

# Choice of route of childbirth: expectation of pregnant women and obstetricians

Teodoro Leguizamón Junior<sup>1</sup>, Jovani Antônio Steffani<sup>2</sup>, Elcio Luiz Bonamigo<sup>3</sup>

## Abstract

The technological and scientific advances in medicine and the respect for the autonomy of pregnant women and medical indications have contributed to the increased number of cesareans. In this context, the objective of this research was to identify the expectations of pregnant women and doctors about the process of childbirth. The majority of pregnant women (74.1%) expressed a preference for natural delivery, especially Catholic ones and those who have completed higher education or incomplete high school. Among obstetricians it was found a slight preference for cesarean delivery (58.3%), and if advising was requested by pregnant women, all (100%) obstetricians would recommend natural delivery. If the obstetricians were demanded to perform cesarean on request, 54.5% of them would agree immediately, but only 27.3% would admit that right for pregnant women in the public health system. In conclusion, the expectation of the majority of pregnant women was for the natural delivery, and doctors for cesarean, but they would agree with natural childbirth, under normal conditions, and perform cesarean on request.

**Key words:** Cesarean section. Vaginal delivery. Obstetrics. Personal autonomy.

## Resumo

### Escolha da via de parto: expectativa de gestantes e obstetras

Os avanços tecnológicos e científicos da medicina, o respeito à autonomia das gestantes e as indicações médicas parecem ter contribuído para o aumento do número de cesarianas. Neste contexto, o objetivo desta pesquisa foi identificar a expectativa de gestantes e médicos obstetras quanto à via de parto. A maioria das gestantes (74,1%) manifestou preferência pelo parto natural, sobretudo as católicas e portadoras de ensino superior completo ou médio incompleto. Entre os obstetras houve preferência pelo parto cesariano (58,3%) e, se fossem instados a aconselhar, todos (100%) recomendariam parto natural. Caso fossem solicitados a realizar cesariana a pedido, 54,5% dos obstetras concordariam de imediato, porém somente 27,3% admitiriam este direito para gestantes do sistema público de saúde. Em conclusão, a expectativa da maioria das gestantes foi pelo parto natural e dos médicos obstetras pela cesárea, contudo estes realizariam parto natural, em condição normal, e cesárea a pedido.

**Palavras-chave:** Cesárea. Parto natural. Obstetrícia. Autonomia pessoal.

## Resumen

### La elección de la vía del parto: la expectativa de las mujeres embarazadas y obstetras

Los avances tecnológicos y científicos en la medicina, el respeto a la autonomía de las embarazadas y las indicaciones médicas parecen haber contribuido para el aumento del número de cesáreas. En este contexto el objetivo de este estudio fue identificar las expectativas de las embarazadas y de los médicos obstetras en cuanto a las vías del parto. La mayoría de las gestantes (74,1%) manifestaron su preferencia por el parto natural, especialmente las católicas y las de educación superior completa o secundaria incompleta. Entre los obstetras se encontró preferencia por cesárea (58,3%) y cuando fueron solicitados a aconsejar, todos (100%) recomendarían parto natural. Si se les requiriese para realizar una cesárea bajo petición, 54,5% de los obstetras estaría inmediatamente de acuerdo, pero sólo el 27,3% reconocería este derecho para embarazadas del sistema de salud pública. En resumen, la expectativa de la mayoría de las embarazadas fue por un parto natural y de los obstetras por cesárea, no obstante éstos realizarían parto natural, bajo condiciones normales, y cesárea bajo petición.

**Palabras-clave:** Cesárea. Parto normal. Obstetrícia. Autonomía personal.

## Approval CEP Unoesc nº 235/2011

1. **Graduate student** teodorojr@hotmail.com 2. **Doctor** jovani.steffani@unoesc.edu.br 3. **Doctor** elcio.bonamigo@unoesc.edu.br – University of the West of Santa Catarina (Unoesc) Campus Joaçaba, Joaçaba/SC, Brazil.

## Correspondence

Elcio Luiz Bonamigo – Rua Francisco Lindner, 310 ZIP 89600-000. Joaçaba/SC, Brazil.

The authors declare no conflict of interest.

