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Review Article

Factor influencing the mode of delivery in Brazil

Fatores que influenciam a via de parto no Brasil

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ABSTRACT: *Introduction:* The prevalence of caesarean sections has grown in Brazil. Pregnancy and childbirth are influenced by cultural and economic aspects of the society in which the pregnant woman is inserted. *Objective:* To analyze factors that influence the choice of the mode of delivery by the pregnant woman. *Methods:* This is a narrative literature review including articles published between 2009 and 2020. Searches were made in Pubmed, LILACS and SciELO databases, with descriptors "Bioethics", "Caesarean section", "Choice behavior", "Decision", "Women's rights", "Pregnancy", "Childbirth", "Normal delivery" and "The Unified Brazilian Health Care System". *Results:* Caesarean section rates were found to be higher in the private sector than in the public sector. Lower maternal age and education, black race, residence in rural areas and in the North and Northeast regions were associated with lower prevalence of caesarean section. Maternal obesity, previous caesarean section, complications in pregnancy, non-cephalic fetal presentation and macrosomia were more related to caesarean section. Pain, predictability, mother's relationship with the newborn, hospital discharge, sexual life and return to activities were related to the choice of vaginal delivery. **Discussion:** The disparity of caesarean sections in the public and private sectors suggests the impact of financial aspects on the choice. Socioeconomic variables are important in this decision. *Conclusions*: The choice of mode of delivery is influenced by several factors.

Keywords: Bioethics; Caesarean; Choice behavior; Decision; Women's rights; Pregnancy; Childbirth; Natural childbirth; The Unified Brazilian Health Care System.

RESUMO: *Introdução:* A prevalência de cesarianas cresceu no Brasil. Gestação e parto são influenciados por aspectos culturais e econômicos da sociedade em que a gestante está inserida. *Objetivo:* Analisar fatores que influenciam a escolha da via de parto pela gestante. *Métodos:* Trata-se de revisão narrativa da literatura incluindo artigos publicados entre 2009 e 2020. Foram feitas buscas nas bases de dados Pubmed, LILACS e SciELO, com descritores "Bioética", "Cesárea", "Comportamento de escolha", "Decisão", "Direitos da mulher", "Gravidez", "Parto", "Parto normal", "Sistema único de saúde". *Resultados:* Foram encontradas taxas de cesariana no setor privado maiores do que no público. Menor idade materna e escolaridade, raça negra, residência em meio rural e nas regiões Norte e Nordeste foram associados a menor prevalência de cesariana. Obesidade materna, cesariana prévia, intercorrências na gravidez, apresentação fetal não cefálica, macrossomia estiveram mais relacionados a cesariana. Dor, previsibilidade, relação da mãe com o recém-nascido, alta hospitalar, vida sexual e retorno às atividades foram relacionados a escolha do parto vaginal. *Discussão:* A disparidade de cesarianas no setor público e privado sugere o impacto de aspectos financeiros na escolha. Variáveis socioeconômicas são importantes nessa decisão. *Conclusões:* A escolha da via de parto é influenciada por vários fatores.

Palavras-chave: Bioética; Cesárea; Comportamento de escolha; Decisões; Gravidez; Parto; Parto normal; Sistema Único de Saúde.

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INTRODUCTION

Pregnancy and birth are some of the most important moments in the life of the woman, partner and family. Many consider childbirth one of the most significant human experiences, with positive and fulfilling potential. Until the 19th century, deliveries were carried out in a home environment, with the help of midwives. From then on, obstetrics emerged as a medical specialty, which greatly modified the view of birth[2]. Although the World Health Organization (WHO) states in 2015 that caesarean rates greater than 10 to 15% are not associated with a reduction in maternal, perinatal and neonatal mortality[3], the prevalence of high births has been growing continuously in recent years[4,5].

