RIASE
REVISTA IBERO-AMERICANA DE SAÚDE E ENVELHECIMENTO
REVISTA IBERO-AMERICANA DE SALUD Y ENVEJECIMIENTO

INTERVENTION OF OBSTETRIC NURSES IN UPRIGHT CHILDBIRTH WITH THE SUPPORT OF THE DELIVERY BENCH: AN INTEGRATIVE REVIEW

INTERVENÇÃO DOS ENFERMEIROS OBSTETRAS NO PARTO EM POSIÇÃO VERTICALIZADA COM O APOIO DO BANCO DE PARTO: UMA REVISÃO INTEGRATIVA

INTERVENCIÓN DE LAS ENFERMERAS ESPECIALISTAS EN SALUD MATERNA Y OBSTÉTRICA EN EL PARTO EN POSICIÓN VERTICAL CON EL APOYO DEL BANCO DE PARTO: REVISIÓN INTEGRATIVA

Carolina Figueiredo[1], Telma Maio[1], Otília Zangão[2,3].

[1]Obstetrics and Gynecology Emergency Service, Local Health Unit of the Algarve, Faro, Portugal
[2]Department of Nursing, University of Évora, Évora, Portugal.
[3]Comprehensive Health Research Centre (CHRC), University of Évora, Évora, Portugal.

Received/Recebido: 2025-02-17 Accepted/Aceite: 2025-03-19 Published/Publicado: 2025-03-27

DOI: http://dx.doi.org/10.60468/r.riase.2024.10(3).725.92-111

ABSTRACT

Introduction: Upright birthing positions have been identified as promoting fetal descent during labor. The delivery bench utilizes gravity to facilitate fetal descent and encourages leg flexion, which increases pelvic diameters.

Goal: To analyze, in the scientific evidence, the interventions of obstetric nurses in the use of upright positions with the delivery bench during the second stage of labor.

Methodology: An integrative literature review was conducted using the databases PubMed, b-On, Web of Science, and EBSCOhost: MEDLINE and CINAHL. Inclusion criteria applied for article selection were as follows: articles written in Portuguese, English, or Spanish; articles published since 2020; full-text articles published in scientific journals and freely accessible.

Results: 6 articles were selected for analysis. Several advantages were identified associated with upright positions using the delivery bench during the second stage of labor. These include reduced pain, decreased need for oxytocin infusion, fewer dystocic births, fewer severe episiotomies/lacerations and a shorter second stage of labor, all contributing to improved maternal comfort and satisfaction. However, increased vaginal bleeding and first and second-degree perineal lacerations were noted. Obstetric nurses play a fundamental role in supporting and encouraging pregnant women to adopt upright and comfort-promoting positions during labor.

Conclusion: The vertical position with the use of the delivery bench has significant benefits, with the obstetric nurse playing a fundamental role in promoting a humanized delivery, by encouraging the mobility and comfort of the pregnant woman. However, challenges such as variability in clinical practice, lack of knowledge and resources hinder the implementation of these positions, demonstrating the need for greater training and awareness of health professionals, to ensure compliance with scientific recommendations.

Keywords: Nurse Midwives; Parturition; Patient Positioning; Posture; Labor Stage, Second.

RESUMO

Introdução: As posições de parto verticalizadas têm sido definidas como promotoras da progressão da apresentação fetal. O banco de parto permite utilizar a gravidade para estimular a progressão da apresentação fetal, bem como a flexão das pernas, aumentando os diâmetros pélvicos.

Objetivo: Analisar na evidencia científica, as intervenções dos enfermeiros obstetras no uso da posição verticalizada com o apoio do banco de parto na segunda fase do trabalho de parto.

Metodologia: Revisão integrativa da literatura, recorrendo às bases de dados científicas PubMed, b-On, Web of Science e EBSCOhost: MEDLINE e CINAHL. Para a seleção dos artigos, foram aplicados os seguintes critérios de inclusão: artigos que se encontram redigidos em português, inglês ou espanhol; artigos publicados desde 2020; artigos de texto integral e publicados em revistas científicas, de acesso gratuito.

Resultados: Foram selecionados 6 artigos para análise. Identificaram-se diversas vantagens relativas às posições verticalizadas com o uso do banco de parto durante o período expulsivo, englobando a redução da dor, da necessidade de perfusão de ocitocina, de parto distócico, de episiotomia/lacerações graves e da segunda fase do trabalho de parto, aumentando o conforto e satisfação materna. No entanto, foi mencionado um aumento da hemorragia vaginal e de lacerações perineais de primeiro e segundo grau. O enfermeiro obstetra desempenha um papel fundamental no apoio e incentivo às parturientes para adotarem posturas verticais e promotoras de conforto durante o trabalho de parto.

Conclusão: A posição verticalizada com o uso do banco de parto apresenta benefícios significativos, tendo o enfermeiro obstetra um papel fundamental na promoção de um parto humanizado, através do incentivo à mobilidade e ao conforto da parturiente. No entanto, desafios como a variabilidade na prática clínica, a falta de conhecimento e de recursos dificultam a implementação dessas posições, demonstrando a necessidade de maior formação e consciencialização dos profissionais de saúde, para garantir conformidade com as recomendações científicas.