The trend to increased rates of cesarean delivery occurred worldwide, particularly in Brazil from the 1970s<sup>1</sup>. The progress regarding the respect for the women's autonomy and new role in family and society contributed to the progressive female participation in the choice of the route of childbirth, assuming that from the inclusion of her preferences in that decision it could be influencing the increase in the number of cesarean deliveries worldwide<sup>2</sup>. The main cause for the increase in the number of cesarean sections would be the medical interference, with the justification that it was a comfortable and safe procedure for both mother and fetus<sup>3</sup>.

Natural delivery has some advantages, both for the mother and baby, including faster recovery, no pain in the postpartum period, early discharge, less risk of infection and bleeding. For these reasons, in accordance with the World Health Organization (WHO) recommendation, cesarean surgeries should correspond to at most 15% of total births and only be given in cases of risk to the mother or the unborn child<sup>4</sup>. Thus, the cesarean section would be an alternative for when complications occur during pregnancy or natural childbirth, generating some sort of risk to the mother, the baby or both, without regard to the decision of the pregnant women.

In recent years, several factors, which were not sufficiently identified yet, have contributed for the consistent increase in the indication of cesarean surgeries. The literature abounds in records regarding the increased risks of maternal and perinatal morbidity of caesarean sections<sup>1,5</sup>. It is worth highlighting a bias observed in most of the works cited, in which there occurs the necessary separation between the complications done in emergency and elective cesarean sections.

In parallel, there has been great progress in the technical realization of the natural and cesarean delivery, providing favorable arguments to both procedures used by both obstetricians and pregnant women as for justification of their choices. Thus, the personal preferences of obstetricians and patients emerge in relation to other technical and scientific basis as possible factors contributing to the increased rate of caesarean sections.

The main objectives of this research are to know the expectation of pregnant women and obstetricians regarding the choice of the route of delivery and to contextualize their influences on cesarean section rates from the studied municipality.

## Method

This is a descriptive and cross-sectional research with a quantitative approach. The study sample consisted of 85 (41.87%) pregnant women, aging over 18 years, whose pregnancy occurred between April 2011 and April 2012, during which they went through prenatal care in the public health system at the city of Joaçaba/SC; and 11 obstetricians, who exercised the profession in the city.

Mentally handicapped or high-risk pregnant women were excluded. For obstetricians the only exclusion criterion was not to consent to participate in the study. Pregnant women were approached in a private environment, without the presence of the physician; there they were presented the term of free informed consent (TIC) and, subsequently, a self-administered questionnaire containing general and specific multiple choices or scaled questions. As for obstetricians, they were contacted by telephone and subsequently presented with the TIC and questionnaire. Data were stored in Epi Info 3.4.3 software and the main variables calculated by chi-square test, with a confidence interval of 95%. Data collection was conducted from January to March 2012. To conduct the study it was requested prior approval of the CEP Unoesc.

## Results

Among the 13 existing medical obstetricians in the county, 11 (84.6%) have completed the questionnaire and were included in this study, 10 (90.9%) were male and only one (9.1%), a female. All obstetricians claimed to be experts with residency and 90.9% worked both in public and in private health systems.

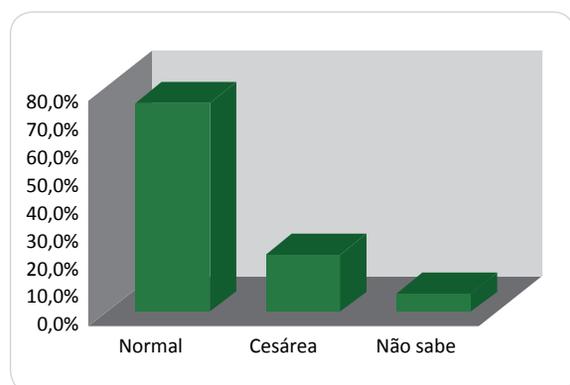
All pregnant women who met the inclusion criteria agreed to participate. Pregnant women (n = 85) were aged between 18 and 50 years, prevailing, with a total of 35 (41.2%) participants, women aged 21 to 30 years, followed by the age group 18-21 years, 25 (29.4%), 31-40 years, 22 (25.9%) and 41-50 years with 3 (3.5%) participants. The level of education varied: 10 (11.8%) women reported having between 1 and 5 years of education, 14 (16.5%), between 6 and 9 years, 34 (40.0%) have completed only high school, 11 (12.9%) did not complete secondary school, 10 (11.8%) have completed higher education, and 6 (7.0%) incomplete higher education, as can be seen in Table 1.

