



VAGINAL TEAR AND INTEGRITY IN VAGINAL BIRTHS: AN ANALYSIS OF ASSOCIATED FACTORS

LACERAÇÃO E INTEGRIDADE VAGINAL EM PARTOS NORMAIS: UMA ANÁLISE DE FATORES ASSOCIADOS

LACERACIÓN E INTEGRIDAD VAGINAL EN PARTOS NORMALES: UN ANÁLISIS DE FACTORES ASOCIADOS

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How to cite: Bevilacqua JC, Ferreira ES, Esteche CMGCE, Melo LPT, Rodrigues DP, Ferreira GRON, et al. Vaginal tear and integrity in vaginal births: an analysis of associated factors. Online Braz J Nurs. 2026;25(1):e20266927. <https://doi.org/10.17665/1676-4285.20266927>

RESUMO

Objetivo: Analisar a associação entre a ocorrência e o grau de laceração vaginal e o perfil sociodemográfico, obstétrico e neonatal de puérperas submetidas ao parto vaginal, bem como a posição adotada durante o parto. **Metodologia:** Este estudo transversal e quantitativo foi realizado em uma maternidade de referência para alto risco obstétrico no estado do Pará. Foram analisados 139 prontuários de puérperas submetidas ao parto vaginal entre 2022 e 2023. Os dados foram submetidos à análise por estatística descritiva, adotando-se nível de significância estatística de $p < 0,05$. **Resultados:** Entre as 139 puérperas analisadas, 97 apresentaram laceração vaginal, predominando as lacerações de 1º grau. Observou-se maior incidência de laceração entre mulheres não nulíparas, com diferença estatisticamente significativa ($p = 0,015$). Verificou-se associação entre o peso neonatal e o grau de laceração ($p = 0,013$), indicando que maiores pesos ao nascer estiveram relacionados a lacerações de maior gravidade. Não foram observadas associações entre a ocorrência de lacerações e a idade materna, a escolaridade, a posição adotada durante o parto ou a categoria profissional responsável pela assistência ao parto. **Conclusão:** Identificou-se associação entre a ocorrência de lacerações vaginais e a paridade, bem como entre o grau de laceração e o peso do recém-nascido ao nascer. Esses achados contribuem para a compreensão dos fatores envolvidos na ocorrência de lacerações vaginais no contexto amazônico e subsidiam a discussão sobre estratégias para qualificar a assistência ao parto.

Descritores: Assoalho Pélvico; Assistência ao Parto; Parto Vaginal.

ABSTRACT

Objective: To analyze the association between the occurrence and grade of vaginal tear and the sociodemographic, obstetric, and neonatal profile of puerperal women who underwent vaginal birth as well as the position adopted during childbirth. **Methodology:** This cross-sectional, quantitative study was conducted in a referral maternity hospital for high-risk obstetrics in the state of Pará, Brazil. A total of 139 medical records of puerperal women who underwent vaginal birth between 2022 and 2023 were analyzed. Data were analyzed using descriptive statistics, adopting a statistical significance level of $p < 0.05$. **Results:** Among the 139 puerperal women analyzed, 97 presented vaginal tears, with grade I tears predominating. A higher incidence of tear was observed among non-nulliparous women, with a statistically significant difference ($p = 0.015$). An association was identified between neonatal weight and the grade of tear ($p = 0.013$), which indicates that higher birth weights were related to more severe tears. No associations were observed between the occurrence of tears and maternal age, educational level, the position adopted during childbirth, or the professional category responsible for childbirth care. **Conclusion:** An association was identified between the occurrence of vaginal tears and parity as well as between the grade of tear and newborn birth weight. These findings contribute to the understanding of factors involved in the occurrence of vaginal tears in the Amazonian context and support discussions on strategies to improve childbirth care.

Descriptors: Pelvic Floor; Childbirth Care; Vaginal Birth.

