

Social inequalities and women's satisfaction with childbirth care in Brazil: a national hospital-based survey

Desigualdades sociais e satisfação das mulheres com o atendimento ao parto no Brasil: estudo nacional de base hospitalar

Diferencias sociales y satisfacción de las mujeres con la atención al parto en Brasil: estudio nacional de base hospitalaria

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Abstract

The objective is to identify factors associated with women's satisfaction towards the care provided by the health professionals during hospital assisted delivery and identify how those factors influence their general levels of satisfaction. The cohort hospital based study was carried out in connection with the Birth in Brazil research. 15,688 women were included, interviewed at home, through the phone, from March 2011 to February 2012. All the variables that compose the professional/pregnant woman relationship (waiting time, respect, privacy, clarity of explanations, possibility of asking questions and participating in the decisions) and schooling remained independently associated with general satisfaction towards delivery care, in the adjusted model. The white women assisted in the southeastern and southern regions of the country, by the private sector and with a companion present gave a better evaluation of the care provided. Women value the way in which they are assisted by the health professionals, and there are inequalities in the way they are treated based on skin color, geographic region and financial situation.

Patient Satisfaction; Health Services Evaluation; Parturition; Social Inequity

Resumo

O objetivo foi identificar fatores associados à avaliação das mulheres quanto à relação profissionais de saúde/parturiente e como esses fatores influenciam a satisfação com o atendimento ao parto. Estudo de coorte de base hospitalar, realizado com base na pesquisa Nascer no Brasil. Foram incluídas 15.688 mulheres entrevistadas no pós-parto, por telefone, de março de 2011 a fevereiro de 2013. Todas as variáveis componentes da relação profissional/parturiente (tempo de espera, respeito, privacidade, clareza nas explicações, possibilidade de fazer perguntas e participação nas decisões) e escolaridade mantiveram-se associadas de forma independente à satisfação geral com o atendimento ao parto, no modelo ajustado. As mulheres atendidas na Região Sudeste e na Sul, no setor privado e com acompanhante avaliaram melhor a relação com os profissionais de saúde, o oposto ocorreu com as pardas e que tiveram trabalho de parto. As mulheres valorizam a forma como são atendidas pelos profissionais e existem desigualdades de cor, região geográfica e financiamento do parto nessas relações.

Satisfação do Paciente; Avaliação de Serviços de Saúde; Parto; Iniquidade Social

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Introduction

Obstetric care in Brazil is provided by both the public and private sectors, with the latter including out-of-pocket payment and various forms of health plans and insurance. Sixty-nine percent of the maternity hospitals are private, but they reserve only 38% of their beds for the Unified National Health System (SUS) ¹. According to official information, 25% of the Brazilian population has a health plan with medical coverage ². Both in the public and the private model, the prevailing obstetric-care model is technocratic, marked by the performance of traditional obstetric interventions, without considering scientific evidences or the subjective dimension of giving birth ³.

When considering childbirth most women expect an interventionist care, which has come to be seen as natural or traditional. Studies show that women value the way they are treated at the maternity hospital, and the attentiveness of health professional during labor/delivery, all part of what is considered "ideal" care ⁴.

Women's satisfaction is influenced by their expectations of on the care they will receive, not the quality of care actually provided. However, the assessment of satisfaction with the received care may be an important tool for social control ⁵. Studies on the satisfaction of women with childbirth care show that the quality of interaction between health professionals and women in labor, particularly regarding emotional support, communication skills, provision of proper information, and participation in the decision-making process are strong and consistent predictors of childbirth care satisfaction ⁶. It should be mentioned that the experience of women in labor may also influence maternal and neonatal outcomes, since anxiety during labor is associated with high adrenaline levels, abnormal fetal heart rate, decrease of uterine contractility, an increase in the duration of the active labor stage, and low Apgar scores ⁷. On the other hand, the emotional support, guidance and comfort measures may reduce anxiety, fear, and, therefore, their adverse effects ⁸.

In Brazil, quantitative studies on women's satisfaction with the care received during childbirth are specific, with most of them designed to assess care delivered at a given institution. These studies indicate that the degree of satisfaction is related to the quality of the interaction and communication with health practitioners (respect, privacy, care, and information received during labor/delivery, emotional support), with the way they experienced the process (little suffering, presence of a companion of their choice), and with good maternal and

neonatal outcomes ^{9,10,11}. Even though these findings relate to important satisfaction components of childbirth care, they cannot be extrapolated to the whole of the country, as the design of these studies does not enable generalization of their findings.

Considering that obstetric care should focus on the needs of the woman, and satisfaction with the care received is an indirect way of assessing the quality of health services, identifying satisfaction predictors is a way to check whether labor and delivery care meet the health system user rights.

The hypothesis of this investigation is that satisfaction with childbirth care greatly depends on the health practitioner/pregnant woman interaction, and that socioeconomic and demographic characteristics, and childbirth characteristics influence this relationship.

The goal of this investigation is to identify factors associated with women's satisfaction regarding the relationship they develop with health practitioners during hospital stay and childbirth, and to identify how these factors influence their overall satisfaction with childbirth.

Methods

Birth in Brazil is a national hospital-based investigation of women post-childbirth and their newborn babies. The sample was selected in three stages. At the first stage the hospitals were selected, they should have 500 or more deliveries/year, and were stratified by the five macro-regions of Brazil (North, Northeast, South, Southeast, and Central), location (capital city or not), and type of hospital (private, public, and mixed). At the second stage the interview days were selected (at least seven days for each hospital), and the third stage selected the post-childbirth women. In each of the 266 hospitals in the sample, 90 postpartum women were interviewed, a total of 23,940 subjects. More detailed information of the size of the sample may be found on Vasconcellos et al. ¹². In the first stage of the survey, carried out from February 2011 to October 2012, face-to-face interviews were held with the postpartum women during their hospital stay, data about the woman and the newborn were collected from their medical chart, and their prenatal cards were photographed. Interviews over the phone were conducted before six months and at twelve months after birth, between March 2011 and February 2013, to collect information on maternal and newborn outcomes. Detailed information on data collection may be found on do Carmo Leal et al. ¹³.

For this study, data from the phone and the face-to-face interviews, and from the medical chart were used. The phone interviews were arranged previously, during the face-to-face interview at the hospital, and an Informed Consent Form was signed. Women who had no phone, or could not be contacted after 5 attempts in alternate days and times were considered lost to follow-up. Phone interviews were conducted by 10 female interviewers hired from a company specialized in this type of approach, previously trained by the investigation coordinators. Before the fieldwork, a pilot study was held in which the coordinators listened in on the interviews, to identify possible problems and/or difficulties. All the data were sent and stored in the Oswaldo Cruz Foundation (Fiocruz) central server.