Palavras-chave: Enfermeiros Obstetras; Parto; Posicionamento do Paciente; Postura; Segunda Fase do Trabalho de Parto.

RESUMEN

Introducción: Las posiciones de parto verticales han sido definidas como promotoras de la progresión de la presentación fetal. El banco de parto permite utilizar la gravedad para estimular la progresión de la presentación fetal, así como la flexión de las piernas, aumentando los diámetros pélvicos.

Objetivo: Analizar, a través de la evidencia científica, las intervenciones de los enfermeros obstétricos en el uso de la posición vertical con el apoyo del banco de parto durante la segunda fase del trabajo de parto.

Metodología: Revisión integrativa de la literatura utilizando las bases de datos PubMed, b-On, Web of Science y EBSCOhost: MEDLINE y CINAHL. Para la selección de los artículos, se aplicaron los siguientes criterios de inclusión: artículos en portugués, inglés o español; artículos publicados desde 2020; artículos de texto completo y publicados en revistas científicas de acceso gratuito.

Resultados: Se seleccionaron 6 artículos para el análisis. Se identificaron varios beneficios relacionados con las posiciones verticales utilizando el banco de parto durante el período expulsivo, como la reducción del dolor, la necesidad de perfusión de oxitocina, el parto distócico, la episiotomía/laceraciones graves y la duración de la segunda fase del trabajo de parto, además de un aumento en el confort y la satisfacción materna. Sin embargo, se verificó un aumento de la hemorragia vaginal y de las laceraciones perineales de primer y segundo grado. El enfermero obstétrico desempeña un papel fundamental en el apoyo e incentivo a las gestantes para adoptar posturas verticales y promotoras de confort durante el trabajo de parto.

Conclusión: La posición erguida con el uso del taburete de parto tiene importantes beneficios, y las enfermeras obstétricas desempeñan un papel fundamental en la promoción de un parto humanizado, fomentando la movilidad y la comodidad de la parturienta. Sin embargo, retos como la variabilidad en la práctica clínica, la falta de conocimientos y de recursos dificultan la aplicación de estas posiciones, lo que demuestra la necesidad de una mayor formación y concienciación entre los profesionales sanitarios para garantizar el cumplimiento de las recomendaciones científicas.

Descriptores: Enfermeras Obstetrices; Parto; Posicionamiento del Paciente; Postura; Segunda Fase del Trabajo de Parto.

INTRODUCTION

The physiology of labor, the anatomical changes in the maternal pelvis during the process, and the positions adopted by the woman in labor have been subjects of extensive research in recent years[1]. Upright positions that utilize gravity to facilitate the birth process (such as standing, sitting, or squatting) have been less frequently performed due to the increasing medicalization of childbirth, including greater use of epidural analgesia and medical instruments such as forceps and vacuum extractors. The supine position is often favored by healthcare professionals, particularly in emergency situations[2]. However, upright positions continue to be the most favorable for spontaneous vaginal delivery as they promote fetal descent and adaptation to the pelvis[3].

Encouraging mobility and upright postures during labor helps relieve pressure on major maternal blood vessels, improving fetal oxygenation and reducing the risk of fetal distress and maternal hypotension. Additionally, these postures increase the diameters of the birth canal, facilitating proper fetal alignment and descent[4].

The World Health Organization (WHO) emphasizes the importance of upright and mobile positions during labor to promote comfort and labor progression. Various labor-assisting devices have been developed to provide greater comfort to the laboring woman, allowing her to tolerate and maintain favorable pelvis-fetus adaptation positions for extended periods[3]. The delivery bench, used during the expulsive period, takes advantage of gravity to aid fetal descent and allows leg flexion, increasing pelvic diameters[5].

The second stage of labor, which begins with complete cervical dilation and ends with fetal expulsion[20], is the most critical phase of the process, involving multiple risks for both the mother and the fetus[6]. The guideline no. 002/2023 of the Directorate-General of Health reinforce that labor care should be ensured by a multidisciplinary team. Moreover, the maternal and obstetric health specialist nurse should provide care aimed at offering high-quality healthcare, prioritizing maternal and fetal safety while ensuring a positive birth experience for the mother and her family[7].

This literature review aims to analyze, based on scientific evidence, the interventions of obstetric nurses in the use of upright positions with the support of the delivery bench during the second stage of labor.

The term "obstetric nurses" was used as a replacement for "maternal and obstetric health specialist nurses" as it is considered a descriptor in health sciences and allows for the use of fewer words.

METHODOLOGY

This integrative literature review was conducted through research, selection, and analysis of documents related to the topic. The search was performed in the databases PubMed, Web of Science, b-On, and EBSCOhost: MEDLINE and CINAHL using keywords listed in the Health Sciences Descriptors (DeCS): "Labor Stage, Second," "Nurse Midwives," "Parturition," "Patient Positioning," and "Posture," combined with the boolean operators "AND" and "OR".