RESUMEN

Objetivo: Analizar la asociación entre la ocurrencia y el grado de laceración vaginal y el perfil sociodemográfico, obstétrico y neonatal de puérperas sometidas al parto vaginal, así como la posición adoptada durante el parto. **Metodología:** Este estudio transversal y cuantitativo se realizó en una maternidad de referencia para alto riesgo obstétrico en el estado de Pará. Se analizaron 139 historias clínicas de puérperas sometidas al parto vaginal entre 2022 y 2023. Los datos fueron sometidos a análisis mediante estadística descriptiva, adoptándose un nivel de significancia estadística de $p < 0,05$. **Resultados:** Entre las 139 puérperas analizadas, 97 presentaron laceración vaginal, predominando las laceraciones de primer grado. Se observó mayor incidencia de laceración entre mujeres no nulíparas, con diferencia estadísticamente significativa ($p = 0,015$). Se verificó asociación entre el peso neonatal y el grado de laceración ($p = 0,013$), indicando que mayores pesos al nacer estuvieron relacionados con laceraciones de mayor gravedad. No se observaron asociaciones entre la ocurrencia de laceraciones y la edad materna, la escolaridad, la posición adoptada durante el parto o la categoría profesional responsable de la asistencia al parto. **Conclusión:** Se identificó asociación entre la ocurrencia de laceraciones vaginales y la paridad, así como entre el grado de laceración y el peso del recién nacido al nacer. Estos hallazgos contribuyen a la comprensión de los factores involucrados en la ocurrencia de laceraciones vaginales en el contexto amazónico y respaldan la discusión sobre estrategias para mejorar la calidad de la atención al parto.

Descriptores: Suelo Pélvico; Asistencia al Parto; Parto Vaginal.

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What is already known:

- Vaginal lacerations are common after vaginal delivery.
- Maternal, fetal, and obstetric care factors may influence their occurrence.
- First- and second-degree lacerations are the most prevalent.

What this article adds:

- The majority of perineal lacerations were first-degree, and episiotomy was infrequent (9.0%).
- Previous vaginal delivery experience showed a protective effect against perineal lacerations.
- Higher newborn weight was associated with increased severity of perineal trauma.

INTRODUCTION

Vaginal tears are frequent events after childbirth and may affect the cervix, vagina, vulva, and perineum⁽¹⁾. These injuries are classified according to their extent into four grades: i) grade I tear, which involves only the skin; ii) grade II tear, which compromises muscle tissue; iii) grade III tear, which extends to the anal sphincter; and iv) grade IV tear, which, in addition to the anal sphincter, also affects the rectum^(2,3).

Several factors may influence the occurrence of vaginal tears during childbirth. These include maternal characteristics, such as parity, maternal age, and gestational age; fetal characteristics, such as head circumference; and care-related factors, including the duration of the second stage of labor, operative vaginal birth, the use of oxytocin, and labor induction. However, there is still no consensus in the literature regarding which of these factors exert the most consistent influence on the occurrence of these injuries⁽⁴⁾.

The expected frequency of some grade of tear in vaginal births ranges from 53% to 79%, with grade I and grade II tears being the most prevalent⁽¹⁾. A cross-sectional study based on data from the national survey *Birth in Brazil: National Survey on Labor and Birth*, coordinated by Fundação Oswaldo Cruz and conducted between 2011 and 2012, identified an association between self-reported perception of vaginal tear and factors such as maternal adolescence, primiparity, excessive gestational weight gain, and the performance of fundal pressure during childbirth. Conversely, living in the North or Northeast regions, having incomplete primary education, having a newborn small for gestational age, and insufficient gestational weight gain were associated with a lower proportion of this outcome⁽⁵⁾.

Experience in the setting of the present study, which made it possible to observe the occurrence of vaginal tears in different care contexts, motivated the conduct of this investigation. The objective was to analyze the associations between the occurrence of these injuries and maternal, fetal, and care-related factors involved during labor and childbirth. The results may contribute to the development of strategies that favor a more favorable perineal outcome for women as well as support safer care practices.

The present study aimed to analyze the relationship between the occurrence and grade of vaginal tear and the sociodemographic, obstetric, and neonatal profile as well as the position adopted during childbirth, among puerperal women who underwent vaginal birth.

METHOD

This is a cross-sectional study with a quantitative approach, conducted in a public maternity hospital that serves as a referral center for high-risk obstetrics located in the city of Belém, state of Pará, Brazil. The volume of births performed places this institution among the main references in maternal care in the state, serving users of the Brazilian Unified Health System and operating as an open-door obstetric service, providing care for cases of medium and high complexity.

Data were obtained from medical records of puerperal women who underwent vaginal birth in the years 2022 and 2023, admitted to the institution for delivery, as well as from their newborns, either live-born or stillborn, with birth weight ≥ 500 g or gestational age greater than 20 weeks. Medical records related to cesarean births, duplicate records, births that occurred outside the maternity hospital, and pregnancies with gestational age below 20 weeks or newborns weighing less than 500 g were excluded.