Data from the section on hospital care satisfaction were selected. During the phone interview, before asking the questions, the following statement was said: *“We will now ask some questions about your childbirth hospital admission, and your satisfaction about the way it happened”*. This statement was meant to help the interviewee recall her experience.

Next, questions on different aspects of care were asked, and they would always begin with *“In your childbirth admission, how do you evaluate...”*. The women were asked to evaluate the following: waiting time from arrival to the time they were attended, whether the health professional was respectful during the admission, whether they respected the women's privacy during physical examination and consultation, for instance during the vaginal digital examination and attending to childbirth (privacy), clarity of the explanations provided by health practitioners, possibility of taking part, along with the medical team, in the decisions about labor and delivery, and the length of time she had to ask questions about her health or treatment. The question about the satisfaction of the woman with childbirth care was asked at the end of this series of questions, in order to improve her ability to recall the events, and allow her to think over the specific aspects of the interaction with the health practitioners before evaluating them¹¹. Five response options were given: very bad, bad, fair, good, and excellent, which allowed them to express lower satisfaction levels, and enabled increased answer variability¹⁴.

The occurrence of violence was assessed by the question: *“During your stay at the hospital for childbirth, do you think you were subjected to any type of abuse or other form of violence by practitioners: has any practitioner yelled at you or cursed you (verbal abuse), has any practitioner threatened you, humiliated you, denied provision*

of care, or denied the provision of any type of pain relief (psychological abuse), has any practitioner pushed you, harmed you, or done a digital vaginal examination in a painful way (physical abuse)?”, more than admitted, which were later grouped in “some sort of violence” (yes/no).

The main outcome variable was satisfaction of the woman with childbirth care, by answering the question: *“In your opinion, the care provided for your childbirth was...”*, with five response options: very bad, bad, fair, good, and excellent. Also considered as outcomes were the report of abuse (yes/no), the women's assessment about the waiting time until she was attended, practitioner's respectfulness while talking to them, respect to privacy during the physical examination and childbirth care, clarity of the explanations provided by the health practitioners, possibility of taking part, along with the medical team, in the decisions about labor and delivery, and the time available for her to ask questions about her health or treatment, all of which with five response alternatives.

The co-variables were collected during the hospital interview with the postpartum woman, and included: age (up to 19 years old, 20-34 years old, and 35 and over; which was defined considering the different groups pregnancy risk), self-declared skin (white, black, brown, yellow, indigenous), schooling (Basic Education, incomplete; Basic Education, complete; High School, complete; and Higher Education, complete), socioeconomic status according to the classification by the Brazilian Association of Market Survey Institutes (ABIPEME), which considers classes A/B, C e D/E, type of delivery (vaginal/caesarian), geographic region of residence (North, Northeast, Southeast, South, Central), source of payment for the childbirth (women who delivered in public health care facilities and women who delivered in mixed health care facilities that were not paid by health insurance plans were classified as “public source of payment”. Women whose delivery was paid by health insurance plan, and the delivery occurred in mixed or private hospitals, and women who delivered in private facilities, regardless of the delivery having been paid or not by the health insurance plan, were classified as “private source of payment”), presence of a companion during hospital stay, from admission to post-delivery (at no time, during some times, throughout the stay), and labor yes/no (assessed from the information on the chart).

For the statistical data analysis, the statistic software Stata version 11 (Stata Corp., College Station, United States) was used. For the sample description, the co-variables outcomes percent-

ages were calculated considering the highest cut-off point (“excellent”).

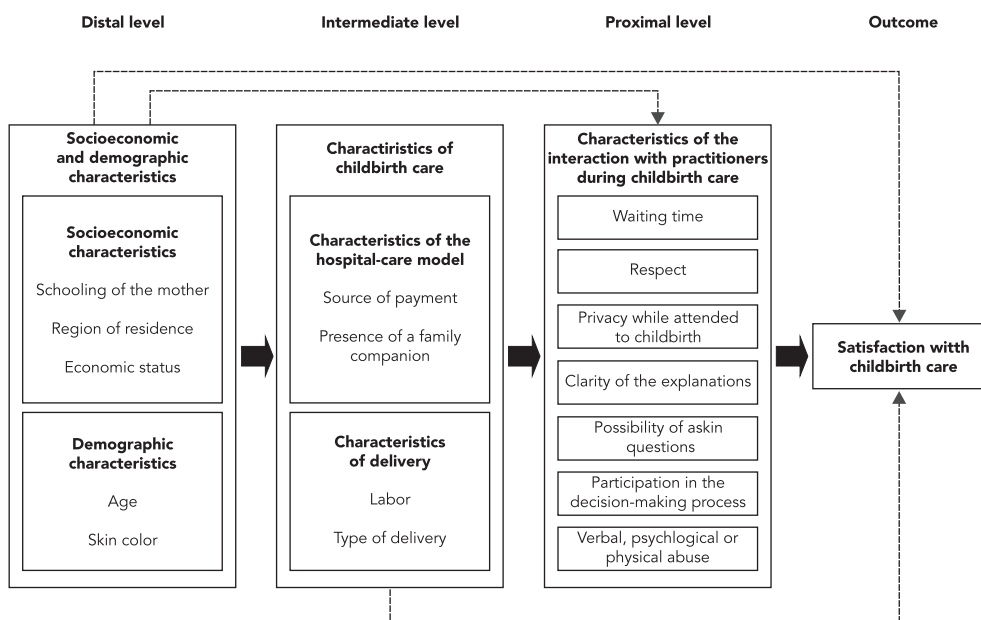
Univariate and multivariate statistical analysis of childbirth-satisfaction associated factors were made using ordinal logistic regression ¹⁵, following the hierarchical model ¹⁶ presented in Figure 1, with estimation of the crude and adjusted odds ratio and their respective 95% confidence intervals (95%CI). Ordinal regression produces an odds ratio (OR) that estimates the chances of a 1-unit increase of a dependent variable for each 1-unit increase in the independent variable. The assumption of the model proportionality was checked by Brant test, with favorable result ($p > 0.05$). On the distal level, socioeconomic and demographic variables were included (schooling, social class, skin color, age, region of residence); on an intermediate level, the service-related variables (source of payment, type of delivery, labor, companion); and on the proximal level, the variables related to the care provided by the practitioners. The outcome was an overall satisfaction with childbirth care (in five categories); the exposure variables were classified as excellent versus good/fair/bad/very bad. It was considered that socioeconomic and demographic conditions, and characteristics regarding the type of facility

and type of labor determine how health practitioners treat women in terms of violence, respect, privacy, waiting time to be attended, clarity of the explanations, possibility of asking questions, participation in decision-making, and that these aspects determine the overall satisfaction with childbirth care.

