



Kinds of deliveries associated with maternal/obstetric and neonatal factors

Tipos de partos associados a fatores maternos/obstétricos e neonatais

Tipos de partos asociados con factores maternos/obstétricos y neonatales

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ABSTRACT

Introduction: The clinical and epidemiological characterization of the deliveries performed is of great importance for the public health practice. The objective is to characterize the sorts of deliveries associating them with maternal/obstetric and neonatal factors in female patients observed at a family health center. **Outline:** It is a quantitative, exploratory and retrospective study, of documentary analysis. The variables analyzed were: Apgar score at 5 minutes, mother's age, kind of delivery, number of performed prenatal care appointments, gestational age, marital status and educational status. **Results:** A total of 60.09% underwent cesarean delivery. As to the age, it predominated between 21 and 30 years the cesarean delivery. When observed the correlation between marital status and delivery, there was a predominance of stable union and cesarean delivery (50%). In relation to the gestational age, the percentages of kinds of deliveries were close in those considered to be term pregnancy (37 to 41 weeks) being the vaginal one with 20% and the cesarean one with 30%. **Implications:** The present work revealed two relevant data: first, very early maternal age and the second one, a much higher number of cesarean sections than the established by the health organizations. These results emphasize the need to invest in the quality of care in communities, schools, on pregnancy at a young age.

DESCRIPTORS

Maternal Age; Parturition; Prenatal Care; Educational Status.

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INTRODUCTION

The gestation associates with a stage of modifications in the body and the emotional state of pregnant women and is experienced in an individual way. Several aspects, as fears, anguish, doubts and joys permeate this experience and, when associated with physical, cultural and personal factors influence women's attitudes during pregnancy, vaginal delivery and birth.¹ Thus, to comprehend the complexity of this phenomenon in the perspective of the wholeness, it is necessary to consider, in addition to the biological events, how the women's acting happens in the process of gestating, birth-giving and mothering, particularly with regards to the choice of the type of delivery.²

There are aspects referring to the delivery assistance that still need discussion. The model of support to the delivery is characterized by surplus of interventions, somewhat that has collaborated to increase the number of cesarean deliveries and the maternal/child morbidity and mortality, in Brazilian territory. In Brazil, most of the deliveries is performed either in the hospital environment or health institutions. Besides that, the ratio of cesarean deliveries in the country was 55.4%, in 2014, including public and private health services, that is, rate far beyond 15% indicated by the World Health Organization.³⁻⁴

The trinomial pregnancy/delivery/birth aggregates to socioeconomic and demographic factors such as: work, educational status, income, age, marital situation and race.⁵⁻⁸ In this panorama, the social politics of Brazil show, as an important characteristic, the benefit of less-favored social groups at the expense of greater social fragility sections,⁹ so that the disparities in health among groups/individuals represent one of the more critical sides of health situation in the Brazilian territory.¹⁰

In view of supporting for the study of the reality of the epidemiological and clinical aspects of delivery, in order to contribute to works to improve

public health, the current study aimed to characterize the sorts of delivery making association with obstetric/maternal and neonatal factors in female patients assisted at a family health center.

METHOD

It is a quantitative, exploratory and retrospective study, in documentary analysis. Which aimed to characterize the sorts of deliveries making association with obstetric/maternal and neonatal factors in female patients assisted at a family health center.

The participants of the study were the pregnant women and their newborn (n=64) attended at the referred center, which had received prenatal care between the years 2016 and 2017. The files and/or medical records of the years not included in the predetermined period were excluded. This center was chosen because it was one of the more actives in the seat of the municipality, also because it was a scenario of practical activities of the researchers of this article.

The variables analyzed, the ones that allowed us to trace epidemiological and clinical characteristics, such as: Apgar score at 5 minutes, sort of delivery, maternal age, number of performed prenatal appointments, gestational age, marital status and educational status. For the variable "prenatal care attendance", the following intervals were considered: from 1 to 3 (one to three), from 4 to 6 (four to six) and equal to or greater than 7 performed attendances. As to the "gestational age", there were observed the following intervals: until 36 complete weeks (preterm birth), from 37 to 41 weeks (full-term birth) and over 42 weeks (being characterized as prolonged pregnancy). As far as to the "sort of delivery", there were verified the numbers regarding the vaginal birth (vaginal delivery) and cesarean (section, cesarean delivery). For the variable "Apgar score", the scores were divided in accordance with ranges which varied from 0-4 (zero

to four), 5-6 (five to six) and 7-10 (seven to ten). With regard to the “marital status”, it had been considered as with companion the ones with stable union and the married ones and the other were considered as single.

The data were caught starting from the medical records of the pregnant women accompanied at the center, being written down on collect instruments elaborated by the authors. These medical records were filed at the SAME - Service of Medical Archive and Statistics. The data were entered in Microsoft Excel®, and tables were created containing absolute (n) and relative (%) frequencies.