**Table 1.** Grade schooling of pregnant women

Education	No.	%
1 – 5 years	10	11,8
6° - 9° years	14	16,5
Complete High school	34	40,0
Incomplete secondary education	11	12,9
Complete higher education	10	11,8
Incomplete higher education	6	7,0
<b>Total</b>	<b>85</b>	<b>100</b>

Regarding the marital status of pregnant women, 39 (45.9%) reported being married, 35 (41.1%) were under stable union and 10 (13%), unmarried. On the issue of religion, 69 (81.2%) reported being Catholic, 14 (16.5%) Evangelic and 2 (2.3%) followed other religions. Most women, consisting of 63 (74.1%) patients, showed a preference for conducting natural childbirth, because it is a handy process and free of surgical intervention, followed by 17 (20.0%) of them who were in favor of cesarean sessions, and 5 (5.9%) that did not opine, as shown in Graph 1.

**Graph 1.** Expectancy of pregnant women in relation to the route of childbirth



All the 85 women were asked about the reasons that lead them to change their option from natural childbirth to cesarean section. Practicality was the chosen reason by 51 (60%) of them; fear of suffering and pain, 47 (55.2%); comfort and safety for baby, 37 (43.5%); avoid impairment of sex life, 4 (4.7%); and 13 (15.3%) responded that they would not change their opinion (Table 2).

**Table 2.** Reasons that would lead the mother to change the natural birth by cesarean section

Among the reasons below, which would make you replace the natural birth by cesarean birth?	No.	%
Practicality: cesarean section is more practical	51	60
Fear of suffering and pain during vaginal delivery	47	55,2
Comfort and safety for baby in cesarean delivery	37	43,5
A cesarean section will least disturb my sex life in the future	4	4,7
I would not change my mind and choose natural birth	13	15,3

As regards the main source of information about pregnancy and childbirth, 42 (49.4%) women said they obtained information through health professionals, 23 (27%) by family, friends or television, and 20 (23.6%) by physicians (Table 3). On the choice of delivery type, 64 (75.3%) women denied the influence of the obstetrician that was taking care of them, but 21 (24.7%) confirmed.

**Table 3.** Leading source of information for pregnant women on pregnancy and childbirth

Source	No.	%
Health professionals (Non-medical)	42	49,4
Family, friends or television	23	27,0
Physician	20	23,6
<b>Total</b>	<b>85</b>	<b>100</b>

Within the universe of 85 pregnant women, 62 stated their preference for natural childbirth. Among these, 6 (9.7%) have 1 to 4 years of education (elementary school years), 8 (12.9%), 5 to 8 years (final year of primary school), 10 (16.1%) had not completed high school, 25 (40.3%) completed high school, 4 (6.5%) incomplete higher education and 9 (14.5%) completed higher education.

Table 4 presents the scores according to the choice of the delivery route taken by pregnant women, correlating them with schooling. The differences between the choices of pregnant women determined by the route of childbirth showed statistically significant results in terms of their respective educational level ( $p = 0.031$ ).

**Table 4.** Schooling x choice of route of delivery by pregnant women \*

Education	Normal	Caesarean	Do not know
	No. (%)	No. (%)	No. (%)
1 – 5 years	6 (7,1)	2 (2,3)	2 (2,3)
6 – 9 years	8 (9,4)	4 (4,7)	2 (2,3)
Incomplete secondary education	10 (11,8)	1 (1,2)	0
Complete High school	25 (29,5)	8 (9,4)	1 (1,2)
Incomplete higher education	4 (4,7)	2 (2,3)	0
Completed higher education	9 (10,6)	1 (1,2)	0
<b>Total</b>	<b>62 (73,1)</b>	<b>18 (21,1)</b>	<b>5 (5,8)</b>

\* *P*-value = 0.031

When the reasons for choosing a particular type of birth in relation to age were correlated with the women's marital status, the differences between the options showed no statistically significant results (respectively,  $p = 0.1704$  and  $p = 0.1607$ ).

