




## INTEGRATIVE REVIEW ON THE INCIDENCE OF VAGINAL DELIVERY AND CESAREAN SECTIONS IN BRAZIL IN THE LAST TEN YEARS

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### ABSTRACT

This study reviewed the incidence of vaginal deliveries and cesarean sections in Brazil in the last ten years, with the objective of analyzing the trends of these delivery modalities and the factors associated with choice. The survey revealed that, despite some regions showing a reduction in cesarean section rates, Brazil still has one of the highest rates in the world, with about 55% of cesarean sections registered in 2022. The choice of the type of delivery is influenced by cultural and socioeconomic factors and the structure of health care. Regions with greater access to health services and higher educational level tend to have higher cesarean section rates, while rural areas have a higher incidence of vaginal deliveries. The culture of preference for cesarean section, the doctor-patient relationship, and the lack of public policies that encourage safe vaginal delivery are some of the factors that perpetuate this scenario. The COVID-19 pandemic has also had an impact, with an increase in caesarean sections due to fear of complications associated with vaginal delivery. The review concludes that it is necessary to promote the informed choice of the type of delivery and implement public policies that encourage humanized vaginal delivery, in addition to strengthening the education of pregnant women. Future studies should explore the combination of quantitative and qualitative data for a more comprehensive understanding of obstetric practices in Brazil.

**Keywords:** Vaginal Delivery. Cesarean. Public health. Health Policies. Brazil.

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## INTRODUCTION

The choice of the type of delivery is a topic of increasing relevance in public health, especially in Brazil, where cesarean section rates are significantly higher when compared to the internationally recommended parameters. This phenomenon raises concerns due to the impact that inappropriate choices can have on maternal and newborn health. The World Health Organization (WHO) establishes that cesarean section should be performed only when there is a clear medical indication, since, despite being a vital intervention in risk situations, it is associated with a series of complications for the mother, such as infections, hemorrhages, problems in establishing breastfeeding, and longer recovery (WHO, 2015). In addition, according to Diniz et al. (2020), newborns may face respiratory challenges and other problems related to the absence of labor, which plays a fundamental role in the baby's adaptation process to the extrauterine environment.

In Brazil, the significant increase in the prevalence of cesarean sections is often related to a complex interaction of cultural, social, and institutional factors. Among these factors, the desire to schedule delivery for convenience, the fear of pain associated with vaginal delivery, and the economic incentives that favor cesarean sections for health professionals stand out. In addition, the lack of adequate education about the benefits and risks of each type of childbirth, combined with the scarcity of clear information for pregnant women, contributes to the perpetuation of this practice (Leal et al., 2020; Bertoldi et al., 2016). For Lima et al. (2020), public policies also play a crucial role, since the lack of incentives to perform vaginal births, the lack of infrastructure to welcome pregnant women, and cultural resistance to humanized obstetric practices make it difficult to change this situation.

This scenario, therefore, requires a detailed analysis and a multifaceted approach to promote more humanized practices in obstetric care. The integrative review proposed in this study was justified by the need to understand the current panorama of cesarean section rates in Brazil and the determinants of choices related to the type of delivery. By doing so, it seeks to foster discussions based on scientific evidence that can support the formulation of more effective public policies, in addition to promoting the education and empowerment of pregnant women. The objective of this study was to analyze the incidence of vaginal deliveries and cesarean sections in Brazil in the last ten years, focusing on the factors that influence these choices. The study contributes to the identification of strategies that can reduce unnecessary interventions, expand the role of pregnant women and favor the humanization of childbirth, essential aspects for improving maternal and child health outcomes in the country.

## MATERIALS AND METHODS

A systematic search was carried out in the PubMed and SciELO databases to identify articles published between 2013 and 2023 that addressed the incidence of vaginal births and cesarean sections in Brazil. The search was conducted using combinations of keywords in Portuguese and English, including "vaginal delivery", "cesarean section", "birth rates in Brazil", "factors associated with the type of delivery" and "humanization of childbirth", with the use of Boolean operators such as AND and OR to refine the results.

The inclusion criteria included original studies published in peer-reviewed journals that presented quantitative or qualitative data on rates of vaginal deliveries and cesarean sections in Brazil, as well as those that analyzed factors associated with obstetric choices and practices. Cohort studies, integrative reviews, and cross-sectional studies that focused on epidemiological, social, cultural, or clinical aspects related to the topic were included. Articles that dealt with other countries, case reports, abstracts of scientific events, or those not available in full in Portuguese, English, or Spanish were excluded.

The retrieved articles were initially selected based on the title and abstract, and later submitted to a full reading for eligibility evaluation. The relevant data extracted included information on the rates of cesarean sections and vaginal deliveries, regional variations, trends over the analyzed period, and associated factors, such as maternal age, socioeconomic status, type of health institution (public or private), and interventions during prenatal care.

The results were organized in tables and graphs to facilitate the analysis of trends and patterns, in addition to enabling a critical discussion about the factors that influence obstetric practices in Brazil and the challenges for reducing unnecessary interventions in childbirth. The systematic search sought to ensure a comprehensive and rigorous survey of the relevant literature to meet the objectives of the review.