The definition of the number of medical records analyzed was based on the total number of births that occurred in the years 2022 and 2023. Sample size was calculated using the SurveyMonkey online calculator, considering a margin of error of 5% and a confidence interval of 95%.

Data collection was carried out in the institution's medical records archive sector between December 2024 and March 2025, using a specific instrument based on the *Birth in Brazil Project* and adapted from Leal et al.⁽⁶⁾.

Data were recorded and organized in a spreadsheet in Microsoft Excel® and subsequently analyzed using descriptive statistics. Absolute and relative frequencies were presented using the public-domain program R (R Core Team, 2024), version 4.2.2. Results were expressed in tables containing absolute number, mean, standard deviation (SD), percentage, and median, according to the nature of the variables.

To analyze the association between the response variable "occurrence of tear," of a dichotomous categorical nature (yes/no), and the quantitative variables, the Wilcoxon and Kruskal-Wallis tests were used. For qualitative variables with categories containing values lower than 5, Fisher's exact test was applied; for those with values greater than 5, the chi-square test was used, adopting a significance level of 5% ($p < 0.05$).

Variables with incomplete data or missing information were excluded from percentage calculations and statistical

analyses. Considering the cross-sectional design of the study and the statistical tests employed, the analyses allow only the description of associations between variables, and it is not possible to establish causal relationships.

The study followed the ethical guidelines established by Resolutions No. 466/2012 and No. 510/2016 of the National Health Council ^(7,8). The research was approved by the research ethics committees of the Institute of Health Sciences of Universidade Federal do Pará and Fundação Santa Casa de Misericórdia do Pará under CAAE No. 75008823.1.0000.0018 and No. 75008823.1.3002.5171, respectively (Appendices C and D).

RESULTS

The mean age of the parturients was 24 years (SD = 7), with a minimum age of 13 years and a maximum age of 43 years. A predominance of the age group between 19 and 35 years was observed, corresponding to 72.7%

of the sample (n = 101). The proportion of parturients older than 35 years was 7.2% (n = 10). Notably, there was also a considerable frequency of parturients younger than 18 years, who represented 20.1% of the sample (n = 28). Regarding educational level, a predominance of complete high school education was observed (49.6%; n = 66), followed by incomplete primary education (20.3%; n = 27) (Table 1).

Regarding obstetric characteristics, most parturients were nulliparous (54.0%; n = 74), and 50.7% (n = 70) had no history of previous vaginal birth. Among the 139 parturients included in the study, six (n = 6) had no record in the medical chart regarding the occurrence of tear. Among the 133 parturients with this information recorded, 73.0% (n = 97) presented some type of tear during childbirth. Among these, grade I tear predominated (67.0%; n = 57).

Episiotomies were recorded in 134 medical records. Most parturients did not undergo the procedure (91.0%; n = 122), while 9.0% (n = 12) did (Table 1).

Table 1 – Sample characterization according to the sociodemographic and obstetric characteristics of puerperal women assisted at Fundação Santa Casa de Misericórdia do Pará, 2022-2023, Belém, Pará, Brasil.

Variable	n	% or mean (SD)
Age, years	139	24 ± 7 (23)
≤ 18	28	20.1
19-35	101	72.7
> 35	10	7.2
Residence		
Greater Belém	86	61.9
Other cities	53	38.1
Education		
Illiterate	1	0.8
Complete primary education	13	9.8
Incomplete primary education	27	20.3
Complete high school	66	49.6
Incomplete high school	22	16.5
College degree	4	3.0
No information	6	
Parity		
Nulliparous	74	54.0
Multiparous	64	46.0
No information	1	
Number of previous vaginal births		
0	70	50.7
1	44	31.9
2	16	11.6
≥ 3	8	5.8
No information	1	
Occurrence of tear		
Yes	97	73.0
No	36	27.0
No information	6	
Grade of tear		
Grade I	57	67.0
Grade II	27	31.7
Grade III	1	1.1
No information	12	
Episiotomy performed		
Yes	12	9.0
No	122	91.0
No information	5	

n (%); mean ± standard deviation (SD) (median).

Source: author's own work, 2026.

Table 2 presents the association between the occurrence of tear and maternal, neonatal, and care-related variables. Among the 97 women who presented tear, the mean age was 24 ± 7 years, whereas among the 36 who did not present tear the mean age was 26 ± 7 years. No statistically significant association was observed between maternal age and the occurrence of tear ($p = 0.165$). A similar result was identified in the analysis by age group, which also showed no association with the outcome ($p = 0.683$). Likewise, educational level showed no statistically significant association with the presence or absence of tear ($p = 0.143$).