To assess the association between characteristics of the women and facilities with the care provided by the practitioners, a bivariate and multivariate analysis was initially done, having, as outcome variables, those related to the attentiveness towards the woman: report of violence (yes/no), waiting time, respect, privacy, clarity of the explanations, time allotted for the woman to ask questions, and participation in decision-making, with five levels, and, as exposure variables, socioeconomic and demographic characteristics, and childbirth characteristics (source of payment, type of delivery, presence of a companion). Next, a model was built, having as outcome the overall satisfaction with childbirth care, and as exposure variables those related to the health practitioner/pregnant woman (proximal level: report of violence, waiting time, respect, privacy, clarity in the explanations, time allotted for questions, participation in decision-making, classified as excellent

Figure 1

Theoretical model to assess childbirth satisfaction.



versus good/fair/bad/very bad, childbirth care characteristics (intermediate level), socioeconomic and demographic characteristics (distal level). All variables with $p < 0.05$ in the bivariate analysis were included in the multivariable analysis. All models were developed according to the sample design, in a way to make up for the follow-up loss. Details on the calculation of the sample weight are found on Vasconcellos et al.¹².

This investigation follows the regulations established by *Resolution n.º 196/1996*, by the National Health Council, which regulates guidelines and norms of research with human beings, under research protocol Ethics Research Committee of the National School of Public Health, Oswaldo Cruz Foundation - CEP/ENSP n.º 92/10. The heads of all facilities and the postpartum women signed the Informed Consent Form.

Results

A total of 23,940 hospital interviews with postpartum women were held. From the original sample, women of yellow skin color ($n = 275$) and indigenous ($n = 99$) were excluded because they accounted for a small proportion of the interviewees (1.4%), leaving 23,523 women. From these, 15,688 (66.7%) were contacted and interviewed over the phone, starting from 45 days after delivery (the mean time between delivery and phone interview was of 90 days). Follow-up loss/refusal figures were as follows: 1,811 women did not have a phone, 129 refused to answer, and the remainder were unsuccessful calls (non-existent number, no one with that name, wrong number, disconnected phone).

Table 1 presents the sample characteristics, corrected for sample weight. Most women were of brown skin color, socioeconomic class C, with a complete high-school education, age group 20-34 years, and from the Southern Region. There was a higher proportion of public sector-paid deliveries (79.9%) compared to private. The proportion of C-section was 53.4%, and only 19.3% of the women had a companion at all times of their hospital stay.

Table 1 also presents the proportion of outcomes investigated regarding socio-demographic and childbirth care co-variables. The proportion of respondents who reported verbal, physical or psychological abuse was higher among brown or black-colored skin women, of lower school education, age range between 20 and 34 years, of the Northern Region, with vaginal delivery, who had no companion during hospital stay, who were attended by the public sector, or who underwent labor. The proportion of women who

considered the different aspects of their interaction with health practitioners as “excellent” was higher for those of white skin color, of the socioeconomic class A/B, with complete higher education, of the Southern Region, with C-section performed, who had a companion throughout her stay, whose care was paid by the private sector, and who did not undergo labor.

Table 2 presents the analyses for outcomes “verbal, psychological, or physical abuse” during hospital stay; “waiting time until being attended”, “respect” and “privacy”. In the adjusted analysis, living in the Southern Region, having a companion throughout hospital stay, or delivery by the private sector were independent factors associated with a lesser chance of suffering abuse, whereas labor was associated with a higher chance of abuse (Table 2).

Independent factors associated to higher satisfaction with waiting time included belonging to socioeconomic class A/B, age between 20 and 34 years, age 35 years or older, deliveries carried out in the Southeastern, Southern, or Central regions, deliveries by the private sector, and the presence of a companion. Brown skin color was associated with lower degree of satisfaction with waiting time (Table 2).

As for health practitioners respectfulness while seeing and talking to the pregnant woman, the only independent factor associated with a lower rating regarding respect was having gone into labor. Independent factors associated to a stronger chance of being treated respectfully were: higher school education, delivery in the Southeastern, Southern, or Central regions, having a companion, and private source of payment (Table 2).

Two factors were independently associated with less privacy during examinations: brown skin color and labor. Factors associated with a greater degree of privacy included higher school education, being from the Northeastern, Southeastern, Southern or Central regions (versus the Northern region), having a companion during hospital stay, and private source of funding (Table 2).

Table 3 presents the analyses for outcomes “clarity of the explanations”, “possibility of asking questions” and “participation in the decisions”. Higher clarity of the explanations was associated with giving birth in the Southeastern or Southern regions, having a companion some of the time or at all times of hospital stay, and private source of payment (Table 3).

Regarding the time allotted for questions, women age 35 or older, from the Southern region, in whom a C-section was performed, who had a companion some of the time or at all times of hospital stay, or whose childbirth source of

Table 1

Distribution of the characteristics within the sample, proportion of women who reported having suffered some type of abuse, and proportion of women who rated "excellent" the waiting time, respect, privacy, clarity of explanations, opportunity of asking questions, participation in decision-making, and childbirth care for the categories related to of sociodemographic co-variables, type of labor, having a companion during hospital-stay, source of payment for childbirth care, payment, and undergoing labor. Brazil, 2011-2012.