Regarding religion, 58 (84.1%) of Catholic pregnant expressed a preference for the natural route and 10 (15.9%) by cesarean, amount the of Evangelic pregnant, 8 patients (53.3%) preferred the natural birth and 7 (46.7%) the cesarean section, the only (100%) pregnant woman who follow Spiritism and the only (100%) one that was Protestant expressed opting for natural childbirth. Among Catholics, the preference for the route of natural child-

birth was statistically different ( $p = 0.035$ ) compared to the surgical route. This preference was not shown statistically significant for all other religions.

When asked about the actual indication for cesarean section, the risk for baby was reported by 66 patients (77.6%); the mother having a serious disease by 56 (65.8%); post-term pregnancy by 68 (80.0%); when there is no other alternative by 38 (44.7%); the intention of going through tubal ligation by 29 (34.1%); the wrong baby's position by 51 (60, 0%); and the fact that the mother does not have expansion or contraction by 68 (80.0%). The results are given in Table 5.

**Table 5.** Opinion of pregnant women on indications for cesarean section

Em sua opinião, qual seria a real indicação para cesárea?		
	No.	%
Risk for baby	66	77,6
The mother had severe disease	56	65,8
Post-term pregnancy	68	80,0
When there is no other alternative	38	44,7
The mother will go through tubal ligation	29	34,1
The baby is in the wrong position	51	60,0
The patient does not have expansion / contraction	68	80,0

In response to the real reasons that would make their option for normal delivery be replaced by C-section, practicality was cited by 51 patients (60.0%); fear of pain and pain during natural childbirth by 47 (55.2%); comfort and safety for baby, 37 (43.4%); cesarean section disrupt less the future sex life of the pregnant woman, 4 (4.7%); and 13 (15.2 %) would not change their mind and choose natural childbirth.

On being asked about the reasons for trading the option by a caesarian delivery for the natural birth, convenience was cited by 30 patients (35.7%); postpartum cesarean being more painful, 48 (57.1%); aesthetic problems (scar), 11 (13.1%); cesarean section's increased risk for the mother and baby, 28 (33.3%); cesarean section's increased length of stay, by 40 (47.6%); the fact that natural childbirth is a physiological process and part of the

natural experience of being a mother was cited by 15 (17.8%) patients; and 12 (14.2%) would not change their opinion. When asked if the cesarean section undermines breastfeeding, 18 (21.1%) women agreed, 21 (24.8%) disagreed and 46 (54.1%) had no opinion about it.

At the end, it was asked to pregnant women if the presence of a multidisciplinary team consisting of physiotherapists, physical education teachers, psychologists, nurses and doctors offering lectures and/or who worked the physical aspect, encouraging them to a natural birth, would influence their final decision. In their responses, 11 patients (12.9%)

answered yes; 10 (11.8%) said no; and 64 (75.3%) had no opinion.

Among the interviewed obstetricians (n = 11), there was a slight preference for cesarean delivery (63.6%). However, when they were asked in relation to their wives or, if the obstetrician was a woman herself, 11 (100%) obstetricians indicated natural childbirth as their preference. When asked to indicate which route of childbirth they would indicate for their daughters, 3 (27.2%) reported they would indicate the natural delivery and 8 (72.7%) did not state, as shown in Table 6.

**Table 6.** Obstetricians’ preferences and indications about the route of delivery

	Normal	Cesarean		Without no preferences		
	No.	%	No.	%	No.	%
What is your personal preference for route of childbirth?	7	63,6	0	0	4	36,4
Which route of childbirth would you recommend to your wife or, as a woman, to yourself?	11	100	0	0	0	0
Which route of childbirth would you recommend to your daughters?	3	27,3	0	0	8	72,7

When obstetricians were asked about at what time they used to approach a patient in relation to route of childbirth, 6 (54.5%) reported doing so in the first trimester of pregnancy or in the very first medical consultation; 3 (27.3%) in third quarter, for better assessment of the evolution of pregnancy; and 2 (18.2%) did not respond. However, if questioned by their patients about the best type of delivery, all 11 (100%) obstetricians would recommend natural childbirth. However, if the patient plead to deliver her child via cesarean, 6 (54.5%) of them would immediately agree with the patient’s choice; 3 (27.3%) would disagree; and 2 (18.2%) did not respond.