In 2009, for the first time, the ratio of caesarean sections exceeded that of normal births in Brazil and reached 58,7% in 2019, with 83,9% being performed in the private sector and 41,7% in the public service[4,6]. It is important to emphasize that caesarean sections are an important resource, but must be indicated only in situations of risk to the mother and/or her child, such as fetal distress, pelvic presentation, hemorrhage before delivery, pregnancy-specific hypertensive disease, twinning, diabetes and repeated caesarean section[7,8].

Still in this context, the poor indication of the high mode of delivery is related to the higher proportion of premature labor, puerperal infection, incidence of prematurity and low birth weight, in addition to a higher risk of hemorrhage, uterine rupture and fetal death in the second delivery after planned caesarean; there is still an association with overweight in infancy, adolescence and young adulthood[9]. Added to this is the fact of that many physicians indicate elective caesarean sections for pregnant women with gestational age below 39 and up to 37 weeks, which may add the risks of prematurity for that child[10].

It is worth noting that vaginal delivery brings many advantages, both for the mother and the baby, including faster recovery, absence of pain in the postpartum period, early discharge, lower risk of infection and hemorrhage[8]. After vaginal delivery, there seems to be faster and more effective establishment of lactation, in addition to earlier first mother-child contact, which is considered a protective factor to avoid the introduction of baby formula[11].

The choice of type of delivery, in general, is influenced by professional and women's own issues, health outcomes, economic issues, increased length of hospitalization and clinical complications[12]. Some factors that contribute to the choice of caesarean delivery by pregnant women are: desire to avoid pain, lack of necessary information or deficit in understanding the concepts involved in the type of delivery, idea of being a procedure with lower risks and possibility of planning the delivery. On the other hand, the preference for vaginal delivery is based on faster recovery, less postpartum pain, and the possibility of the woman being the protagonist during childbirth[13].

Pregnancy and childbirth are not only biological acts, but social processes influenced by cultural and political-economic aspects of the society in which the pregnant woman is inserted. The author argues that the institutionalization of childbirth causes women to lose autonomy front to the decisions of the doctor, what shows to the inversion of papers during the birth process[14,15]. Even when the decision is made by the woman, it has little technical and scientific basis, since information about the types of delivery is usually not passed on by the obstetrician[16].

Thus, the objective of this study was to analyze, through a narrative review of the literature, the factors that influence the choice of the mode of delivery, aiming to expose its financial, socioeconomic, obstetric and cultural dimensions. This knowledge on the part of health professionals allows a more humanized and assertive conduction in the care of women in the perinatal period.

METHODOLOGY

This study is a narrative review of the literature, of an exploratory and descriptive nature. Searches were carried out in the Pubmed, LILACS and Scientific Electronic Library Online (SciELO) databases, through the Health Sciences Descriptors (DeCS): Bioética, Cesárea, Comportamento de escolha, Decisão, Direitos da mulher, Gravidez, Parto, Parto normal, Sistema único de saúde and their English corresponding Bioethics, Caesarean section, Choice Behavior, Decision, Women's Rights, Pregnancy, Parturition, Natural childbirth, Unified Health System, using the boolean AND. The review also includes Brazilian official and governmental documents. The search was carried out between October 5 and 20, 2020 and 48 documents were included in the review.

As inclusion criteria were used articles referring to the years 2009 to 2020, published in national and international journals, in Portuguese, Spanish and English, and selected articles whose theme approaches the mode of delivery, factors of influence and choice. In the exclusion criteria, scientific productions that did not deal with the proposed theme were disregarded.

RESULTS

Financial aspects

A multicenter study conducted by the WHO in 137 countries estimated the costs involved in the categories of "necessary" and "excessive" caesarean sections, identifying 6.2 million excess caesarean sections (50% of

these in China and Brazil), which corresponds to a cost five times higher than the cost of necessary caesarean sections[17].