| | Sample | Verbal, psychological our physical abuse | Waiting time to be attended | Respect from practitioners | Privacy during labor and delivery | Clarity of the explanations | Opportunity of asking questions | Decision- making participation | Satisfaction with child- birth care |
|--|--------|---|-----------------------------------|----------------------------------|---|-----------------------------------|---------------------------------------|--------------------------------------|---|
| | % | % | % | % | % | % | % | % | % |
| Skin color | | | | | | | | | |
| White | 34.0 | 5.5 | 33.0 | 46.9 | 47.5 | 40.3 | 31.2 | 35.9 | 52.7 |
| Black | 8.3 | 6.6 | 25.6 | 39.1 | 36.6 | 36.1 | 26.1 | 31.5 | 44.4 |
| Brown | 57.6 | 6.0 | 26.0 | 39.2 | 37.9 | 33.3 | 26.6 | 31.3 | 43.8 |
| Social class according to ABIPEME | | | | | | | | | |
| D/E | 21.5 | 6.6 | 21.6 | 33.2 | 31.3 | 29.4 | 23.3 | 28.7 | 38.7 |
| C | 54.3 | 6.3 | 27.5 | 41.1 | 39.4 | 35.4 | 27.4 | 31.7 | 45.7 |
| A/B | 24.2 | 4.5 | 36.4 | 50.8 | 53.1 | 42.6 | 34.0 | 39.2 | 56.4 |
| Schooling | | | | | | | | | |
| Incomplete Primary School | 22.9 | 6.5 | 21.8 | 32.1 | 30.2 | 27.7 | 23.7 | 28.1 | 38.0 |
| Complete Primary School | 26.5 | 5.9 | 26.3 | 41.7 | 38.0 | 35.5 | 28.1 | 34.0 | 45.5 |
| Complete Secondary School | 41.7 | 6.0 | 30.5 | 44.1 | 44.6 | 38.4 | 28.1 | 32.6 | 49.5 |
| Complete University | 9.0 | 4.3 | 41.6 | 56.1 | 60.5 | 47.1 | 39.3 | 43.5 | 61.7 |
| Age (years) | | | | | | | | | |
| 12-19 | 18.6 | 5.1 | 24.6 | 38.1 | 35.4 | 34.4 | 26.0 | 30.3 | 44.4 |
| 20-34 | 70.9 | 6.3 | 28.7 | 41.9 | 41.7 | 35.6 | 27.9 | 37.4 | 46.9 |
| 35 and older | 10.5 | 4.6 | 32.4 | 47.3 | 46.8 | 41.2 | 33.1 | 32.9 | 51.5 |
| Region | | | | | | | | | |
| Northern | 9.6 | 6.2 | 22.4 | 33.7 | 30.9 | 27.3 | 22.8 | 28.8 | 37.9 |
| Northeastern | 28.8 | 7.2 | 23.6 | 35.1 | 33.3 | 29.6 | 23.7 | 29.9 | 41.6 |
| Southeastern | 42.5 | 5.6 | 30.3 | 45.4 | 45.9 | 40.2 | 30.8 | 34.4 | 50.5 |
| Southern | 12.6 | 4.3 | 35.6 | 49.9 | 49.0 | 41.5 | 33.3 | 37.4 | 53.3 |
| Central | 6.5 | 5.1 | 31.1 | 44.0 | 43.2 | 38.1 | 27.5 | 33.6 | 47.9 |
| Type of delivery | | | | | | | | | |
| Vaginal | 46.6 | 6.8 | 25.2 | 36.9 | 34.3 | 31.7 | 24.4 | 28.7 | 41.7 |
| Cesarean section | 53.4 | 5.1 | 31.1 | 46.1 | 46.9 | 39.7 | 31.3 | 36.6 | 51.4 |
| Presence of a companion during hospital-stay | | | | | | | | | |
| No | 23.6 | 7.8 | 24.4 | 34.3 | 33.4 | 29.1 | 22.7 | 25.4 | 38.8 |
| Some of the time | 57.0 | 5.7 | 28.3 | 42.8 | 42.0 | 37.0 | 32.9 | 34.1 | 48.0 |
| At all times | 19.3 | 4.1 | 33.3 | 47.8 | 47.4 | 41.2 | 28.1 | 38.6 | 53.6 |
| Source of payment | | | | | | | | | |
| Public | 79.9 | 6.7 | 25.6 | 38.0 | 36.0 | 32.9 | 25.5 | 30.0 | 42.7 |
| Private | 20.1 | 2.5 | 39.4 | 57.0 | 61.2 | 48.1 | 38.3 | 44.4 | 63.6 |
| Underwent labor | | | | | | | | | |
| No | 35.1 | 3.8 | 32.6 | 48.5 | 49.9 | 41.7 | 33.2 | 38.9 | 54.6 |
| Yes | 64.9 | 7.0 | 26.1 | 38.1 | 36.3 | 32.9 | 25.3 | 29.7 | 42.8 |

ABIPEME: Brazilian Association of Market Survey Institutes.

Table 2

Multivariate models for outcomes waiting time, respect and privacy, adjusted for the sociodemographic variables, type of delivery, source of payment, region, presence of a companion during hospital-stay. Brasil 2011-2012.

