical assessment of study quality<sup>(10)</sup>.

Despite these limitations, it is hoped that this review will contribute significantly to the understanding of the strategies adopted by obstetric nurses, promoting reflection on the continuous improvement of the care provided to women during labor. These limitations will be duly recognized and discussed in the final analysis of the results, ensuring a critical and contextualized reading of the findings and pointing out paths for future research in this area.

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