An analysis of the budgetary impact from the perspective of the Unified Health System (SUS) compared the costs of spontaneous vaginal delivery with those of elective caesarean section without clinical indication in pregnant women at usual risk. According to the study, the adoption, over 5 years, of an ideal scenario of caesarean rates provided by Brazilian guidelines (corresponding to 25% to 30% of caesarean sections for the Brazilian population) for pregnant women at usual risk, primiparous and multiparous, without uterine scar, would be able to generate savings of almost US$76.5 million/year (conversion rate of US$1.00=R$3.18) when compared to the current base scenario[17]. The comparison between the current scenario and the ideal scenario of caesarean section rates showed that this projected rate from 2016 to 2020 would generate an impact of more than US$80 million per year for the SUS, considering the primiparous and multiparous pregnant women included in the study[17].

Another study, published in the periodic Ciência & Saúde Coletiva, estimated the costs of vaginal delivery and elective caesarean section without clinical indication of three public maternities and showed a 38% higher cost of caesarean section in relation to vaginal delivery, with human resources being the main cost driver in both procedures (89% of the cost of vaginal delivery and 81% in caesarean section) [18].

The proportion of caesarean sections in Brazil was unequal when comparing the care provided by the SUS and by complementary health. Population studies show significantly higher caesarean rates in the private sector (80-90%) than in the public system (35-45%)[19]. In the study by Domingues et al.[4], women in the private sector presented 87.5% of caesarean section, with increased decision for caesarean delivery at the end of pregnancy, regardless of the diagnosis of complications. A study of factors associated with caesarean section in adolescents in Brazil showed that having the delivery funded by the private sector increased the chance of pregnant women undergoing caesarean section by 4.3 times and those who had their deliveries funded by the health plan had more than twice the number of caesarean sections compared to those who had their deliveries by the public health system[20].

A study on the temporal trend of the mode of delivery according to the source of funding, published in the Brazilian Journal of Gynecology and Obstetrics, showed that, in 11 years of an analysis carried out in Maringá (Paraná), 77.1% (37,178) of births were by caesarean section and only 22.9% (11,042 births) by vaginal delivery, and the rates of non-SUS caesarean section were always higher than 90.0% and more frequent[9]. A study conducted with 10,155 pregnant women in the Southeast region of Brazil showed that the rates of elective caesarean sections in public and private hospitals correspond, respectively, to 28.3% and 83.2%[21].

Socioeconomic aspects

According to Mendonza-Sassi et al.[22], women aged 30 years or older had 21% (211 women aged ≥ 30 years vs. 42 girls aged between 15 and 19 years) more caesarean sections than girls aged between 15 and 19 years. According to Freitas et al.[23], 74.7% of women over 40 years of age underwent caesarean section. Paiva et al.[24] corroborates these data by showing that 61.2% of women over 35 years old underwent elective caesarean section.

When evaluating the economic aspect, according to Câmara et al.[25], caesarean section rates are higher than 90% in the private sector, which reflects the reality of women with greater purchasing power.

According to Freitas et al.[23], 68.7% of women with more than 12 years of schooling underwent caesarean section; on the other hand, 23.4% of women with less than one year of schooling had the same outcome. Rattner et al.[26] found that lower caesarean rates were present in pregnant women without schooling. Zaiden et al.[21] corroborates these data by showing that there was a 33% higher prevalence of caesarean sections among women with higher education, when compared to women with elementary education. Pádua et al.[27] and Meller et al.[7] found no statistically significant difference in this item. Meller et al.[7] showed that the prevalence of caesarean section varies according to the state: South and Southeast have higher rates and North and Northeast, the lowest[7]. The same study shows that 45.2% (n=1701) of women living in urban households underwent caesarean section, in comparison, 34.1% (n=731) of women in rural areas had the same outcome.

According to Barros et al.[12], black women performed 18% less caesarean sections than white women. Mendonza-Sassi et al.[22] had previously stated that white women were more submitted to caesarean than black women, regardless of public or private funding. These data were corroborated by Meller et al.[7] who found that 48.6% (n=981) of white women had caesarean section, while 39.7% (n=1420) of non-white women had the same outcome.