The present study was submitted to the ethics committee of the Acaraú Valley State University, having been approved with opinion number 1,878,614

and held anonymously, following the recommendations of the Ordinance of the Brazilian National Health Council/Health Ministry, Resolution 466/12, adopting the four basic principles of bioethics: autonomy, beneficence, non-maleficence and justice.

RESULTS

For the sort of delivery, cesarean section (39; 60.9%) was the prevailing. In Table 1, it can be observed that more than 50% of the pregnant women underwent cesarean section, of these, over half aged between 21 and 30 years. In general, the lowest rates for both vaginal and cesarean delivery were those of women aged between 12 and 20 years and between 31 and 40 years.

Table 1 – Sorts of deliveries associated with maternal age in pregnant women observed in prenatal care at a Family Health Center – Sobral/CE (2016–2017).

Age (years)	Vaginal Birth		Cesarean Section	
	n	%	n	%
From 12–20	09	14.1	04	6.2
From 21–30	14	21.9	23	35.9
From 31–40	03	4.7	09	14.1
41	-	-	02	3.1

Source: Service of Medical Archive and Statistics of the city of Sobral – CE.

In Table 2, it can be observed that more than 70% of the pregnant women who made part of this study had high school degree. As to the marital status, pregnant women with companion predominated. In relation to the number of medical appointments during prenatal care, those who

performed seven or more prevailed. Observing the results referring to the gestational age, the age from 37 to 41 weeks of pregnancy was highlighted. For the Apgar score, the newborns had a very good rating, almost all ranging between 7 and 10 points of this score.

Table 2 – Sorts of deliveries associated with the educational status, marital status, number of medical appointments during prenatal care, gestational age and Apgar score in pregnant women observed in prenatal care at a Family Health Center – Sobral/CE (2016–2017).

Variable	Vaginal Birth		Cesarean Section	
	n	%	n	%
Educational status				
Middle school	06	9.3	09	14.1
High school	18	28.1	30	46.9
Higher education	-	-	01	1.6
Marital status				
Single	06	9.4	07	10.9
With companion*	19	29.7	32	50.0
No. of prenatal medical appointments				
From 4–6	04	6.3	06	9.4
≥ 7	21	32.8	33	51.6
Gestational age (weeks)				
Until 36	07	10.9	07	10.9

From 37–41	16	25	30	46.9
≥ 42	01	1.6	03	4.7
Apgar score				
From 0–4	01	1.6	-	-
From 5–6	-	-	-	-
From 7–10	23	35.9	40	62.5

Source: Service of Medical Archive and Statistics of the city of Sobral – CE.

DISCUSSION

In the last years, Brazil experienced a change in the pattern of births, in which cesarean sections had become the most usual delivery way, reaching 85% of the deliveries performed in private health services. In the public health service, the ratio is notably inferior, reaching 40%.¹¹ In the present study, the cesarean deliveries prevailed over the vaginal ones. The World Health Organization (WHO) exposes that there is no cause for a percentage of c-sections above 15% in any region of the world.¹² In Brazil, in the same way, the Ministry of Health discusses that high rates of cesarean deliveries are the reason of maternal/perinatal morbidity and mortality.¹³

Despite advances in obstetric care and the high percentage of cesarean deliveries performed in Brazilian territory, no progress has yet been made in reducing mortality.¹⁴ Perinatal mortality rates decreased without increasing cesarean delivery rates, and it exalts to be more expected than the decrease of perinatal death rates of the performed and supervised deliveries is more a direct relationship to the advancement of neonatal follow-up care than to the type of delivery.¹⁵

The increase of the proportions of the cesarean deliveries is a worldwide obstetric phenomenon, but, in Brazilian territory, this has been seen as leading in the statistics.¹⁶ In the Interagency Network of Information for Health-RIPSA, the theme has a somewhat differentiated image, being seen as a question that requires action for all involved in the health care of pregnant women.¹⁷ Sociocultural factors related to the health systems, besides the devaluation of risks associated with procedures, are concerning. It is known that, when compared to the natural birth, the chance of severe mother's morbidity outdoes twice among mothers who

underwent intrapartum cesarean section and twice to thrice in case of elective cesarean section. This latter condition, besides increasing hospital stay, associates with the higher morbidity and mortality after hospital discharge.¹⁸

For this variable analyzed, the present study finds a limitation regarding the exposition of this high value of deliveries of cesarean way. This limitation concerns the lack of justified information (what necessity) to perform this kind of delivery in that pregnant woman. Depending upon the need to perform this surgery, the values can be quite high.