Based on the PICo strategy presented in Table 1↗, the following research question was formulated: "What are the interventions of obstetric nurses in the use of the upright position with the support of the delivery bench during the second stage of labor?".

The inclusion criteria encompassed articles written in Portuguese, English, or Spanish, published since 2020, available in full text, published in scientific journals, and freely accessible. Exclusion criteria included duplicate articles and those that did not meet the research objective, population, and guiding question. Based on these criteria and in the search strategies across different databases (Table 2↗), 11 articles were selected for analysis in PubMed, 2 in Web of Science, 48 in b-On and 55 in EBSCO: MEDLINE and CINAHL. 116 articles were initially identified, with 6 being selected for full-text analysis following exclusions.

The selection process followed the PRISMA flow diagram, as represented in Figure 1↗[8]. The articles were classified based on their level of evidence using the Joanna Briggs Institute's Critical Appraisal Checklist[9].

The research and selection of studies were carried out by two of the authors independently and, if any discrepancy was found, the collaboration of another author would be requested, which did not occur. The Rayyan platform was used to analyze and exclude the articles.

FINDINGS

The six articles selected after the search for this integrative literature review are systematized in Table 3↗.

DISCUSSION

During labor, parturient are encouraged to change their positions, and the importance of more vertical positions that allow women greater mobility has been increasingly addressed [1]. Also, in the study by Shorey *et al*, it is reported that the choice of positions during labor is culturally influenced, varying according to the society in which the woman is inserted. In Western countries, the horizontal position is the most adopted, due to the development of health care that promoted the medicalization of childbirth with the use of medical instruments and the comfort of health professionals performing childbirth[2].

In the studies analyzed, we found that several interventions performed by obstetric nurses, related to the management of positions during labor, namely the use of the delivery bench and the active management of positions, have benefits during labor. In this sense, they must provide culturally sensitive care to the parturient, promoting informed choices regarding the position of delivery, ensuring a humanized delivery.

We conducted the discussion according to the effect of the use of vertical positions with the use of the delivery bench during the second phase of labor, through the analysis of the articles, also identifying the influence of obstetric nurses' interventions on labor pain, perineal trauma, neonatal outcomes, type of delivery and phases of labor, in induction of labor with oxytocin and in hemorrhage.

Labor Pain

Pain in labor reflects the interaction of visceral and somatic mechanisms. Visceral pain, predominant in the initial phase, results from cervical dilation and uterine contraction, and is often reported as diffuse, radiating to the back and lower abdomen[2]. During the expulsive phase, somatic pain takes on greater prominence due to the stretching and compression of the pelvic tissues, characterized as localized and acute[10].

The pain of labor is perceived in different ways, being shaped by the sociocultural context and prenatal care. This pain is portrayed as progressive, intense, of limited duration, variable and uncomfortable, but bearable and is influenced by several factors, such as fear of the unknown and insecurity, as well as cultural factors, which indirectly establish the ideal behavior of the parturient, passivity, obedience and resignation[16].

The positions adopted during the second stage of labor directly influence maternal pain and outcomes. Upright and sacral-flexible positions are associated with a reduction in pain intensity and an increase in parturient satisfaction[1].

The parturient should, therefore, be encouraged to choose positions that provide comfort, allowing the reduction of pain levels[5].

Asnawi *et al* also state that and although there is a wide variety of strategies for pain management, barriers such as lack of knowledge or practice among health professionals continue to limit the implementation of unconventional techniques. Educational interventions aimed at health professionals are essential to disseminate evidence-based practices that respect the autonomy and well-being of parturients[1].

With regard to pain associated with labor, Shedmake and Wakode, in their study, expose that there is a reduction in pain when the upright position is used with the support of the delivery bench, a fact proven in the study carried out by Yang *et al*, suggesting that vertical delivery positions with the use of this device can reduce pain intensity and improve the parturient's experience, because they facilitate fetal descent and reduce the duration of the second stage of labor, which may reduce the need for interventions such as episiotomy and analgesia[10,11]. However, Baigorra *et al* reported that the pain levels mentioned by the parturients increased with the use of the delivery bench[13]. Zang *et al* also state that upright positions have positive effects on pain management during labor, favoring less use of interventions and providing greater comfort to the parturient[14].

Perineal trauma

Perineal trauma refers to an injury to the perineum that occurs during vaginal delivery, which can affect other pelvic floor structures. Injuries can result from a perineal tear, which is a spontaneous tear of tissues classified as grades I, II, III, or IV, or from an episiotomy, which is a surgical incision made by the healthcare professional during vaginal delivery[17].

At the international level, the WHO recommends that normal birth care be conducted based on the best available scientific evidence. In this context, the WHO emphasizes as part of the "Good Practices of Labor and Birth Care" the importance of allowing freedom of positions and movements during labor, of encouraging upright positions at the time of delivery, and of restricting the practice of episiotomy[18].