Obstetric aspects

Regarding the mode of delivery, Nagahama et al.[28] and Zaiden et al.[21] found rates of 48% (227 women) and 62.1%, respectively, of caesarean delivery in primiparous women. Benute et al.[13] reveal that 70.5% (n=31) of primiparous women reported preferring vaginal delivery, however the most common mode of delivery among them was caesarean section (68.2%). In the study by Domingues et al.[4], the preference for caesarean section ranged from

15.4% in primiparous women in the public sector to 73.2% in multiparous women with previous caesarean section in the private sector. In addition, the preference for abdominal delivery was reported by 75% of women with a previous reproductive history[4]. Pádua et al.[27] found no association between the number of pregnancies and the mode of delivery.

Pádua et al.[27] and Zaiden et al.[21] found, respectively, a 5 and 6 times higher prevalence of caesarean sections in women with a previous caesarean section, compared to vaginal delivery in the previous pregnancy. Paiva et al.[24] show that 78.7% of women with previous abdominal delivery had an elective caesarean section and this number fell to 35.8% in women without a previous caesarean section.

Knobel et al.[29] showed that 56% of births in Brazil between 2014 and 2016 occurred via caesarean delivery. Among the caesarean sections, 97% of the fetuses were in a transversal or oblique presentation, 89.5% of the pregnant nulliparous women and 85.2% of the multiparous women with a single fetus and ≥ 37 weeks. Vaginal deliveries occurred in 53.6% of nulliparous or 80.0% of multiparous women, with ≥ 37 weeks, in cephalic presentation and in spontaneous labor[29].

In the study by Domingues et al.[4], the highest proportions of caesarean sections were observed in pregnant women with some intercurrence in pregnancy (71.9% vs 32.9%). Paiva et al.[24] found a 369% higher prevalence of elective caesarean section in the SUS if high-risk pregnancy and Zaiden et al.[21] found a 45% higher prevalence of caesarean section if hypertensive diseases during pregnancy[21].

Regarding obesity, according to Pádua et al.[27], women with a BMI>30kg/m² had a prevalence ratio about 80% higher than those with a BMI less than 25kg/m². In addition, Paiva et al.[24] found a 33% higher prevalence of elective caesarean section in the SUS if obese patient. In relation to complications during childbirth, there is a 717% higher prevalence of elective caesarean section in the sus if non cephalic presentation and 97% higher if macrosomia[24].

Pádua et al.[27] and Gama et al.[20] showed that the higher the number of prenatal consultations, the higher the prevalence of caesarean sections. There is also a 5.7 times increase in the number of caesarean sections when the same physician performs prenatal care and delivery[20]. Zaiden et al.[21] corroborates this data by showing a 46% higher prevalence of caesarean sections if prenatal care and childbirth are performed by the same physician[21]. In addition, Zaiden et al.[21] demonstrate that there is 43% higher prevalence of caesarean section if prenatal care is performed only by a physician, compared to the association of nurses in prenatal care.

Sociocultural aspects

The National Demographic and Health Survey (Pesquisa Nacional de Demografia e Saúde, PNDS, in Portuguese) developed in 2006 shows that women over the age of 30 years are more likely to perform caesarean delivery than women under the age of 20 years[7]. A Brazilian study conducted with 23,940 pregnant women, 66% had a preference for vaginal delivery at the beginning of pregnancy, 27% preferred caesarean delivery and 6.1% did not have a defined preference, at the end of pregnancy, only 58.4% had their initial desire for vaginal delivery fulfilled[4].

Among the reported factors that influence the choice of vaginal delivery, the following stand out: protagonism during delivery, reduction of the sensation of postpartum pain, faster recovery, improvement of the mother/baby relationship, hospital discharge, impact on sexual life after delivery and early return to daily activities. Regarding the choice of caesarean section, the following stand out: fear of pain and of not having enough strength for vaginal delivery; feeling of greater security; faster process; previously defining the date of delivery and fear of needing an emergency caesarean section[1,4,5,12,14,30,31,32]. Permeating these data we have the sociocultural context in which pregnant women are inserted, since their idealization of childbirth suffers direct impact from the experiences already lived, their social interactions and their network of relationships[5,33,30,34].