When asked whether the woman who uses the public health system should have the right to choose the way of delivery, 3 obstetricians (27.3%) answered affirmatively, 6 (54.5%) said no; and 2 (18.2%) did not answer.

**Discussion**

Most patients in this study (74.1%) expressed a preference for natural childbirth, justified by the practicality of the procedure and for being a natural process, not requiring surgical intervention. This result coincides with the work of Iorra *et al*<sup>6</sup>, in which the majority of women surveyed (72.8%) preferred

the natural route of childbirth, mainly to avoid the pain caused by a cesarean section. It is also in accordance with a research by Tedesco<sup>7</sup>, in which the majority of the women (90.0%) also expressed a preference for the natural route of childbirth, justified by the practicality of the procedure and for the fear of suffering and pain after a cesarean delivery.

The preference for the route of childbirth can vary from early to late gestation. Research conducted with 437 pregnant women in Rio de Janeiro found that, in early pregnancy, 35% of women expressed a preference for cesarean section, 48% for natural childbirth and 17% remained undecided. In late pregnancy, the decision by cesarean section occurred in 97% of women in the group who had expressed this preference, with 56% of those who chose natural childbirth and 73% of those who expressed no preferences<sup>8</sup>. These results point to the strengthening of the role of the pregnant woman in choosing the route of delivery.

On being asked about the doctor’s influence in choosing the route of delivery, most of the women in this survey responded that they were not influenced by the doctor. However, in work by Figueiredo<sup>9</sup>, the result was contrary, as 70.0% of the women answered that they were influenced by their doctors. In this respect, women’s vulnerability triggered

by the parturition process and added to the doctor's knowledge could be favoring the construction of an asymmetrical relationship during prenatal care, in which the pregnant woman, by accepting paternalism, would value more the doctor's opinion than her own.

The availability of information about pregnancy favors the inclusion of pregnant women in the decision making process, providing opportunities for the manifestation of their autonomy in relation to the route of childbirth<sup>10</sup>. Obtaining adequate guidance was evident in this study, once pregnant women said they would always seek for guidance mainly from healthcare professionals, but also take into consideration information from family, friends and television.

The age of the mothers did not significantly influence the choice of route of childbirth ( $p=0.170$ ). However, two studies<sup>7,10</sup> have found that the preference for natural childbirth is directly proportional to the woman's age, signaling the increased weighting of the consequences of choosing one or the other route of childbirth arising from the maturation of the woman.

Regarding the level of education, it was found increased preference for natural childbirth in women from the group that have complete high school and college ( $p=0.031$ ). This result partially disagreed with the findings of Tedesco<sup>7</sup>, in which pregnant women with higher levels of education expressed preference for cesarean delivery. As justification for this choice, for those who exercise extra domiciliary activities, choosing cesarean delivery means having autonomy to determine delivery's date and time, not to compromise the women's professional activities.

Regarding the correlation between marital status and preference for route of childbirth, natural childbirth was prevalent in groups of married or pregnant women under stable union, but without statistical significance ( $p=0.167$ ). Most single mothers (60%) expressed a preference for cesarean section, approaching the results of another study<sup>7</sup> in which 75% of the women also expressed this preference. As for religion, Catholic pregnant opted for natural childbirth most of the times, compared to other religions, and this result showed statistical significance ( $p=0.035$ ).

Among obstetricians there was a slight preference for cesarean delivery, but unanimity regarding the indication of natural childbirth in normal conditions. However, eventually when the mother solicits

caesarean birth, most doctors would attend to the request, respecting the autonomy of the patient. It is noteworthy that when asked about the right of the pregnant woman, as a user of the Unified Health System (SUS in Brazil), to choose the route of delivery, most obstetricians replied negatively, pointing to the still existent paternalism. A study prepared by Ferrari<sup>5</sup> found that, before the pregnant woman who pleads elective cesarean, 8.1% of obstetricians would agree immediately; 62.9% would agree after discussing the case; 17.7% would disagree; and 11.3% did not answer – this data corroborate the results of this research. There is no evidence that the procedures' financial compensation influence the choice of the route of childbirth by the doctor<sup>11</sup>, although there are opposing opinions<sup>12</sup>.