Perineal trauma, due to laceration or episiotomy, can cause sexual dysfunctions, chronic local pain, discomfort during gynecological exams, urinary incontinence, coloproctological disorders and pelvic organ prolapse, requiring monitoring and treatment by multidisciplinary teams[17].

The study conducted by Rocha *et al* points out that the number of perineal lacerations in upright positions is statistically higher and that the lithotomy position contributes to the increase in interventions such as episiotomy[19].

Zang *et al* demonstrate that upright positions are associated with a reduced incidence of severe perineal trauma and episiotomy compared to horizontal positions[14]. However, there is a slight increase in the rate of mild perineal trauma, such as first and second degree lacerations, especially in the sacral-flexible positions, suggesting that, although vertical positions are advantageous to minimize severe perineal trauma, they can cause mild trauma due to increased perineal pressure, a fact corroborated by Zang *et al*[15]. The study carried out by Shorey *et al* report that the Use of the delivery bench was associated with situations of sphincter incontinence or discomfort due to more severe perineal lacerations[2].

Shedmake and Wakode also mention that there was a need to perform a longer episiotomy in parturients placed in the squatting position, compared to the lithotomy position[10]. Baigorra *et al* demonstrate, in their study, that there were no significant differences in the use of the delivery bench and the lithotomy position[13].

Neonatal Outcomes

Sacro-flexible positions are associated with better fetal oxygenation during labor, possibly due to the absence of aortocaval compression[14]. However, the authors of the studies analyzed are consistent when it comes to neonatal outcomes, reporting no significant differences between positions during the different stages of labor in the Apgar score or changes in fetal heart rate.

Type of Delivery and Stages of Labor

Eutocic birth is defined as one that occurs naturally and spontaneously, without the need for significant medical interventions, characterized by the spontaneous onset of labor, the normal progress of the stages of labor and the expulsion of the fetus vaginally, without complications. Dystocia is when there are difficulties in the labor process, requiring interventions to ensure maternal and fetal safety, through the use of forceps or a caesarean section[20].

According to the WHO, the first stage of labor, or dilation phase, is a period characterized by regular and painful uterine contractions, with the cervix in effacement and with cervical dilation up to 10 cm. It encompasses the latent phase up to 5 cm of dilation and, after that, the active phase. The second phase of labor, or expulsive phase, is the period between the total dilation of the cervix and birth, with the presence of expulsive uterine contractions. The third stage of labor, also known as dehydration, is the period that occurs after birth, until the placenta and fetal membranes are completely expelled[18].

Shedmake and Wakode mention that the duration of the second stage of labor is reduced in the squatting position, compared to horizontal positions, evidence corroborated by the studies carried out by Baigorra *et al* and Yang *et al*, which also demonstrate that the probability of instrumented deliveries is lower with the use of this type of position[10,11,13].

In the study conducted by Zang *et al*, it is described that Flexible sacrum positions, whether vertical or horizontal, reduce the incidence of dystocic delivery and the duration of the period of expulsive efforts[14].

Induction of Labor with Oxytocin

Oxytocin is a uterotonic agent that stimulates the smooth muscle cells of the uterus and allows the ejection of milk during breastfeeding, by causing the contraction of the myoepithelial cells of the nipple alveoli. In clinical practice, a synthetic analogue of oxytocin is often used to induce labor[21].

Of the studies analyzed, only Shedmake and Wakode address the issue of the need for oxytocin perfusion during labor, comparing it in different positions, concluding that this need is reduced in upright positions[10].

Hemorrhage

Hemorrhage encompasses any loss of blood from the genital tract during and after childbirth that results in hemodynamic instability. Postpartum hemorrhage (PPH) is characterized by a loss of 500 ml or more of blood in vaginal deliveries or 1000 ml in cesarean sections[22].

Shedmake and Wakode (2021) and Baigorra *et al* (2023) conclude that the use of the delivery bench increased bleeding during the second and third stages of labor. However, Yang *et al* (2020) refute the idea.

As a summary, we highlight the importance of the role of the obstetric nurse in the transformation of the current obstetric model[10,11,13]. With the growing appreciation of a more comprehensive and differentiated training in the health sector, the support of scientific evidence to guide care and decision-making is essential. This approach promotes the role of women in the childbirth process, ensuring respect for their legal rights and emphasizing humanization in labor and birth care. In addition to technical-scientific knowledge, the obstetric nurse must demonstrate sensitivity to understand childbirth as a unique and subjective experience, respecting the natural physiology of the female body and limiting invasive interventions to what is strictly necessary[19].

Although scientific evidence points to benefits in the use of upright positions during labor, many obstetric nurses continue to prefer supine positions, such as the lithotomy position, due to comfort and familiarity, demonstrating a lack of confidence to act according to their knowledge[1]. However, currently, parturients are already included in decision-making regarding the choice of position during childbirth, provided that the conditions are favorable[6].