| | Verbal, psychological or physical abuse | | | Waiting time until being attended | | | Respect by practitioners | | | Privacy during labor and delivery | | |
|--|---|-----------|-------------------|-----------------------------------|-----------|-------------------|--------------------------|-----------|-------------------|-----------------------------------|-----------|-------------------|
| | OR adjusted | 95%CI | p-value | OR adjusted | 95%CI | Valor de p | OR adjusted | 95%CI | p-value | OR adjusted | 95%CI | p-value |
| Skin color | | | 0.340 | | | 0,031 | | | 0.170 | | | 0.009 |
| White | Reference | | | Reference | | | Reference | | | Reference | | |
| Black | 0.92 | 0.55-1.55 | | 0.91 | 0.76-1.10 | | 1.00 | 0.82-1.21 | | 0.91 | 0.78-1.06 | |
| Brown | 0.88 | 0.70-1.10 | | 0.92 | 0.83-1.02 | | 0.97 | 0.89-1.07 | | 0.92 | 0.85-1.00 | |
| Social class according to ABIPEME | | | 0.991 | | | 0.036 | | | 0.177 | | | 0.074 |
| D/E | Reference | | | Reference | | | Reference | | | Reference | | |
| C | 1.06 | 0.79-1.43 | | 1.03 | 0.91-1.16 | | 1.03 | 0.94-1.14 | | 1.04 | 0.93-1.16 | |
| A/B | 1.06 | 0.75-1.48 | | 1.12 | 0.97-1.29 | | 1.05 | 0.90-1.22 | | 1.09 | 0.93-1.27 | |
| Schooling | | | 0.345 | | | < 0.001 | | | 0.002 | | | < 0.001 |
| Incomplete Primary School | Reference | | | Reference | | | Reference | | | Reference | | |
| Complete Primary School | 0.96 | 0.67-1.36 | | 1.05 | 0.92-1.21 | | 1.23 | 1.08-1.42 | | 1.15 | 1.01-1.30 | |
| Complete Secondary School | 1.03 | 0.76-1.38 | | 1.19 | 1.06-1.33 | | 1.24 | 1.09-1.41 | | 1.30 | 1.15-1.46 | |
| Complete University | 1.26 | 0.81-1.95 | | 1.40 | 1.15-1.69 | | 1.41 | 1.16-1.71 | | 1.60 | 1.29-1.98 | |
| Age (years) | | | 0.085 | | | 0.005 | | | 0.112 | | | 0.562 |
| 12-19 | Reference | | | Reference | | | Reference | | | Reference | | |
| 20-34 | 1.40 | 1.02-1.91 | | 1.24 | 1.00-1.27 | | 1.04 | 0.92-1.18 | | 0.99 | 0.89-1.10 | |
| 35 and older | 1.18 | 0.81-1.70 | | 1.20 | 1.03-1.40 | | 1.19 | 1.00-1.42 | | 1.03 | 0.90-1.19 | |
| Region | | | 0.003 | | | < 0.001 | | | < 0.001 | | | < 0.001 |
| Northern | Reference | | | Reference | | | Reference | | | Reference | | |
| Northeastern | 1.24 | 0.89-1.74 | | 0.95 | 0.78-1.15 | | 1.02 | 0.85-1.24 | | 1.16 | 0.93-1.44 | |
| Southeastern | 0.96 | 0.67-1.38 | | 1.36 | 1.12-1.64 | | 1.54 | 1.28-1.87 | | 1.84 | 1.49-2.28 | |
| Southern | 0.72 | 0.51-1.01 | | 1.58 | 1.28-1.94 | | 1.78 | 1.46-2.17 | | 2.06 | 1.67-2.55 | |
| Central | 0.81 | 0.58-1.15 | | 1.40 | 1.14-1.72 | | 1.44 | 1.16-1.78 | | 1.72 | 1.39-2.13 | |
| Type of delivery | | | 0.246 | | | 0.528 | | | 0.230 | | | 0.002 |
| Vaginal | Reference | | | Reference | | | Reference | | | Reference | | |
| Cesarean section | 1.16 | 0.89-1.51 | | 0.98 | 0.85-1.11 | | 1.09 | 0.95-1.24 | | 1.16 | 1.00-1.33 | |
| Presence of a companion during hospital-stay | | | 0.019 | | | < 0.001 | | | < 0.001 | | | <0.001 |
| No | Reference | | | Reference | | | Reference | | | Reference | | |
| Some of the time | 0.81 | 0.63-1.05 | | 1.10 | 0.99-1.22 | | 1.26 | 1.10-1.44 | | 1.20 | 1.07-1.34 | |
| At all times | 0.64 | 0.43-0.97 | | 1.27 | 1.11-1.47 | | 1.41 | 1.18-1.70 | | 1.26 | 1.05-1.52 | |
| Source of payment | | | < 0.001 | | | 0.001 | | | < 0.001 | | | 0.007 |
| Public | Reference | | | Reference | | | Reference | | | Reference | | |
| Private | 0.41 | 0.30-0.56 | | 1.33 | 1.11-1.47 | | 1.58 | 1.34-1.85 | | 1.89 | 1.59-2.24 | |
| Underwent labor | | | 0.001 | | | 0.065 | | | 0.027 | | | 0.053 |
| No | Reference | | | Reference | | | Reference | | | Reference | | |
| Yes | 1.79 | 1.28-2.52 | | 0.90 | 0.79-1.03 | | 0.58 | 0.76-0.99 | | 0.86 | 0.76-0.97 | |

ABIPEME: Brazilian Association of Market Survey Institutes; 95%CI: 95% confidence interval; OR: odds ratio.

Note: Wald test p-value highlighted in bold.

Table 3

Multivariate models for outcomes clarity of explanations, opportunity of asking questions, and participation in decision-making, adjusted for the sociodemographic variables, type of delivery, source of payment, region, and presence of a companion during labor and delivery. Brazil 2011-2012.

| | Clarity of explanations | | | Opportunity of asking questions | | | Participation in decision-making | | |
|--|-------------------------|-----------|-------------------|---------------------------------|-----------|-------------------|----------------------------------|-----------|--------------|
| | OR adjusted | 95%CI | p-value | OR adjusted | 95%CI | p-value | OR adjusted | 95%CI | p-value |
| Skin color | | | 0.066 | | | 0.225 | | | 0.866 |
| White | Reference | | | Reference | | | Reference | | |
| Black | 1.02 | 0.85-1.23 | | 1.00 | 0.86-1.17 | | 1.04 | 0.97-1.21 | |
| Brown | 0.95 | 0.86-1.04 | | 0.98 | 0.88-1.08 | | 0.96 | 0.87-1.06 | |
| Social class according to ABIPEME | | | 0.966 | | | 0.805 | | | 0.754 |
| D/E | Reference | | | Reference | | | Reference | | |
| C | 0.98 | 0.87-1.11 | | 0.95 | 0.85-1.07 | | 0.93 | 0.83-1.05 | |
| A/B | 0.94 | 0.80-1.10 | | 0.92 | 0.80-1.07 | | 0.94 | 0.82-1.09 | |
| Schooling | | | 0.080 | | | 0.235 | | | 0.984 |
| Incomplete Primary School | Reference | | | Reference | | | Reference | | |
| Complete Primary School | 1.18 | 1.03-1.33 | | 1.04 | 0.92-1.18 | | 1.11 | 0.96-1.29 | |
| Complete Secondary School | 1.13 | 1.00-1.29 | | 1.28 | 0.82-1.44 | | 0.89 | 0.79-1.00 | |
| University complete | 1.25 | 1.06-1.48 | | 1.08 | 0.96-1.28 | | 0.95 | 0.78-1.16 | |
| Age (years) | | | 0.858 | | | 0.007 | | | 0.882 |
| 12-19 | Reference | | | Reference | | | Reference | | |
| 20-34 | 0.92 | 0.82-1.03 | | 1.05 | 0.93-1.18 | | 1.02 | 0.90-1.15 | |
| 35 and older | 1.07 | 0.92-1.25 | | 1.28 | 1.09-1.49 | | 1.11 | 0.96-1.29 | |
| Region | | | < 0.001 | | | < 0.001 | | | 0.420 |
| Northern | Reference | | | Reference | | | Reference | | |
| Northeastern | 1.03 | 0.81-1.31 | | 1.00 | 0.82-1.23 | | 1.02 | 0.82-1.26 | |
| Southeastern | 1.60 | 1.26-2.04 | | 1.44 | 1.16-1.78 | | 1.20 | 0.96-1.49 | |
| Southern | 1.66 | 1.31-2.11 | | 1.60 | 1.28-1.98 | | 1.36 | 1.09-1.70 | |
| Central | 1.50 | 1.45-1.97 | | 1.30 | 1.04-1.62 | | 1.28 | 1.03-1.59 | |
| Type of delivery | | | 0.407 | | | 0.030 | | | 0.583 |
| Vaginal | Reference | | | Reference | | | Reference | | |
| Cesarean section | 1.06 | 0.92-1.21 | | 1.12 | 1.00-1.26 | | 1.10 | 0.98-1.24 | |
| Presence of a companion during hospital-stay | | | < 0.001 | | | < 0.001 | | | 0.012 |
| No | Reference | | | Reference | | | Reference | | |
| Some of the time | 1.28 | 1.14-1.44 | | 1.35 | 1.20-1.51 | | 1.41 | 1.25-1.59 | |
| At all times | 1.40 | 1.14-1.73 | | 1.48 | 1.24-1.77 | | 1.63 | 1.36-1.95 | |
| Source of payment | | | < 0.001 | | | < 0.001 | | | 0.004 |
| Public | Reference | | | Reference | | | Reference | | |
| Private | 1.52 | 1.30-1.76 | | 1.55 | 1.34-1.79 | | 1.58 | 1.39-1.79 | |
| Underwent labor | | | 0.080 | | | 0.069 | | | 0.569 |
| No | Reference | | | Reference | | | Reference | | |
| Yes | 0.88 | 0.75-1.03 | | 0.90 | 0.79-1.02 | | 0.81 | 0.72-0.92 | |