DISCUSSION

Financial aspects

Brazil is a country that has high rates of caesarean section, higher than that recommended by the WHO, causing higher costs to health systems[5]. Cost-effectiveness analyses of spontaneous vaginal delivery vs. elective caesarean section without clinical indication point to excessive caesarean sections as a problem from a financial perspective, so that encouraging vaginal delivery, in addition to being consistent with current Brazilian and international public policy, would generate savings for the Unified Health System[17, 18, 35].

A significantly higher prevalence of caesarean sections was observed in the private system than in the public network. For Riscado et al.[5], pregnant women seen in the public network generally do not have their request for a caesarean section met, that is, they do not have the protected right to choose the mode of delivery. Likewise, although the idea is that women in the private sector choose the type of delivery, often the pregnant woman who opts for normal delivery in this service causes certain discomfort[36]. This discussion reinforces the impact of financial aspects on the choice of the mode of delivery by pregnant women, so that this decision includes, in addition to health outcomes and professional and personal issues

of women, economic issues related to the difference in cost between procedures, longer hospital stay and clinical complications related to elective caesarean section without clinical indication[18].

Socioeconomic aspects

Socioeconomic variables include maternal age, income, maternal education, place of residence and ethnicity. In the studies analyzed in this review, there was a great influence of these characteristics in the choice of the mode of delivery.

Most of the studies evaluated show that, with increasing age, there is an increase in the prevalence of caesarean sections. This could occur due to the higher rates of obstetric diseases in this age group, in addition to this group having a higher number of previous caesarean sections[27]. Some authors suggest that the reason for choosing the surgical route is the possibility of concomitant ligation aiming sterility; even if it is a violation of Law No. 9.263, which prohibits surgical sterilization in women during delivery or abortion, except in cases of proven need[15].

When analyzing income, it is concluded that women of higher economic classes perform more caesarean sections, mainly due to access to private services. According to Câmara et al.[25], caesarean section rates are higher than 90% in the private sector, which reflects the reality of women with greater purchasing power. The reason behind these numbers is questionable, it may involve the choice of the most convenient method, the physicians involved with this public and even the national culture of preference for caesarean section, since people of higher economic classes have more autonomy in choosing the mode of delivery.

Education appears in several articles as a factor of great influence, although Pádua et al.[27] and Meller et al.[7] did not find a statistically significant difference[21,23,26]. Maternal schooling may have an impact on the choice of the mode of delivery due to the better socioeconomic conditions that these women have, which allows them greater access to private health services and, therefore, makes caesarean section a more accessible option.

The place of residence is mentioned in few studies, with evidence that the highest rates of caesarean sections are concentrated in the South and Southeast regions, as well as a higher prevalence of this type of procedure in patients residing in urban households, compared to rural areas[7]. The impact of the place of residence on the choice of the mode of delivery may be due to the higher rates of urbanization in the South and Southeast, which are closely related to the greater ease of access to hospitals and maternities. In addition, the population of these regions has a higher socioeconomic level[7].

Ethnicity appeared as a variable not statistically related to the mode of delivery in some studies, however others were able to trace this difference, showing that white women are usually more submitted to caesarean sections compared to black women[7,12,22].

Obstetric aspects

Obstetric factors include parity, previous delivery mode, associated comorbidities or delivery dystocia and prenatal consultation. According to the reviewed studies, these factors are directly related to the mode of delivery performed in parturients.

Although Pádua et al.[27] found no association between the number of pregnancies and the delivery mode, several studies showed that primiparous women had high rates of caesarean section[21,28]. In addition, it can be seen that, even with the desire for vaginal delivery, caesarean rates remain disproportionately high, demonstrating that many parturients, although they do not wish to, end up undergoing this type of procedure[13]. These data are alarming, since the numbers of caesarean sections among primiparous women show an increasing trend and the current prevalence of caesarean sections is already very high compared to the WHO recommendations, which defends less than 15% of surgical deliveries[16].