A study demonstrated that the age of the pregnant women who participated in the study ranged between 19 and 34 years, with an average of 23 years. Initially, the women were inquired about the kind of delivery they want to have. The preference of the majority was the vaginal birth, it was justified, by them, that this one enables both faster recuperation and cicatrization and that they could return to their normal activities in a less time than if the cesarean section were chosen.¹⁴

Some pregnant women, older than the others, who had previous deliveries, preferred the vaginal birth because they have had not a pleasant experience with the cesarean section. Comparing this study with the data in the table, the information is compatible with the results found in the present study.¹⁹

A scientific article shows that, among the reasons associated with the high rates of cesarean deliveries are: access to information and health services, cultural factors, socioeconomic variables, educational status, race, among others, besides the lower risk of feel pain and suffering. Besides that, it is of paramount importance the health professionals to show all the disadvantages and advantages of each

sort of delivery for pregnant women and, also, to identify the needs of each one.²⁰

In another study, 20 young pregnant women were interviewed in the maternity department of a public hospital in the city of Porto Velho, this study showed that, as to the educational status, 05 (25%) had high school degree, and 08 (40%) did not finished high school; 04 (20%) had middle school degree, and 03 (15%) did not finished middle school; none of the pregnant women participating in the study were unschooled, almost half of the respondents did not have at least high school degree, a significant value. In relation to Table 2, the rates are different, the table shows that most of the study participants had high school degree, yet in the study it shows that most of them have incomplete high school.²¹

According to a study, in relation to the educational status, 19 (47%) of the participants had taken from 04 to 09 years of study, while 21 (53%) had either finished or started high school, with 10 to 12 years of study. Most of them, 24 (60%), were not, at the time of the study, enrolled in school, and the other 16 (40%) have been studying or, at least, stayed enrolled in the regular school system. The reason for most pregnant women not being studying in the current moment of the pregnancy is related to the most diverse factors, for instance, low familiar income, which would make difficult going to school, the non-presence of child's father living together her was also alleged as a reason for not going to school, as well as the lack of inclusion in Government projects/programs.²²

It can be observed that the number of cesarean sections (60.93%) was higher than vaginal births (39.05%), regardless of marital status, showing a higher interest of the patients in performing cesarean sections and, in this way, opposing the information found in another study conducted that demonstrated a higher prevalence in performing vaginal delivery in married women or in the ones who are living under stable union.²³

In another study, when relating the reasons for choosing such way of delivery to the age range, in addition to marital status of women, the differences between the options displayed no significant results.²⁴

About pregnant women's marital status, the fact of that they are single can constitute as a risk factor, since besides her psychological harm, the lack of father figure, in general, decreases the economic stability for that family. Besides that, delivery experience seems to be more grievous for the pregnant women without partner when compared with married mothers.²⁵

It can be perceived that greater adherence to appointments of prenatal care did not relevantly influenced in the choice of the sort of delivery, seeing that both pregnant women with 7 or more (51.56%) prenatal care appointments and pregnant women with 4-6 (9.37%) prenatal care appointments opted for cesarean section.

Such information can be justified by a study which demonstrated that there is no great relevance between receiving information for the delivery while in the prenatal care and the number of prenatal care appointments, since among the included puerperal women (n=172) who received advice, only 18.7% was stimulated for performing natural birth by the team of the Primary Attention to the Health (PAH), it may cause a larger number of cesarean sections.²⁶ This situation highlights the lack of commitment to quality and scarce role of this supervision in preparing pregnant women for the delivery, despite a great prenatal care.²⁷

Counterbalancing the data mentioned previously, a study demonstrated that it was possible to identify a remarkable influence of the advice concerning the kinds of delivery for the pregnant women, since 60% of the participants underwent vaginal delivery, as this would have been the most recommended one by the health professionals in the prenatal care appointments, due to the faster recovery, as well as maternal and neonate benefits.²⁸

It can be noted that only in pregnant women with gestational age until 36 weeks, there is a balanced rate of vaginal births (10.93%) and cesarean sections (10.93%), equivalent to half of deliveries performed in this gestational age range. In relation to the frequency of cesarean sections, it can be observed which the majority occurred in gestational age range of 37-41 weeks, seeing that it is during this period that most of the deliveries occur.