Note: Wald test p-value highlighted in bold.

ABIPEME: Brazilian Association of Market Survey Institutes; 95%CI: 95% confidence interval; OR: odds ratio.

payment was the private sector reported a longer time allotted by health practitioners for their questions (Table 3).

In terms of participation in decision-making during labor and delivery, women who were most satisfied had a companion during some of the time or at all times of hospital stay, and the source of payment was from the private sector (Table 3).

Table 4 presents the results from factors related to the overall satisfaction with childbirth care. In the bivariate analysis, all tested variables were significantly associated with the outcome, with a lesser degree of satisfaction being found for women with brown or black skin color versus the white women, and a higher degree of satisfaction for women of socioeconomic class A/B, with complete high-school or higher education, older than 20 years, from the Southeastern, Southern or Central regions. The chance of satisfaction was significantly higher, in the bivariate analysis, for women in whom a cesarean section was performed, who had a companion during hospital stay, and with childbirth paid by the private sector. To undergo labor was associated with a lesser degree of satisfaction, and with reports of abuse. A satisfactory assessment of the different aspects of the practitioner/pregnant woman interaction was associated with a higher overall satisfaction with childbirth care. In the multivariate analysis including socio-demographic variables, only the region was associated with the outcome. Among the characteristics of childbirth, the source of payment was associated with the outcome. All variables of the practitioner/pregnant woman relationship were independently associated with the overall satisfaction with childbirth care in the adjusted model. The report of abuse was seen as an independent factor associated with a lesser overall satisfaction with childbirth care. A satisfactory assessment of the waiting time, respect, privacy, clarity in the explanations, time allotted for questions, and participation in decision-making were all independent factors associated with higher satisfaction with childbirth care.

Discussion

The results show that higher schooling, delivering in the Southeastern or Southern Region, and the presence of a companion were significantly associated with the perception of shorter waiting time to be attended, a more respectful attitude by health practitioners, more privacy during examinations and delivery, more clarity of the explanations, and more possibility of asking questions. Skin color was associated with a worse assessment of waiting time to be attended, and less

privacy during examinations; and labor was associated with lower levels of respect and privacy, and more reports of abuse. The private source of payment was associated with fewer reports of violence, more respect, more privacy, more clarity of the explanations, more opportunities of asking questions, and more participation in decision-making. Finally, all aspects of the health practitioner/pregnant woman interaction were independently associated with a higher overall satisfaction with childbirth care, whereas, among the socio-demographic and delivery characteristics, the region and the source of payment remained associated with the main outcome (satisfaction with childbirth) in the final model.

The findings indicate that delivering in the more developed regions and having a private source of payment contributed to a higher degree of satisfaction and better interaction with health practitioners, which conflicts with the principles of equality in health-care provision. In the private sector, in general, the bond between the woman and the obstetrician is established from the prenatal care, which may lead to childbirth with less anxiety and more support from the medical team^{17,18}. In some health clinics in Brazil, there is a discriminatory attitude towards the public health-care sector, which serves low-income and more poorly educated women, which leads those health professionals to assume that these women not be able to understand or have autonomy to decide on childbirth interventions. On the other hand, women with higher income, higher schooling, and served by the private sector would be in better condition to exert their autonomy and take part in decision-making^{19,20,21}. Such discriminatory attitudes, in tandem with the critical asymmetry between pregnant women and health practitioners, mentioned by Boltanski²¹, allow us to understand why women served by the public sector report less clarity in the explanation, less openness of practitioners to questions, which result in their perception of less participation in decision-making. In terms of physical, verbal or psychological abuse, it became evident that women residing in the Northeastern region, who went into labor, or who were attended by the public sector, reported a higher occurrence of abuse; however, the presence of a companion restrained significantly such reporting.

Among women of black or brown skin, there was a smaller chance of privacy during labor and delivery, and less satisfaction with waiting time, which makes social inequality in health care evident for this group of women. The social discrimination in childbirth care found in our investigation, which may result in more abuse, is confirmed by other studies, such as the one

Table 4

Crude and Adjusted odds ratio (OR) for the outcome overall satisfaction with childbirth care according to the sociodemographic variables, characteristics of delivery, and practitioner/pregnant woman interaction. Brazil 2011-2012.