The obstetric nurse thus plays a fundamental role in supporting and encouraging parturients to adopt vertical and comfort-promoting postures during labor, in addition to providing clear guidance on the benefits associated with these practices[4].

CONCLUSION

The upright position, associated with the use of the delivery bench, demonstrates significant benefits, including the reduction of the second stage of labor, pain associated with labor, and maternal and neonatal complications. The delivery bench allows comfort and stability, encouraging mobility and the adoption of positions that favor the progression of labor.

However, the evidence also indicates challenges and limitations. The increase in vaginal bleeding and first- and second-degree perineal lacerations in some situations should be considered in the individualized evaluation of each parturient.

The obstetric nurse plays an essential role in promoting a humanized birth that focuses on the needs of the parturient, ensures the quality of care provided, but also contributes to a positive birth experience. In the context of vertical childbirth, with the support of the delivery bench, this professional assumes himself as a facilitator of the natural birth process, respecting the physiology of the woman's body and the principles of maternal autonomy.

There is a variability in the practices of obstetric nurses in relation to labor management, especially in the second phase or expulsive period, due to the fact that they do not follow the recommendations, due to the existence of significant barriers, such as lack of knowledge, practical skills, confidence, human resources or adequate equipment that hinder the implementation of vertical positions, and because there is no clear consensus on certain practices. Reducing variability in these practices can improve the safety of the parturient and the perception of the care received.

Given the positive impact of the upright position and the use of the delivery bench, future investigations should explore more robust methodological approaches, such as randomized controlled trials with larger samples, in order to consolidate the existing evidence. In addi-

tion, it is essential to consider other theoretical and cultural perspectives that influence the acceptance and implementation of this practice, ensuring a holistic and woman-centered approach.

Continuous training and awareness of health professionals allows to minimize variability in clinical practice and ensure its compliance with scientific recommendations.

REFERENCES

1. Asnawi DH, Idris DR, McKenna L, Abdul-Mumin KH. Midwives' practice of maternal positions throughout active second stage labour: an integrative review. British Journal of Midwifery. 2023;31(8):468-76.

2. Shorey S, Chan V, Lalor JG. Perceptions of women and partners on labor and birth positions: A meta-synthesis. Birth. 2022;49(1):19-29.

3. Cardoso A, Aires C, Machado S, Silva C, Grilo AR. Guia orientador de boas práticas: Preparação para o parto. Science. 2023;6(3):219-26.

4. Zangão MO, Lobão A. Influência da mobilidade e posturas verticais na duração do primeiro estádio do trabalho de parto: revisão integrativa. Revista da Associação Portuguesa de Enfermeiros Obstetras. 2022;22(1):36-51.

5. Satone PD, Tayade SA. Alternative birthing positions compared to the conventional position in the second stage of labor: a review. Cureus. 2023;15(4).

6. Díaz EL, Rodriguez-Almagro J, Martinez-Galiano JM, Rodríguez RP, Hernández-Martínez A. Variability of clinical practice in the care of the second stage of labor among midwives in Spain. BMC nursing. 2024; 23(1):202.

7. Ordem dos Enfermeiros. Cuidados de saúde durante o trabalho de parto. Orientação n.º 002/2023. Direção-Geral da Saúde; 2023.

8. Vilelas J. Investigação – O Processo de Construção do Conhecimento (3.ª edição). Edições Sílabo. 2022.

9. Joanna Briggs Institute. JBI Levels of Evidence. Joanna Briggs Institute. 2013.

10. Shedmake PV, Wakode S. A hospital-based randomized controlled trial – comparing the outcome of normal delivery between squatting and lying down positions during labour. The Journal of Obstetrics and Gynecology of India. 2021;71:393-8.

11. Yang L, Yi T, Zhou M, Wang C, Xu X, Li Y, et al. Clinical effectiveness of position management and manual rotation of the fetal position with a U-shaped birth stool for vaginal delivery of a fetus in a persistent occiput posterior position. Journal of international medical research. 2020;48(6):0300060520924275.

12. Kurnaz D, Balacan Z, Karaçam Z. The Effects of Upright Positions in the Second Stage of Labor on Perineal Trauma and Infant Health: A Systematic Review and Meta-Analysis. Journal of Education and Research in Nursing. 2022;19(4):383-95.

13. Baigorra RF, da Silva YP, Furlanetto MP. Análise dos desfechos do uso da banqueta durante o trabalho de parto: revisão sistemática. Fisioterapia Brasil. 2023;24(2):215-30.

14. Zang Y, Lu H, Zhao Y, Huang J, Ren L, Li X. Effects of flexible sacrum positions during the second stage of labour on maternal and neonatal outcomes: A systematic review and meta-analysis. Journal of Clinical Nursing. 2020;29(17–18):3154-69.

15. Zang Y, Lu H, Zhang H, Huang J, Ren L, Li C. Effects of upright positions during the second stage of labour for women without epidural analgesia: A meta-analysis. Journal of Advanced Nursing. 2020; 76(12):3293-306.