The mean number of previous vaginal births was 0.83 ± 1.26 . Among women who did not present tear, the mean number of previous vaginal births was 1.31 ± 1.45 , whereas among those who presented tear this mean was 0.65 ± 1.14 . This difference was statistically significant ($p < 0.05$). A similar result was observed in the analysis of nulliparity, which showed a significant association with the occurrence of tear ($p = 0.015$).

No statistically significant association was identified between the professional category responsible for childbirth care and the occurrence of tear ($p = 0.240$).

Table 2 – Association between the occurrence of perineal/vaginal tear and maternal variables and the professional category responsible for childbirth care at Fundação Santa Casa de Misericórdia do Pará, 2022-2023, Belém, Pará, Brasil.

Variables	Total ¹ n (%)	No ¹ n (%)	Yes ¹ n (%)	p-value ²
Age, years	25 ± 7 (23.0)	26 ± 7 (25.0)	24 ± 7 (23.0)	0.165
Age group, years	133	36	97	0.683
≤ 18	26 (20.0)	6 (17.0)	20 (20.6)	
19-35	96 (72.2)	26 (72.0)	70 (72.2)	
> 35	11 (8.3)	4 (11.0)	7 (7.2)	
Education	127	33	92	0.143
Illiterate	1 (0.8)	0 (0.0)	1 (1.0)	
Complete primary education	12 (9.5)	6 (17.0)	6 (6.3)	
Incomplete primary education	26 (20.5)	10 (28.0)	16 (17.0)	
Complete high school	63 (49.6)	12 (33.0)	51 (53.0)	
Incomplete high school	21 (16.5)	7 (19.0)	14 (15.0)	
College degree	4 (3.1)	0 (0.0)	4 (4.2)	
No. of previous vaginal births	0.83 ± 1.26	1.31 ± 1.45	0.65 ± 1.14	0.003
Nulliparous	132	35	97	0.015
No	61 (46.2)	10 (28.6)	51 (52.6)	
Yes	71 (53.8)	25 (71.4)	46 (47.4)	
Professional category responsible for childbirth care	121	32	89	0.240
Nurse	28 (23.1)	5 (15.6)	23 (25.8)	
Physician	93 (76.9)	27 (84.4)	66 (74.2)	
No information	12	4	8	

¹Mean $\pm$ standard deviation (median); n (%).

²Wilcoxon rank-sum test; Fisher's exact test; chi-square test of independence.

Source: author's own work, 2026.

Table 3 presents the distribution of the grade of tear according to the maternal position adopted during childbirth and the newborn birth weight. Analysis using Fisher's exact test indicated no statistically significant association

between the grade of tear and maternal position during childbirth ($p = 0.84$). On the other hand, a statistically significant association was identified between the grade of tear and birth weight ($p = 0.013$).

Table 3 – Distribution of the relationship between tear grade, maternal position during childbirth, and newborn birth weight among puerperal women assisted at Fundação Santa Casa de Misericórdia do Pará, 2022-2023, Belém, Pará, Brasil.

Variables	Total ¹ n (%)	Grade I n (%)	Grade II n (%)	Grade III n (%)	p-value
Maternal position during childbirth	80	55	24	1	0.84 ¹
Birthing stool	5 (6.3)	4 (7.0)	1 (4.0)	0 (0.0)	
Squatting	1 (1.2)	0 (0.0)	1 (4.0)	0 (0.0)	
Side-lying	3 (3.8)	3 (5.3)	0 (0.0)	0 (0.0)	
Horizontal	1 (1.2)	1 (1.8)	0 (0.0)	0 (0.0)	
Lithotomy	4 (5.0)	3 (5.3)	1 (4.0)	0 (0.0)	
Sitting/semi-sitting	66 (82.5)	44 (77.0)	21 (84.0)	1 (100)	
Birth weight (grams)²	2974 ± 598 (3072)	2868 ± 596 (2864)	3172 ± 549 (3290)	$3762 \pm \text{NA}^3$ (3762)	0.013 ²

¹Fisher's exact test.

²Mean $\pm$ standard deviation (median); Kruskal-Wallis test.

³Not applicable.

Source: author's own work, 2026.

DISCUSSION

The findings of this study on factors associated with vaginal tears during childbirth are consistent with prior research, particularly regarding the prevalence and distribution of the different grades of tear⁽²⁾.