| | OR crude * | 95%CI | p-value | OR adjusted * | 95%CI | p-value |
|--|------------|------------|---------|---------------|-----------|---------|
| Sociodemographic variables | | | | | | |
| Skin color | | | < 0.001 | | | 0.128 |
| White | Reference | | | Reference | | |
| Black | 0.71 | 0.58-0.88 | | 0.94 | 0.75-1.18 | |
| Brown | 0.70 | 0.63-0.78 | | 0.93 | 0.82-1.06 | |
| Social class according to ABIPEME | | | < 0.001 | | | 0.465 |
| D/E | Reference | | | Reference | | |
| C | 1.25 | 0.12-1.39 | | 0.91 | 0.79-1.04 | |
| A/B | 1.97 | 0.172-2.26 | | 0.94 | 0.80-1.11 | |
| Schooling | | | < 0.001 | | | 0.293 |
| Incomplete Primary School | Reference | | | Reference | | |
| Complete Primary School | 1.25 | 1.078-1.46 | | 0.97 | 0.82-1.37 | |
| Complete Secondary School | 1.52 | 1.37-1.69 | | 1.07 | 0.94-1.22 | |
| Complete University | 2.54 | 2.14-3.013 | | 1.05 | 0.87-1.29 | |
| Age (years) | | | < 0.001 | | | 0.505 |
| 12-19 | Reference | | | Reference | | |
| 20-34 | 1.16 | 1.04-1.29 | | 1.10 | 0.88-1.62 | |
| 35 and older | 1.43 | 1.24-1.65 | | 1.10 | 0.85-1.29 | |
| Region | | | < 0.001 | | | 0.002 |
| Northern | Reference | | | Reference | | |
| Northeastern | 1.16 | 0.48-1.43 | | 1.12 | 0.94-1.34 | |
| Southeastern | 1.73 | 1.39-2.16 | | 1.30 | 1.09-1.56 | |
| Southern | 1.99 | 1.63-2.43 | | 1.34 | 1.12-1.60 | |
| Central | 1.54 | 1.24-1.92 | | 1.20 | 1.00-1.44 | |
| Characteristics of delivery | | | | | | |
| Type of delivery | | | < 0.001 | | | 0.504 |
| Vaginal | Reference | | | Reference | | |
| Cesarean section | 1.54 | 1.38-1.71 | | 1.06 | 0.89-1.25 | |
| Presence of a companion during hospital-stay | | | < 0.001 | | | 0.092 |
| No | Reference | | | Reference | | |
| Some of the time | 1.48 | 1.31-1.66 | | 1.10 | 0.97-1.25 | |
| At all times | 1.82 | 1.51-2.18 | | 1.35 | 0.95-1.29 | |
| Underwent labor | | | < 0.001 | | | 0.117 |
| No | Reference | | | Reference | | |
| Yes | 0.59 | 0.53-0.67 | | 0.9 | 0.79-1.02 | |
| Source of payment | | | < 0.001 | | | < 0.001 |
| Public | Reference | | | Reference | | |
| Private | 2.46 | 2.17-2.78 | | 1.35 | 1.16-1.57 | |
| Interaction with practitioners | | | | | | |
| Suffered verbal, psychological or physical abuse | | | < 0.001 | | | < 0.001 |
| No | Reference | | | Reference | | |
| Yes | 0.07 | 0.06-0.10 | | 0.12 | 0.09-0.15 | |
| Waiting time to being attended | | | < 0.001 | | | < 0.001 |
| Good, fair, bad, very bad | Reference | | | Reference | | |
| Excellent | 5.28 | 4.58-6.09 | | 1.98 | 1.69-2.32 | |

(continues)

Table 4 (continued)

| | OR crude * | 95%CI | p-value | OR adjusted * | 95%CI | p-value |
|-----------------------------------|------------|-----------|---------|---------------|-----------|---------|
| Respect of practitioners | | | < 0.001 | | | < 0.001 |
| Good, fair, bad, very bad | Reference | | | Reference | | |
| Excellent | 7.66 | 6.95-8.44 | | 2.58 | 2.27-2.93 | |
| Privacy during labor and delivery | | | < 0.001 | | | < 0.001 |
| Good, fair, bad, very bad | Reference | | | Reference | | |
| Excellent | 7.27 | 6.62-8.00 | | 2.24 | 1.97-2.55 | |
| Clarity of explanations | | | < 0.001 | | | < 0.001 |
| Good, fair, bad, very bad | Reference | | | Reference | | |
| Excellent | 6.62 | 5.97-7.34 | | 2.06 | 1.80-2.34 | |
| Time allotted for questions | | | < 0.001 | | | < 0.001 |
| Good, fair, bad, very bad | Reference | | | Reference | | |
| Excellent | 6.47 | 5.84-7.16 | | 1.80 | 1.56-2.09 | |
| Decision-making participation | | | < 0.001 | | | < 0.001 |
| Good, fair, bad, very bad | Reference | | | Reference | | |
| Excellent | 6.87 | 6.15-7.66 | | 2.43 | 2.11-2.79 | |

ABIPEME: Brazilian Association of Market Survey Institutes; 95%CI: 95% confidence interval.

Note: estimation by ordinal logistic regression for the outcome "overall satisfaction with childbirth care" with five options ("very bad", "bad", "fair", "good", "excellent"), p-values estimated by the Wald test.

of Leal et al.²², which points to two levels of discrimination: racial and educational, and leads to a higher degree of dissatisfaction of brown-skinned women with the care they receive, regardless of their level of schooling. Different studies mention the importance of addressing the racial issue in particular, and its implications for and in health-care services^{22,23,24}, whether because of the scarcity of studies published tackling this issue, or because of the evidently discriminatory practices that are replicated on a daily basis. Even considering that socioeconomic differences cause inequalities in health care, the color of the skin has effects of its own in health, and, according to Chor & Lima²⁴, it is likely the origin of most of these inequalities, and this should be better understood and discussed by the scientific community.

There are two striking results in the findings that were independent from the source of payment for the childbirth: the first is a higher occurrence of abuse reports from women who underwent labor, and, therefore, had more contact with the health-care team, which increased their perception of the positive and negative aspects of the care they received. The woman who undergoes labor and vaginal delivery has her body explored and manipulated longer. This fact, in association with the historically natural gender abuse, the domination of the female body by Medicine, and the steep asymmetry of the practitioner-user relationship makes the woman a

*non-subject*²⁵. Pereira²⁶ mentions the existence of significant differences in the attitude of practitioners, depending on the nature of the facility (public or private), and the economic status of the woman. However, in particular settings, women acknowledge labor as a pleasant and enriching experience, that gives them the main role, and participation at the time of becoming a mother¹⁸.

The second observation is the protective effect of the presence of a companion, which may restraint excesses and abuses, and/or foster a more amicable relationship with the team²⁷. This may be particularly important for women who are socioeconomically vulnerable. It should be mentioned that the right to have a companion of the woman's choice during labor, delivery and postpartum, established by *Law n.º 11,108/2005*²⁸, is not being respected for most women; in this investigation only 19.8% of the women had a companion throughout their hospital-stay.

The high prevalence of satisfaction with childbirth care found in this investigation was also mentioned in different national and international studies^{6,9,11,29,30,31,32}. It should be mentioned that satisfaction is influenced by the expectation of the users about the care they will receive, not the actual quality of the care⁵. It should also be considered that the low capacity for criticism, the passive acceptance of users with the care received, and the mere fact of having ac-

cess to care may result in a positive assessment of the health care services³³.