16. de Araújo Lima AP, dos Santos Lima MM, de Lucena GP. Medo e dor no trabalho de parto e parto. Revista Recien-Revista Científica de Enfermagem. 2019;9(28):55-63.

17. Mamede L, Marano D, Dias MAB, Souza Junior PRB de. Prevalência e fatores associados à percepção da laceração perineal: estudo transversal com dados do Inquérito Nascer no Brasil, 2011 e 2012. Epidemiologia e Serviços de Saúde. 2024;33: e2023621.

18. World Health Organization. WHO recommendations on intrapartum care for a positive childbirth experience. World Health Organization; 2018.

19. Rocha BD da, Zamberlan C, Pivetta HMF, Santos BZ, Antunes BS. Posições verticalizadas no parto ea prevenção de lacerações perineais: revisão sistemática e metanálise. Revista da Escola de Enfermagem da USP. 2020;54:e03610.

20. Rezende J de. Obstetrícia fundamental. Em: Obstetrícia fundamental. 14a. Guanabara Koogan; 2018.

21. Nunes I, Nogueira-Silva C, Castro TC, Costa FJ, Antunes I, Santo S. Ocitocina no Trabalho de Parto--aceleração e indução. Acta Obstet Ginecol Port. 2021;15(3):301-7.

22. Betti T, Gouveia HG, Gasparin VA, Vieira LB, Strada JKR, Fagherazzi J. Prevalência dos fatores de risco para hemorragia pós-parto primária em um hospital universitário. Revista Brasileira de Enfermagem. 2023;76:e20220134.

Authors
Carolina Figueiredo
https://orcid.org/0009-0009-1204-9219
Telma Maio
https://orcid.org/0009-0009-5714-2425
Otília Zangão
https://orcid.org/00000-0003-2899-8768

Corresponding Author/Autora Correspondente
Maria Otília Brites Zangão – Departamento de Enfermagem, Universidade de Évora, Évora, Portugal.
otiliaz@uevora.pt

Authors' contributions/Contributos das autoras
CF: Study coordination, study design, data collection, storage and analysis, review and discussion of results.
TM: Data collection, analysis.
OZ: Coordination of the study, review and discussion of the results.
All authors have read and agreed with the published version of the manuscript.

Ethical Disclosures
Conflicts of Interest: The authors have no conflicts of interest to declare.
Financial Support: This work has not received any contribution, grant or scholarship.
Provenance and Peer Review: Not commissioned; externally peer reviewed.

Responsabilidades Éticas
Conflitos de Interesse: Os autores declararam não possuir conflitos de interesse.
Suporte Financeiro: O presente trabalho não foi suportado por nenhum subsídio ou bolsa.
Proveniência e Revisão por Pares: Não comissionado; revisão externa por pares.

Table 1 – Formulation of the research question using the PICo strategy.

Acronym	Description	Question Component
P	Population	Parturient
I	Intervention	Interventions of obstetric nurses in the use of the upright position with the support of the delivery bench
Co	Context	Second stage of labor

Table 2 – Search strategy in different databases.

Databases	Limiters	Search Strategy
PubMed	Full Text Publication Date: 2020-2025 Language: English, Portuguese and Spanish	(labor stage, second) AND (parturition) AND (patient positioning).
EBSCOhost: MEDLINE e CINAHL	Full Text Publication Date: 2020-2025 Language: English and Portuguese	(labor stage, second) OR (parturition) AND (nurse midwives) AND (posture).
Web of Science	Full Text Publication Date: 2020-2025 Language: English	(labor stage, second) OR (parturition) AND (nurse midwives) AND (posture).
b-On	Full Text Publication Date: 2020-2025 Language: English Source Types: Academic Journals	(labor stage, second) AND (parturition) AND (nurse midwives) AND (patient positioning).