By analyzing the previous mode of delivery, it is possible to conclude that there is a significant increase in the prevalence of caesarean deliveries in women with previous caesarean section[21,27]. Nagahama et al.[28] state that women without previous caesarean section and with previous vaginal deliveries underwent vaginal delivery more frequently. Thus, Riscado et al.[5] state that the woman's choice of the mode of delivery is influenced by the experience of previous deliveries. Although there is no obligation to perform surgical delivery in all cases of previous caesarean section, this is a current reality. Women previously submitted to surgical or vaginal delivery tend to feel comfortable and safe because they already know the procedure to which they were previously submitted, which is why they choose it at a later time[5].

Currently, Robson classification uses obstetric aspects to evaluate, monitor and compare caesarean rates and, according to the WHO, due to its simplicity, reproducibility and clinical relevance, it is the most appropriate system for these functions[37,38]. This categorization divides pregnant women, at the time of admission for childbirth, into 10 groups, based on six obstetric parameters: previous caesarean section, gestational age (term, preterm), obstetric history (nulliparous or multiparous), number of fetuses (single or multiple pregnancy), fetal presentation (cephalic, pelvic or abnormal) and the way in which childbirth developed (spontaneous, induced or caesarean by choice)[39].

Through an epidemiological study using data from the Department of Informatics of the Unified Health

System (DATASUS) between 2014 and 2016, it can be seen that more than half of births in Brazil occurred by caesarean section[29]. Through the Robson classification, the highest rates were found in the groups of pregnant women with fetus in transversal or oblique presentation, nulliparous or multiparous at any gestational age and pregnant women with previous caesarean section, single fetus and ≥ 37 weeks, while vaginal deliveries were more frequent in the nulliparous or multiparous groups, with ≥ 37 weeks, in a single cephalic presentation and in spontaneous labor[29]. With these results, it is possible to use the Robson classification to promote strategies in each specific group, aiming at reducing the rate of caesarean sections.

The presence of comorbidities, whether previous or acquired during pregnancy, is associated with increased number of caesarean deliveries. According to Pádua et al.[27], the presence of hypertension-eclampsia, chronic diseases, low uterine height for gestational age, sexually transmitted infections and other medical conditions are associated with a higher proportion of caesarean sections. The diseases described by the articles actually present a higher risk for vaginal delivery, although they are not always considered contraindications. This high prevalence of caesarean sections, therefore, can also be attributed to other factors, such as fear on the part of the physician and the pregnant woman of some complication.

With regard to obesity, the higher the body mass index (BMI), the higher the proportion of caesarean sections[24,27]. Gama et al.[20] corroborate the studies and state that clinical history of risk and complications in pregnancy and childbirth increases by 10 times the chance of performing a caesarean section.

Prenatal care was also identified as one of the determining factors of the mode of delivery. The higher the number of prenatal consultations, the higher the prevalence of caesarean sections, as shown in the articles by Pádua et al.[27] and Gama et al.[20]. Other studies show that there is a considerable increase in the number of caesarean deliveries when prenatal and delivery are performed by the same physician[20,21]. In addition, many women complained of not having received information about the mode of delivery chosen by the physician, as shown by Fernandes et al.[40]. All the studies cited show the great influence of the physician in the increase of caesarean rates. Several factors can lead to this, such as the possibility of scheduling deliveries, quickness of the procedure, feeling of a more controlled environment[20]. In addition, nurses appear as a protective factor and, therefore, their insertion in prenatal care should be stimulated[21].

Sociocultural aspects

Gestation, for many women, is the most prominent point in their lives. This moment is surrounded by several important milestones such as the choice of the baby's name, the color of the room, which doctor will be responsible for prenatal care, which mode of delivery. All these choices are surrounded by internal and external factors that directly and indirectly influence the expectations of pregnant women. Culture is understood as a complex tangle of meanings that composes the common worldview, built from the experiences lived by ancestors and contemporary members and shared among the members of a society. Every individual is inserted and paradoxically tied to culture, since their choices and behaviors are directly oriented based on this complex system of social interactions. Thus, cultural aspects have a great impact on the choice of the delivery mode[41].