The low occurrence of grade III tears observed in this sample is also consistent with the literature, which reports the prevalence of this type of trauma ranging from 0.1%-10.2%, depending on the profile of the parturients, obstetric conditions, and care practices adopted at the time of childbirth⁽⁹⁾.

A retrospective study conducted at a university hospital in Italy, which followed more than 22,000 women between 2009 and 2019, identified a rate of severe anal sphincter tears of 0.4%. Although the frequency observed in the present study is higher than that found in the Italian population, both results fall within the range described in the literature. This finding reinforces that severe tears constitute relatively rare events, even in services with greater care complexity⁽¹⁰⁾.

The episiotomy rate identified in this study is consistent with international recommendations. Although earlier documents from the World Health Organization (WHO) mentioned a rate of approximately 10% as acceptable⁽¹¹⁾, more recent guidelines indicate that there is no ideal rate for this procedure and emphasize that it should not be performed routinely, as there is no evidence of protection against more severe tears⁽¹²⁾.

Regarding sociodemographic characteristics, the puerperal women had a mean age of 24 years, with predominance of the age group between 19-35 years, a period widely described in the literature as the one with the highest fertility and lowest obstetric risk⁽¹³⁾. A considerable proportion of adolescents was also observed, exceeding the national average of 14.6% of births among girls younger than 18 years⁽¹⁴⁾. Overall, adolescent pregnancy is frequently associated with conditions of social vulnerability, gaps in access to contraceptive methods, and insufficient sexual education⁽¹⁵⁾.

When relating this finding to the central theme of the study, the literature recognizes adolescent pregnancy as an important obstetric risk factor, since the adolescent body may not yet be fully prepared for childbirth due to the lower anatomical and physiological maturity of the reproductive tract. This condition may increase the likelihood of perineal tears, prolonged labor, and complications during the postpartum period⁽¹⁶⁾. Furthermore, studies indicate a greater propensity for perineal tears both in very young women and in those of advanced maternal age, mainly due to tissue immaturity and reduced perineal elasticity, respectively⁽¹⁷⁾.

However, because the proportions of tear were similar among the different age groups analyzed in this study, no statistically significant association was observed between maternal age and the occurrence of tear. Thus, in this specific group of parturients, age alone was not a determining factor for perineal trauma.

Regarding educational level, the results partially differ from part of literature, which frequently associates low levels of education with greater obstetric vulnerability, mainly due to possible difficulties in access to health services,

information, and adherence to health guidance⁽¹⁸⁾. A meta-analysis conducted in Ethiopia in 2018, which included 20 studies and 13,744 pregnant women, evaluated the influence of maternal education on knowledge, childbirth preparedness, and decision-making capacity in the face of obstetric complications. The results indicated that women with higher educational levels had better preparation and greater knowledge during pregnancy and childbirth⁽¹⁹⁾. Similarly, the WHO states that higher maternal education may favor better understanding and adherence to the guidance provided during prenatal care and labor, contributing to a safer, more informed experience⁽¹²⁾.

Despite this evidence, the univariate analysis conducted in this study did not identify a significant association between education and the occurrence of tear. This result highlights the multifactorial nature of this outcome, which suggests that sociodemographic variables alone are not sufficient to explain the phenomenon.

On the other hand, the findings reinforce the role of parity and previous vaginal birth experience in perineal integrity. Recent studies indicate that multiparity is associated with a lower risk of severe tears, which highlights its relevance as a protective factor in this context.

Previous studies indicate that prior vaginal birth experience contributes to greater compliance and adaptive capacity of tissues during the expulsive phase. Thus, women without a history of vaginal birth tend to present greater vulnerability to perineal trauma, as observed in this study^(10,20).

A systematic review with meta-analysis conducted in Denmark in 2022, which included 23 studies carried out in 11 countries over 19 years, discussed possible mechanisms for this association. Among them are the presence of a uterus with contractility typical of multiparous women combined with a perineum with characteristics similar to those of primiparous women as well as the higher incidence of obstetric interventions in this group⁽²¹⁾.

The differences observed between the analyses reinforce the complexity of the factors associated with the integrity of perineal tissues. In the present study, the analysis of the number of previous vaginal births proved to be more sensitive in identifying the actual risk of tear, which suggests that perineal protection is more closely related to the concrete experience of vaginal birth than merely to reproductive history.

Regarding the association between the professional category responsible for childbirth care and the occurrence of tear, in institutional settings with well-established care protocols and clearly defined team responsibilities, the professional category alone is unlikely to determine the risk of perineal trauma. This occurs because physicians and obstetric nurses tend to follow similar care guidelines, which reduces variations associated with professional profile⁽²²⁾.