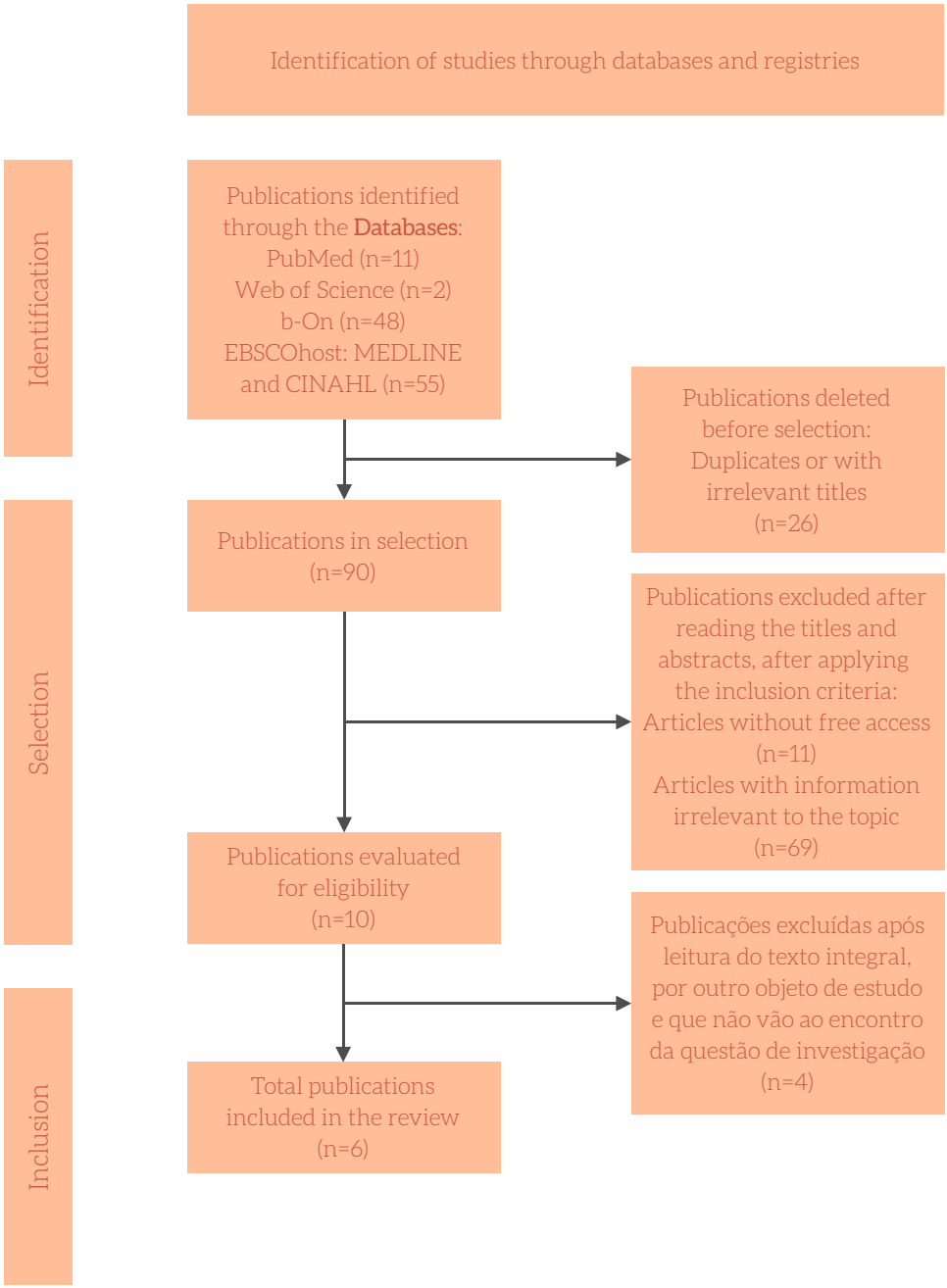

Figure 1 – PRISMA research flowchart.
Source: Adapted from https://www.prisma-statement.org/

Table 3 – Results of the analyzed articles.

Title (Authors, Year) Type of Study/Level of Evidence	Goal	Sample	Main Results/Conclusions of the Article
Article 1 Perceptions of women and partners on labor and birth positions: A meta-synthesis[2]. Location: Singapore. Date: June 28, 2021. Type of Study: Meta synthesis. Level of Evidence: 1[9].	To explore women's and their partners' perceptions of birth positions during the first and second stages of labor, so that maternity health professionals can provide quality, patient-centered care.	The research identified 606 articles in the scientific databases PubMed, Embase, PsycINFO, CINAHL, Scopus and ProQuest. 7 articles were selected. The included studies used the following study designs: grounded theory, descriptive qualitative, observational qualitative, and mixed-methods analysis.	The article concluded that women's preference for birthing positions varies according to personal, social and cultural issues. The comfort reported during labor is based on the woman's freedom of choice of position, guaranteeing her greater control and reducing fear and anxiety. The squatting position was evaluated as convenient for performing expulsive efforts, with greater control of the process by the parturient, while the horizontal position was mentioned as more painful and tiring. In the postpartum period, situations of sphincter incontinence or discomfort due to more exacerbated perineal lacerations, associated with the use of specific positions, including the use of the delivery bench, were reported. The emotional support provided by the partner and health professionals, as well as the information provided throughout labor, allowed an increase in the woman's satisfaction, due to the ability to make informed decisions regarding the positions to adopt during the process.
Article 2 A Hospital-Based Randomized Controlled Trial—Comparing the Outcome of Normal Delivery Between Squatting and Lying Down Positions During Labor[10]. Location: India. Date: January 12, 2021. Study Type: Randomized Clinical Trial. Level of Evidence: 1[9].	To compare the results, in eutocic deliveries, between the upright position and the lithotomy position, assessing the risks and benefits of both during the second and third stages of labor.	This study was carried out over 18 months, with 212 randomly selected parturient, separated into two groups: the first group (Group A) with 106 parturient in the squatting position and the second group (Group B) with 106 parturient in the lithotomy position. In the first group, the farrowing bench was used. The parturient were monitored throughout the process.	Group A showed a reduction in the duration of the second and third stages of labor, compared to Group B, as well as a decrease in the use of oxytocin and in the mean score on the pain scale used. However, hemorrhage was higher in Group A. Neonatal outcomes and the need for episiotomy or instrumented delivery were similar in both groups. Even so, in Group A, there was a need for a longer episiotomy. The study concluded that the squatting position offered advantages over the lithotomy position.