When discussing the factors that influence the high incidence of caesarean sections in Brazil, Faundes and Cecatti<sup>1</sup> have commented that pregnant women, by choosing this route of childbirth, seek to avoid the pain of natural childbirth, besides pursuing the physiological factors related to the maintenance of the perineum's anatomy, despite the cosmetic inconvenience of the abdominal scar. But this statement was not confirmed in the results of this study, as most pregnant women, for different reasons, expressed their preference for natural childbirth. Among those who preferred cesarean delivery, the pointed advantages were: practicality, comfort, less damage to the future sex life, increased safety for the baby and the fact that it is a painless method, although 21.1% admit breastfeeding losses.

The strong preference for the natural route of childbirth by pregnant women in this study contrasted with the high rates of caesarean sections in Brazil, especially in patients of private health plans, to the point of being called "unnecessary epidemic"<sup>1,5</sup>. Brazil have experienced an increased rate of cesarean sections, which ranged from 38.9% in 2000 to 45.5% in 2007, but other countries, to a greater or lesser extent, also raised their rates: in the United States, the rate of cesarean sections increased from 25% in 1980 to 31.8% in 2008<sup>13</sup>. In that country the number of requested cesareans increased 42% in the period 1999-2002, and in Canada it also increased from 17.5% to 26.1% in the period 1995-2005<sup>13</sup>.

Some European countries have also presented a tendency to increase the number of cesarean surgeries, such as Germany, whose rates ranged from 19.8% in 1999 to 25.9% in 2004, and England, 11.3% in 1990 to 22.7% in 2004. Other countries presented very low rates of cesarean sections, with little

increase, such as the Netherlands (13.6%), Belgium (17.8%) and France (18.8%)<sup>13</sup>. In South America, Chile, Argentina (private services) and Brazil (supplementary sector) presented the highest rates in the world<sup>12</sup>.

According to Datasus statistics<sup>14</sup> of the county in which the study was conducted, the rate of cesarean sections moved in the opposite direction to the WHO guidelines, ranging from 58.3% in 1994 to 74.9% in 2010. In this respect, the maximum rate of 15% for cesarean sections recommended by WHO must necessarily be reassessed, especially due to the diversity of cultural characteristics and health systems among countries<sup>13</sup>.

In Brazil, as in many countries, the cesarean sections rate is well above the WHO's goal, assuming that the national reality has no structural and social characteristics to achieve this goal. According to Ferrari's opinion<sup>5</sup>, a pregnant woman having the opportunity to choose the route of delivery and having answered their request to perform a cesarean section is an ethically acceptable conduct.

Whereas the arguments for choosing either route of delivery are similar, the provision of appropriate information and preparatory courses could increase knowledge of pregnant women, encouraging their confidence and certainty as to both procedures, as the indication in accordance with doctors' criteria may not consider the preference of the patient<sup>15</sup>. A review of 17 national<sup>16</sup> and international publications pointed out that the health care improvement will depend on the humanization of the relationship between the pregnant woman, the health team and the inclusion of strategies to reduce fear and anxiety of patients. It is considered that further studies are needed to understand the multidimensionality of factors influencing the choice of both the natural birth and the caesarean section, as evidenced in this study.

The State has a responsibility to provide suitable conditions for the realization of natural childbirth in the institutions and to ensure the autonomy of pregnant women in choosing the route of childbirth, by clarifying and strengthening health policies to mitigate their vulnerability. Thus, not only it would be contemplating the principle of autonomy, but also the bioethics' objectives of protection and intervention<sup>12</sup>.

This study was conducted in a municipality whose rate of caesarean section deliveries is very

high<sup>14</sup>. It was observed that in the period and year studied there were no maternal deaths and the municipality had a high human development index (HDI=0.866), which ranked it in eighth in the national ranking 2003. Human development encourages people to be what they want to be, according to the concept of the United Nations Development Program (UNDP)<sup>17</sup>, assuming that the existence of more favorable conditions for the exercise of autonomy may be influencing the route of delivery decision by pregnant women and obstetricians.