Literature presents heterogeneous results regarding the influence of care models on perineal outcomes. A Brazilian retrospective study conducted in 2018 with 525 vaginal births identified perineal tear in 55.2% of women, with a significant association between the professional category and the outcome, including a higher frequency of severe tears in births assisted by obstetric nurses⁽²³⁾.

On the other hand, an updated Cochrane systematic

review, which included 17 randomized clinical trials involving 18,533 women, did not identify significant differences in the occurrence of severe perineal tears between care models led by obstetric nurses and those led by other professionals⁽²⁴⁾, a result similar to that observed in the present study.

Regarding the position adopted by the parturient during childbirth, despite the predominance of the sitting or semi-sitting position, which reflects the care pattern of the studied service, no statistically significant association was identified between this variable and the severity of tears. However, the Ministry of Health recommends discouraging the supine position, the horizontal dorsal decubitus position, and the semi-supine position during the second stage of labor, encouraging the adoption of alternative positions such as squatting, lateral, or hands-and-knees, according to the woman's preference⁽²⁵⁾.

The high frequency of the sitting or semi-sitting position may reflect cultural, organizational, and care-related aspects of the service, since the choice of childbirth position is often influenced by institutionalized practices and guidance from the health team rather than exclusively by women's preferences or available scientific evidence. Studies indicate that the positions adopted during labor are often determined by care routines and the prevailing culture of care in health units, which may limit women's autonomy and reflect local norms of obstetric care⁽²⁶⁾.

Studies also indicate that the semi-sitting position may facilitate perineal access, vaginal examination, fetal monitoring, and visualization of the expulsive phase, which may contribute to its adoption as the preferred approach. However, this predominance may indicate less institutional encouragement for the use of alternative positions recommended by national and international guidelines^(12,25,27).

Literature presents heterogeneous results regarding the influence of maternal position on perineal trauma. A retrospective cohort study conducted in Italy with 2,240 term nulliparous women identified that non-supine positions were associated with a greater likelihood of intact perineum, lower risk of perineal trauma, and reduced fetal descent time⁽²⁸⁾.

On the other hand, a Brazilian retrospective cohort study conducted in a low-risk public maternity hospital with 264 pregnant women did not identify a statistically significant association between maternal position in the second stage of labor and the occurrence of perineal tears, despite the predominance of vertical positions⁽²⁹⁾. These results reinforce the heterogeneity of findings in prior research.

Regarding factors associated with tear severity, newborn weight showed an association with greater intensity

of perineal trauma. A retrospective case-control study with 108 multiparous women identified an association between higher fetal weight and the occurrence of severe perineal tear, with an increase greater than 500 g in birth weight considered a relevant risk factor⁽³⁰⁾.

Another observational study conducted in Spain, which evaluated births between 2010 and 2017, demonstrated that newborns weighing more than 3,000 g had a twofold higher risk of grade III and grade IV tears with each additional increment of 500 g, a result attributed to greater biomechanical stress on the pelvic floor⁽⁹⁾. These findings reinforce the need for careful clinical monitoring in the management of the expulsive phase, especially in the presence of fetuses with higher estimated weight.

Among the limitations of this study is the use of data obtained from medical records, which may present inconsistencies or incomplete documentation, which indicates the need for greater standardization in recording this information. In addition, this study was conducted in a single service, which limits the generalization of the results, since population characteristics, health system organization, and care practices may vary across different contexts.

CONCLUSION

The present study identified a high proportion of parturients younger than 18 years and with high school education among the women included in the sample, which may reflect greater vulnerability of this population in the context of the investigated setting. Regarding tears, a predominance of lesions classified as grade I and grade II was observed.

The occurrence of tears showed an association with the number of previous vaginal births and with nulliparity. On the other hand, no associations were observed with sociodemographic variables, such as maternal age and educational level, nor with the professional category responsible for childbirth care.

Overall, the results indicate that the occurrence of tears is related to the interaction of multiple factors, which highlights the complexity of this obstetric event. These findings reinforce the importance of adopting individualized care practices that prioritize safety and contribute to a more positive childbirth experience for women. In addition, the results may support future investigations, especially in the Northern region of Brazil, which faces specific challenges in obstetric care due to population diversity and the unequal distribution of health professionals.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interests.

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All authors are responsible for the textual writing and critical review of the intellectual content, for the final published version, and for all ethical, legal, and scientific aspects related to the accuracy and integrity of the study.



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