A very positive assessment of the women about respect, privacy and clarity of the explanations from health practitioners has been pointed out by different investigations, in which satisfaction with labor and delivery are influenced by the perception of warm-heartedness and support from health practitioners, which lessen the anxiety throughout the experience^{31,34}.

Another relevant aspect is the possibility of participation in the decision-making process during labor, which was also mentioned in a number of studies, showing that the feeling of not being informed, and not having the chance of taking part in decision-making were associated with dissatisfaction, pointing to a core role of communication between practitioners and users^{10,18,31}. In this sense, a clear, attentive communication may be a way of acknowledgement “between subjects”, which not only clarifies questions from the pregnant woman (and her companion), lessening the fear and tension typical of that moment, but also empowers the woman³². Acknowledging the other as a subject is essential in comprehensive care, and therefore crucial to the technical effectiveness and practical success of care³⁵.

The independent association between higher degree of overall satisfaction with childbirth and less reports of abuse, higher satisfaction with waiting time to be attended, respect of practitioners, privacy during labor and delivery, clarity of explanations, time allotted for questions, and participation in decision-making is also evidenced in different studies mentioned in the literature^{9,10,11,18,32} that point to the importance of such factors, all of them part of the relational dimension of care, as variables assessed by the users.

Among the limitations of this study there are selective follow up losses, more frequent for women of lower social status, which may lead to an overestimation of the levels of satisfaction, and underestimation of the associations found. However, all estimates were calculated according to a calibrating process that took into account the selective losses, making up for them. Another constraint is that the variables used to measure interaction between health practitioners and pregnant women were subjective, and there may be individual variations in the meaning of each one of them; for instance, what one woman considers respectful may be perceived differently by another. In addition, the association between satisfaction and these variables may reflect its subjectivity. As the instrument used did not enable the identification of women who gave birth

paid by direct disbursement, it is possible that some women had their delivery assisted in mixed health care facilities and were classified as having public source of payment, having paid for their delivery care. However, as these women had very similar socioeconomic characteristics to women attending public hospitals, it is likely that misclassification occurred in a few cases. As it is a non-differential misclassification with respect to the outcomes studied, it is expected that there has been attenuation of the magnitude of the observed associations.

The countrywide and unprecedented dimension of this investigation, as well as its representativeness according to different geographic and organizational strata may be considered one of its strengths. Having the interviews outside of the hospital setting also favors more sincere answers, less subjected to embarrassment or fear of retaliation by the health facilities. In addition, the time elapsed from the experience at the hospital and the phone interview may have improved the perception of the women about some aspects of care³⁶. According to Hodnett⁶, satisfaction with childbirth may change, and it tends to worsen over time, as women move away from the “halo” of relief for her and her baby’s survival, which allows for a more critical reassessment of her experience.

Our results show that the socioeconomic and demographic variables are associated with intermediate-level variables, with significant inequalities regarding skin color, schooling, region, and source of payment in the way women are treated by health practitioners during their hospital-stay for delivery. We also found that only the variables related to the relational dimension of care, region, and source of payment are significantly associated with the overall satisfaction with childbirth. This means that women do value the way they are attended by the practitioners, and that there are major inequalities regarding geographic region and source of payment in these relations. Even though some important aspects were not assessed in this study, such as the hospital setting, the professional expertise of the team, the expectations of the women with their health-care plan, and unfavorable maternal and perinatal outcomes may also interfere with the outcome, we may conclude that an important modifiable satisfaction predictor is the attitude of the practitioners during labor, which must be reviewed, in order to meet the needs of pregnant women with more equality and dignity.

The presence of a companion, even less frequently than expected, lessens such inequalities, and enables the woman to have a better perception of the care received, as there is more respect,

privacy, less abuse, less waiting time, more clarity of the explanations, more possibility of asking questions, and more participation in decision-making.

In a perspective of equality, it should be expected that the care provided is similar for all women, regardless of the source of payment. In this investigation, private payment was associated with smaller prevalence of abuse, a conclusion that was also made in another countrywide investigation³⁷. Furthermore, private payment was also associated with more respect, more privacy, more clarity of the explanations, more possibility of asking questions, and more participation in decision-making. In addition, important differences were seen in the care provided to black- and brown skinned women of social status D/E, lower

schooling, region (North and Northeastern), type of delivery (vaginal), and women who underwent labor, mostly served by the public sector, considering that in the private sector the proportion of vaginal deliveries is too small. Thus, these associations suggest that the frequency of deliveries considered “typical” is quite different: in the public health care services, the vaginal delivery, interventionist and traumatic; in the private care, elective C-section³⁸. This implies in more or in less time of exposure, respectively, of pregnant women to abuse by health practitioners, showing an elitism of care. These data provided evidence of the inequality of our health system, and the existence of discrimination in childbirth care clinics – a reality that sooner or later the health system will have to acknowledge and address.

Resumen

El objetivo es identificar los factores asociados con la evaluación de las mujeres sobre la relación entre profesionales de salud y parturientas y cómo estos factores influyen en la satisfacción con la atención al parto. Se trata de un estudio de cohorte hospitalaria, realizado a partir de la investigación Nacer en Brasil. Fueron entrevistadas 15.688 mujeres en el puerperio, por teléfono, de marzo de 2011 a febrero de 2013. Todas las variables evaluadas sobre la relación entre el profesional de salud y parturienta (tiempo de espera, respeto, privacidad, explicaciones claras, posibilidad de hacer preguntas y participación en las decisiones), así como la escolaridad estuvieron asociadas de forma independiente con la satisfacción en la atención al parto, dentro del modelo ajustado. Las mujeres atendidas en las regiones sudeste y sur, en el sector privado y con acompañante, evaluaron mejor la relación con los profesionales de salud. Las mujeres valoran la forma en que son atendidas y se encontraron desigualdades relacionadas con el color, la región geográfica y la financiación de los servicios de atención al parto en estas relaciones.

Satisfacción de Paciente; Evaluación de Servicios de salud; Parto; Inequidad Social

Contributors

E. d'Orsi, O. M. Brüggemann and R. M. S. M. Domingues made significant contributions for the conception and design of the study, data collection, data assessment and interpretation, preparation and critical review of the manuscript. C. S. G. Diniz, J. A. Torres and D. Rattner made significant contributions for the conception and design of the study, data collection, data assessment and interpretation, preparation and critical review of the manuscript, approval of the final version of the manuscript. J. M. Aguiar, C. R. Gusman and A. Angulo-Tuesta contributed to data collection and interpretation, preparation and critical review of the manuscript, and approval of the final version of the manuscript.

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