In this respect the patient's autonomy has recently strengthened within the Brazilian Code of Medical Ethics, as for the inclusion of item XXI in the Fundamental Principles, according to which the physician must accept the choices their patients when in accordance with the dictates of his conscience and the law<sup>18</sup>. Within the Ministry of Health, patients participation in decisions regarding their treatment was consolidated recently with the issuance of Decree 1.820/09, from the Office of the Minister, in which it is stated that in the hypothesis of the existence of alternative treatments, the patient has the right of choice (Article 4, item XI)<sup>19</sup>. Cesarean section and natural childbirth are available alternatives and thus it appears that the expectant mother has the right to examine the risks and benefits to freely choose. In this regard, approximately half of the women in this study indicated the practicality, fear of pain or suffering, comfort and safety for the baby as the main reasons that would make them choose a cesarean section (Table 2).

In the Project Guidelines of the Brazilian Medical Association and the Federal Council of Medicine it was reported that<sup>20</sup> cesarean surgeries, due to maternal-fetal risks, have eminently medical indications and should only be performed when the benefits for pregnant women outweigh the risks. In this guideline, of 2003, it is not mentioned aspects related to the patient's autonomy and influence of physicians and institutions. However, due to the inclusion of new factors of influence on the national scene, it is assumed that it is desirable to develop this discussion in the next edition. In this broader context, the high number of caesarean sections in private health plans and the trend of rising those rates at the UHS point to the need to study more deeply subjective, scientific, structural, legal and bioethical issues involved in the decision making process of choosing the delivery route.

## Final Considerations

The results showed that pregnant women in this study have preferred the natural route of childbirth, especially the Catholic women and the ones with incomplete secondary education and higher education. The reasons for the preference of pregnant women by natural delivery were based on the facts that it is a natural process, not requiring surgical intervention and that contributes to the experience of being a mother. The main source of information for pregnant women came from health professionals and, for the most part, there was no influence of the obstetrician in their choice of route of childbirth in late pregnancy.

Obstetricians showed slight preference for cesarean delivery, but there was unanimity about the advice to pregnant women about performing natural birth in normal pregnancy, as well as natural birth was said to be their indication for wife or herself, when woman. However, if the pregnant woman claims for a cesarean section, most obstetricians would accept the patient's request, respecting their autonomy. Paradoxically, most obstetricians also opined

that patients at the public health system should not have free of choice regarding the route of childbirth options, signaling that the paternalistic behavior still exists in relation to the public health service.

The preference of pregnant women for natural childbirth, under normal conditions, in contrast to the high cesarean section rates found in the city studied, signs the existence of other factors that may influence the decision. In this respect, it is inferred that the campaigns of the Ministry of Health and WHO have contributed to the highest number of responses in favor of natural childbirth. The increased autonomy of pregnant women and the preference of obstetricians for cesarean sections, that would also perform C-sections upon request, are other factors that may be contributing to the vigorous and paradoxical increase of C-sections number.

Further studies are needed to elucidate the various factors that influence the choice of route of childbirth, including strengthening the autonomy of pregnant women, the role of obstetricians and participation of institutions involved in the health care process, since the existing discourse diverges sharply from the practice that was found.