## RESULTS AND DISCUSSIONS

The results indicate that, despite a slight reduction in some regions of Brazil in recent years, the country still has one of the highest rates of cesarean sections in the world. Data from the Information System on Live Births (SINASC) reveal that, in 2022, approximately 55.7% of births performed in the country were cesarean sections, while only 44.3% corresponded to vaginal births (MINISTRY OF HEALTH, 2023). This percentage is significantly above that recommended by the World Health Organization (WHO), which suggests that the ideal cesarean section rate should not exceed 15%.

Studies also point to marked regional differences. In the South and Southeast regions, where there is a greater concentration of private hospitals and a higher socioeconomic level of the population, the rates of cesarean sections are higher, exceeding 70% in some locations. In contrast, according to Bertoldi et al. (2016), the North and Northeast regions, especially in rural areas, have a higher prevalence of vaginal deliveries, reflecting lower levels of access to high-complexity obstetric care.

In addition, factors such as schooling, family income, and type of health institution also influence the type of delivery. A study conducted by Leal et al. (2020) showed that births in private hospitals are significantly more likely to be cesarean sections, often by convenience or scheduling, while births in public institutions are more often vaginal.

The high rate of cesarean sections in Brazil reflects a complex set of cultural, economic, and structural factors that influence obstetric practices in the country. One of the central aspects of this issue is the culture of preference for cesarean section, widely disseminated both among pregnant women and among health professionals. Many women, especially in urban contexts and of higher socioeconomic status, perceive cesarean section as a safer and more practical option, due to the fear of pain associated with vaginal delivery and the belief that surgical intervention reduces risks. This preference, according to the studies by Diniz et al. (2020), is often reinforced by health professionals, who, for convenience or overloaded schedules, prioritize scheduled procedures, limiting the possibility of a spontaneous and humanized vaginal delivery.

Another determining factor is the doctor-patient relationship, especially in private hospitals, where high cesarean section rates are often influenced by the obstetric care model. In these institutions, vaginal delivery is often not encouraged, and women may feel pressured to opt for cesarean section, even without clear medical indications. This dynamic for Faria et al. (2021) is reinforced by the perception that vaginal delivery requires more time and resources, while cesarean section, because it is scheduled, offers greater predictability and fewer interruptions in the hospital routine.

In addition, the absence of robust public policies and effective incentives for the promotion of vaginal delivery contributes to perpetuate this cesarean model. Despite initiatives such as the Stork Network Program, which aims to expand access to quality prenatal care and humanized childbirth, the reach of these policies is still limited, especially in regions with a higher concentration of private hospitals. According to Lima et al. (2020), the lack of clear guidelines that encourage the humanization of childbirth and discourage elective cesarean section also makes it difficult to reduce the high rates.

The impact of the COVID-19 pandemic has brought even more challenges to obstetric care in Brazil. Studies indicate that the fear of complications associated with vaginal delivery in women infected with the virus has led to an increase in cesarean sections in some regions, particularly in high-complexity hospitals. An analysis by Silva et al. (2022) pointed to a 10% growth in cesarean section rates during the first year of the pandemic, highlighting the influence of contexts of uncertainty in the choice of the type of delivery.

Given this scenario, it is evident the need for strategies that promote the role of women in the childbirth process and encourage evidence-based practices that value safe and humanized vaginal delivery. Investing in educating pregnant women about the benefits of normal delivery and the risks associated with unnecessary cesarean sections, in addition to training health professionals to offer adequate support, are fundamental measures to reverse this situation. In addition, it is essential to strengthen public policies such as the Stork Network, expanding its reach and monitoring its implementation to ensure significant and lasting changes in obstetric care in Brazil.

## CONCLUSION

The analysis of the incidence of vaginal deliveries and cesarean sections in Brazil in the last ten years reveals a worrying panorama, with cesarean section rates that remain significantly above those recommended by the World Health Organization (WHO). Despite some regional advances, especially in areas where initiatives such as humanized childbirth have gained strength, the national numbers still reflect a predominance of obstetric practices that favor cesarean section, often without a clear clinical indication. This scenario highlights the need for a joint effort between health professionals, public managers, and educators to promote informed choice of the type of delivery, based on scientific evidence, and to encourage practices that prioritize maternal and neonatal health.

Among the limitations of this study, the dependence on secondary data from databases such as SINASC stands out, which may contain underreporting or incomplete information on factors associated with the type of delivery. In addition, the heterogeneity of the studies included in the review may limit direct comparability between regional and national data. Another critical point is that this study did not address in depth the subjective experiences of pregnant women and health professionals, which can provide relevant insights into choices and decisions related to childbirth.

Future research should prioritize the integration of quantitative and qualitative data for a broader and more detailed understanding of obstetric practices in Brazil. Prospective



studies that evaluate the impact of interventions such as prenatal education programs and training of teams for humanized childbirth can offer concrete ways to reduce unnecessary cesarean sections. Additionally, it is essential to investigate how factors such as the COVID-19 pandemic, changes in health policies, and technological advancements influence trends in choosing the type of delivery. Only with a multifactorial and continuous approach will it be possible to reverse this scenario and ensure better outcomes for mothers and babies.

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