The decision on the choice of the mode of delivery is based on their network of relationships: living with a partner and family members, relationship established with health professionals[33], experiences of previous deliveries, whether of the pregnant woman herself or of people close to her social life, media and communication vehicles, fear of the care they received during delivery[30]. In addition, factors such as labor activity, socioeconomic level, possibility of planning the delivery interfere or even determine the choice of vaginal delivery or caesarean section[5,34].

As for cultural aspects, women were historically underestimated in terms of their capacity and rationality. The female gender was associated with ideals such as emotion and subjectivity, which corroborated sexist social assumptions. In this context, women would be considered unable to participate in the decision in the delivery process. According to studies, many women feel powerless, dehumanized and violated at this time. Cases of maltreatment and obstetric violence during labor are the result of the process of gender violence, part of the structuring of the culture of inequality, patriarchy and discrimination, as well as the lack of information and practices about women's rights[42].

The family nucleus is the space in which we structure our first perceptions of the world that surrounds us, based on cultural traditions, ethical and moral values, which are transmitted through beliefs, rites and myths full of meaning that contribute to the construction of much of the psychological framework that influences our choices. The stories reported by family members, or even by close people, reinforce the meaning given by pregnant women to aspects inherent to childbirth, which can be perceived sometimes as natural, sometimes with suffering for women[41].

In high-income countries, the decision by caesarean section is related to the opinion of friends, family and information from online communities. The request for caesarean section was related in some studies to the greater cultural acceptance of this type of delivery and to the perception of greater ease of this procedure in relation

to vaginal delivery. On the other hand, in low or middle-income countries, the refusal of caesarean deliveries due to obstetric indication is related to religious beliefs and dogmas, fear of judgments or criticism by the community itself, domestic violence practices and cultural view of caesarean section as an unnatural process[43].

In a Brazilian study with 23,940 pregnant women, it was observed that approximately 66% had a preference for vaginal delivery at the beginning of pregnancy, 27% preferred caesarean delivery and 6.1% did not have a defined preference, and at the end of pregnancy, only 58.4% had their initial desire for vaginal delivery fulfilled[4]. Even though most women initially opt for vaginal delivery during pregnancy, many obstetricians indicate caesarean section for sometimes overestimated reasons, which makes many of these deliveries caesarean section[5]. This may be one of the factors that contribute to the high rates of this type of delivery in Brazil, far exceeding the 15% recommended by the WHO.

The National Demographic and Health Survey (PNDS) developed in 2006 showed that women over the age of 30 years are more likely to perform caesarean delivery than women under the age of 20 years[7]. During the analysis of the articles used in this literature review, it was observed that fear of labor pain is the preponderant factor for choosing caesarean section. Although some opt for vaginal delivery, when they go into labor and experience pain, they end up requesting conversion to a caesarean delivery[24]; thus, the acceptance or not of pain as an intrinsic aspect to childbirth influences the decision-making of many pregnant women[44].

Among the main determining factors for the choice of vaginal delivery are: protagonism during delivery, reduction of postpartum pain sensation, faster recovery, improvement of the mother/baby relationship, hospital discharge, impact on sexual life after delivery and early return to daily activities. Regarding the choice of caesarean section, the following were highlighted: fear of pain and of not having enough strength for vaginal delivery; feeling of greater security; faster process; previously defining the date of delivery and fear of needing an emergency caesarean section[1,4,5,12,14,30,31,32].

The main factor for the choice of caesarean section is fear of pain during vaginal delivery, which is amplified by practices without scientific evidence during labor, such as immobilization, abusive use of artificial oxytocin, the Kristeller maneuver (currently outlawed in obstetric practice) and episiotomy[15,16]. This reality is aggravated in the public sector, where women undergo excessive manipulation, remain confined, receive oxytocin inadvertently, undergo episiotomy and give birth in the supine position during vaginal delivery, procedures not recommended by the WHO[16].