## References

1. Faundes A, Cecatti JGA. Operação cesariana no Brasil: incidência, tendências, causas, consequências e propostas de ação. *Cad. saúde pública*. 1991;7(2):150-73.
2. Dias MAB, Deslandes SF. Expectativas sobre a assistência ao parto de mulheres usuárias de uma maternidade pública do Rio de Janeiro, Brasil: os desafios de uma política pública de humanização da assistência. *Cad. Saúde Pública*. 2006;22(12):2.647-55.
3. Hotimsky SN, Schraiber LB. Humanização no contexto da formação em obstetrícia. *Ciênc. Saúde Coletiva*. 2005;10(3):639-49.
4. Brasil. Ministério da Saúde. Parto, aborto e puerpério: assistência humanizada à mulher. Brasília: Ministério da Saúde; 2001. p. 199.
5. Ferrari J, Lima NM. Atitudes dos profissionais de obstetrícia em relação à escolha da via de parto em Porto Velho, Rondônia, Brasil. *Rev. bioét. (Impr.)*. 2010;18(3):645-58.
6. Iorra MRK, Namba A, Spillere RG, Nader SS, Nader PJH. Aspectos relacionados à preferência pela via de parto em um hospital universitário. *Revista Amrìgs*. 2011;55(3):260-8.
7. Tedesco RP, Filho NLM, Mathias L, Benez AL, Castro VCL, et al. Fatores determinantes para as expectativas de primigestas acerca da via de parto. *Rev. bras. ginecol. obstet.* 2004;26(10):791-8.
8. Brasil. Ministério da saúde. O modelo de atenção obstétrica no setor de saúde suplementar no Brasil: cenários e perspectivas. Rio de Janeiro: ANS; 2008. p. 156.
9. Figueiredo NSV, Barbosa MCA, Silva TASS, Passarini TM, Lana BN, Barreto J. Fatores culturais determinantes da escolha da via de parto por gestantes. *HU Rev.* 2010;36(4):296-306.
10. Pellosso SM, Panont KT, Souza KMP. Opção ou imposição: motivos da escolha da cesárea. *Arq Cien Saúde Unipar*. 2000;4(1):3-8.
11. Gentile FP, Noronha Filho G, Cunha AA. Associação entre a remuneração da assistência ao parto e a prevalência de cesariana em maternidades do Rio de Janeiro: uma revisão da hipótese de Carlos Gentile de Mello. *Cad. Saúde Pública*. 1997;13(2):2.221-6.
12. Barcellos LG, Resende de Souza AO, Machado CAF. Cesariana: uma visão bioética. *Rev. bioét. (Impr.)*. 2009;17(3):497-510.
13. Patah LEM, Malik AM. Modelos de assistência ao parto e taxa de cesárea em diferentes países. *Rev. Saúde Pública*. 2011;45(1):185-94.

## Choice of route of childbirth: expectation of pregnant women and obstetricians

14. Brasil. Ministério da Saúde. Informações de Saúde: nascidos vivos – Santa Catarina. [Internet]. 2010 (acesso 22 abr. 2013). Disponível: <http://tabnet.datasus.gov.br/cgi/deftohtm.exe?sinasc/cnv/nvuf.def>
15. Melchiori LE, Maia ACB, Bredariolli RN, Hory RI. Preferência de gestantes pelo parto normal ou cesariano. *Interação em psicologia*. 2009;13(1):13-23.
16. Velho MB, Santos EKA, Brüggemann OM, Camargo BV. Vivência do parto normal ou cesáreo: revisão integrativa sobre a percepção de mulheres. *Texto Contexto Enferm*. 2012;21(2):458-66.
17. Programa das Nações Unidas para o Desenvolvimento. [Internet]. Ranking do IDH dos municípios do Brasil 2003. Pnud; 2003 (acesso 22 abr. 2013). Disponível: [http://www.pnud.org.br/atlas/ranking/IDH\\_Municipios\\_Brasil\\_2000.aspx?indiceAccordion=1&li=li\\_Ranking2003](http://www.pnud.org.br/atlas/ranking/IDH_Municipios_Brasil_2000.aspx?indiceAccordion=1&li=li_Ranking2003)
18. Conselho Federal de Medicina. Resolução CFM nº 1.931, de 17 de setembro de 2009. Aprova o Código de Ética Médica e revoga a Resolução CFM nº 1.246/1998. [versão de bolso]. *Diário Oficial da União*. 24 set. 2009.
19. Brasil. Portaria nº 1.820, de 13 de agosto de 2009. Dispõe sobre os direitos e deveres dos usuários da saúde. Brasília: Ministério da Saúde; 2009.
20. Associação Médica Brasileira e Conselho Federal de Medicina. Projeto diretrizes: cesarianas – indicações. [Internet]. 2003 (acesso 22 abr. 2013). Disponível: [http://www.projetodiretrizes.org.br/projeto\\_diretrizes/032.pdf](http://www.projetodiretrizes.org.br/projeto_diretrizes/032.pdf)

### Participation of the authors

Teodoro Leguizamon Junior participated in the study design, data collection, data interpretation and writing of the article. Jovani Antonio Steffani participated in the study design, data interpretation and its writing. Elcio Luiz Bonamigo coordinated the research and participated in the study design, data interpretation and its writing.