Table 3 – Results of the analyzed articles.↔↖

Title (Authors, Year) Type of Study/Level of Evidence	Goal	Sample	Main Results/Conclusions of the Article
Article 3 The Effects of Upright Positions in the Second Stage of Labor on Perineal Trauma and Infant Health: A Systematic Review and Meta-Analysis[12]. Location: Turkey. Date: December 1, 2022. Design of Study: Systematic Review of the Literature and Meta-Analysis. Level of Evidence: 1[9].	To determine the effect of upright positions during the second stage of labor on perineal trauma and neonatal health outcomes.	The study includes 16 articles published between 2008 and 2019. The analyzed articles were carried out in several regions of Turkey, North America, Asia and Europe. The search was conducted in the scientific databases PubMed, Ulusal Tez Merkezi, DergiPark, Ulakbim, MEDLINE, Cochrane Library, and EBSCO.	Upright positions during the second stage of labor reduced the likelihood of episiotomy but increased the development of first- and second-degree lacerations. With regard to neonatal health outcomes, these positions showed no significant changes. The study concluded that the use of upright positions can contribute to preserving perineal integrity by reducing the need for episiotomy and more serious lacerations, and can also contribute to improving maternal health and satisfaction by promoting the comfort of the parturient.
Article 4 Analysis of outcomes with birthing stool during labor: literature review[13]. Location: Brazil. Date: February 20, 2023. Design: Systematic Review of the Literature. Level of Evidence: 1[9].	To analyze studies related to the use of the delivery bench, published in the last 10 years, especially during the second phase of labor.	The sample comprises 4 studies: 1 clinical trial and 3 randomized studies. The research was carried out in the scientific databases PubMed, BVS, Scielo and PEDro, between 2011 and 2021.	The study concluded that the use of the delivery bench reduced the duration of the first and second stages of labor and promoted spontaneous delivery. However, it increased the levels of pain reported by the parturient, compared to other positions, and bleeding. Regarding the need for episiotomy and the risk of perineal trauma, no significant differences were demonstrated. Although the delivery bench favors a faster and more natural delivery, more studies with greater methodological rigor are needed to assess the benefits and potential risks of its use.

Table 3 – Results of the analyzed articles.

Title (Authors, Year) Type of Study/Level of Evidence	Goal	Sample	Main Results/Conclusions of the Article
Article 5 Effects of flexible sacrum positions during the second stage of labor on maternal and neonatal outcomes: A systematic review and meta-analysis[14]. Location: China. Date: June 25, 2020. Design of Study: Systematic Review of the Literature and Meta-Analysis. Level of Evidence: 1[9].	To assess the effects of flexible sacrum positions on childbirth, duration of the second stage of labor, perineal trauma, postpartum hemorrhage, maternal pain, changes in fetal heart rate pattern and Apgar score.	Randomized controlled trials comparing the use of flexible sacrum positions with non-flexible positions in the second phase of labor were included in the study. The search was carried out in the scientific databases PubMed, Embase, The Cochrane Library, CINAHL, CNKI, SinoMed and Wanfang, by 2019.	The flexible positions of the sacrum promoted a reduction in the incidence of dystocic delivery (instrumented or cesarean section), episiotomy or severe perineal trauma and exacerbated pain, as well as a reduction in the duration of time in which the parturient remains in expulsive efforts, increasing, however, the incidence of first-degree lacerations. Regarding the total duration of the second stage of labor, maternal satisfaction and neonatal outcome, no significant differences were found. The article also suggests that these positions should be adapted to the individual conditions of each woman in labor, concluding that flexible sacrum positions seem to promote maternal well-being, but still recommending further studies with scientific rigor to validate the conclusions.
Article 6 Effects of upright positions during the second stage of labor for women without epidural analgesia: A meta-analysis[15]. Location: China. Date: August 27, 2020. Study Type: Meta-Analysis of Randomized Controlled Trials. Level of Evidence: 1[9].	To evaluate the effects of upright positions during the second stage of labor in parturient no epidural analgesia.	The meta-analysis encompasses 12 randomized controlled trials, with a total of 4314 parturient. The scientific databases used in the research were The Cochrane Library, PubMed, Embase, CINAHL and ProQuest, until 2019.	With the use of upright positions during labor and delivery, the rate of instrumented vaginal deliveries has reduced, as well as the duration of the period of expulsive efforts. However, the risk of second-degree perineal lacerations has increased. There was no change in the total duration of the second stage of labor. The study also demonstrates the need for more studies with scientific rigor to validate the conclusions. It also highlights the importance of encouraging vertical positions during childbirth, which implies an active role for health professionals, including obstetric nurses, in supporting and guiding women in adopting these positions.