An important aspect cited in some articles of this review addresses the concern of pregnant women with regard to sexual life after labor, since the sexual intercourse of the couple tends to reduce with the advance of pregnancy[45,46]. Specific concerns of pregnant women in the face of vaginal delivery include the possibility of occurrence of traumatic events, such as lacerations and episiotomies, impact on vaginal anatomy and sexual pleasure,[43,32] mainly on performance in sexual activity, pain during vaginal penetration, reduction of lubrication and libido, and fear that these factors generate dissatisfaction with sexual life. In a case-control study to analyze the genital response in the postpartum period, it was observed that women with vaginal delivery had decreased genital flow compared to women undergoing caesarean delivery. However, both groups did not present significant differences regarding subjective sexual experience[47].

Pregnancy and the experience of motherhood and fatherhood generate a need to readapt the interaction between the couple, which is impacted both by the arrival of a new member in the family nucleus and by the acceptance by the woman of her post-gestational self-image, as well as her new role within this new social dynamic, which is also influenced by her fears and challenges in being a mother, wife, daughter and also guaranteeing her autonomy as a woman[48].

This topic is considered a taboo in many regions and often becomes a barrier both for the development of studies with a high level of evidence on the subject, and for the pregnant woman herself, who feels uncomfortable talking to her doctor about the topic and acquiring information to resume sexual life[48].

The lack of precise knowledge about vaginal delivery and its forms of safe and comfortable progression during labor corroborate to hinder the choice of this mode of delivery[31]. The results of a study with 569 pregnant women showed that 66.6% reported receiving expected information during childbirth; 30.8% were dissatisfied with the information and 2.6% showed partial satisfaction[28].

The implementation of measures to enhance and assist normal delivery has became an emerging demand in both the public and private health systems. These measures include increasing the quality of care to pregnant women, providing privacy, deambulation, relaxation, diet, obstetric nursing participation and team support. Even with these practices, a positive impact on the reduction of caesarean delivery rates is not yet noticeable[18].

CONCLUSIONS

It was possible to verify that the choice of the mode of delivery is complex and influenced by several factors. According to the review, the prevalence of caesarean sections is significantly higher in the private system when compared to the SUS, suggesting that financial aspects play an important role in deciding on the mode of delivery,

since caesarean delivery is more expensive than vaginal delivery. Even so, the public sector still has a higher prevalence of caesarean section than that recommended by the WHO.

It is possible to note that socioeconomic factors such as advanced age, white ethnicity, high economic classes, higher education and housing in the southern and southeastern states are closely related to the increased prevalence of caesarean sections.

In addition, there is a significant increase in the prevalence of caesarean deliveries in primiparous women, women with previous caesarean sections and pregnant women with associated comorbidities. Adequate prenatal care or more than adequate prenatal care, especially if performed only by the physician, also increased the choice by high mode. The presence of nurses during prenatal care, in turn, was considered a factor in reducing the number of caesarean deliveries.

Added to this, the cultural influence and the opinions of family and friends, in addition to the relationship with the health team, are also important. In the studies included in this review, many obstetricians indicate, without theoretical basis, the delivery by discharge route and, therefore, more pregnant women opt for caesarean section. One of the most influential factors in the choice of caesarean section was the fear of pain in vaginal delivery, which is increased in case of use of techniques without scientific basis, in addition to the convenience in choosing the date and fear of the impact of vaginal delivery on the sexual life of the couple. On the other hand, decisive factors in the choice of the vaginal route by the pregnant woman include the belief in faster recovery and less postpartum pain. Many women, however, reported that their doctors did not even talk about the types of delivery. Thus, the explanation of the types of delivery by the physician is the greatest possibility of action in order to reduce the prevalence of births by caesarean section.

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