Such results were also obtained in another study in which the preference of primigravidas who were at the third trimester was for the cesarean section (11%), demonstrating the appearance of feelings of fear and anxiety during this period, in addition to the belief that cesarean delivery brings greater safety to the newborn.²³

In contrast to the above-mentioned data, another scientific article about the subject matter demonstrated that the gestational age ranged between 35 and 42 weeks in the group of women with natural birth (average of 38.95) and between 35 and 41 weeks in the group of women who underwent cesarean section (average of 38.83), without statistical difference. The explanation for such expectation relies in the fact of many doctors schedule the cesarean section in accordance with their conformity.²⁹

As to the sort of delivery correlated to newborn's vigor, evaluated under the Apgar score, it is observed that there was no strong correlation, seeing that the newborns reached an effective Apgar score, that is, above 07, both in natural birth and cesarean section. In another study of the same nature, the same conclusion was reached, for the same reason, those who reached an effective Apgar score were 99.3% and 99.2% in cesarean and natural deliveries, respectively.³⁰

In spite of the technical improvements in surgical practice, the maternal morbidity and

mortality remains correlated to the cesarean delivery, the surgical delivery should only be employed when by strict indication. However, in the medicalization process of the pregnancy, the cesarean deliveries are, today, considered, in Brazilian territory, the modern and appropriate way of delivery. The doctors have been preferring the faster c-sections to the slow natural deliveries, and they use the clear motives by a small number of pregnant women that determine c-sections to popularize the supposed preference of pregnant women for cesarean delivery.³⁰ In this moment, the present work shows a limitation, as in the medical records analyzed, the justifications for the use of such interventions (risk for the mother, fetal macrosomia etc.) were not verified.

CONCLUSION

The results pointed out, grounded in the study of the characteristics of the kinds of delivery associated with obstetric and neonatal factors, can help the public health policies in the sense of emphasizing quality of care in communities and schools on pregnancy at young age. Pregnant woman aged between 12 and 20 years were found, meaning that there is a high rate of young women getting pregnant early. That find indicates the need to invest in policies of sex education attending this public, aiming to achieve birth control at very young ages, preventing, in this way, them from undergoing cesarean section, for instance, and becoming exposed to the possible complications that derive from that.

It is said that cesarean delivery showed a high rate, since it exceeds its maximum percentage preestablished by the Brazilian Ministry of Health. This high rate may be associated, in part, when there is a considerable representation of pregnant women with an age range outside the established references.

RESUMO

Introdução: A caracterização clínica e epidemiológica de partos realizados é de grande importância para o trabalho da saúde pública. O objetivo é caracterizar os tipos de partos fazendo associação com fatores maternos/obstétricos e neonatais em pacientes acompanhadas em um centro de saúde da família. **Delineamento:** É um estudo quantitativo, exploratório e retrospectivo, de análise documental. As variáveis analisadas foram: índice de Apgar aos 5 minutos, idade materna, tipo de parto, número de consultas pré-natal realizadas, idade gestacional, estado civil e escolaridade. **Resultados:** Um total de 60,09% realizou parto cesáreo. Sobre a idade, predominou entre 21 a 30 anos o parto tipo cesáreo. Quando observada a correlação entre estado civil e parto, houve predominância de união estável e cesáreo (50%). Em relação à idade gestacional, as percentagens de tipo de partos foram próximas naqueles considerados a termo (37 a 41 semanas) sendo vaginal com 20% e cesáreo com 30%. **Implicações:** O presente trabalho revelou dois dados relevantes: primeiro, a idade materna muito precoce e o segundo, o número de partos do tipo cesáreo muito superior aos estabelecidos pelos órgãos da saúde. Esses resultados enfatizam a necessidade de investimento na qualidade da assistência em comunidades, escolas, sobre a gestação em idade jovem.

DESCRITORES

Idade Materna; Parto; Cuidado Pré-Natal; Escolaridade.

RESUMEN

Introducción: La caracterización clínico-epidemiológica de los partos realizados es de gran importancia para la labor de salud pública. El objetivo es caracterizar los tipos de partos haciendo asociación con factores maternos / obstétricos y neonatales en pacientes seguidas en un centro de salud familiar. **Delineación:** Es un estudio cuantitativo, exploratorio y retrospectivo de análisis documental. Las variables analizadas fueron: índice de Apgar a los 5 minutos, edad materna, tipo de parto, número de consultas prenatales realizadas, edad gestacional, estado civil y educación. **Resultados:** El 60,09% se sometió a cesárea. En cuanto a la edad, predominaron los partos de tipo cesárea entre los 21 y los 30 años. Cuando se observó la correlación entre estado civil y parto, hubo predominio de unión estable y cesárea (50%). En cuanto a la edad gestacional, los porcentajes de tipo de partos fueron cercanos a los considerados a término (37 a 41 semanas), siendo vaginal con 20% y cesárea con 30%. **Implicaciones:** El presente trabajo reveló dos datos relevantes: primero, la edad materna muy temprana y el segundo, el número de partos por cesárea muy superior a los establecidos por las agencias de salud. Estos resultados enfatizan la necesidad de invertir en la calidad de la atención en las comunidades, las escuelas, sobre el embarazo a una edad temprana.

DESCRIPTORES

Edad Materna; Parto; Atención Prenatal; Escolaridad.

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CONFLICTS OF INTEREST

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