Rev Saúde Pública 2011;45(1)

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Factors associated with breastfeeding in the first hour of life

ABSTRACT

OBJECTIVE: To identify factors associated with breastfeeding in the first hour of life (Step 4 of the Baby-Friendly Hospital Initiative).

METHODS: A cross-sectional study was conducted with a representative sample of mothers who gave birth in maternity wards in the city of Rio de Janeiro, Southeastern Brazil, between 1999 and 2001. Newborns or mothers with restriction to breastfeeding were excluded, resulting in a sample of 8,397 pairs. A random effect – at maternity hospital level – Poisson model was employed in a hierarchical approach with three levels: distal, intermediate and proximal for characteristics of the mother, of the newborn, and of prenatal and hospital assistance.

RESULTS: Only 16% of the mothers breastfed in the first hour of life. Breastfeeding in this period was less prevalent among neonates with immediate intercurrences after birth (PR = 0.47; CI99% 0.15;0.80); among mothers who did not have contact with their newborns in the delivery room (PR = 0.62; CI99% 0.29;0.95); among mothers submitted to cesarean section delivery (PR = 0.48; CI99% 0.24;0.72); and among mothers who gave birth at private maternity hospitals (PR = 0.06; CI99% 0.01;0.19) or at maternity hospitals contracted out to National Health System (SUS) (PR = 0.16; CI99% 0.01;0.30). The context effect of maternity wards was statistically significant.

CONCLUSIONS: At an individual level, breastfeeding within one hour after birth was constrained by inappropriate practices in private or SUS-contracted maternity hospitals. The group effect of maternity hospitals and the absence of individual maternal-related factors that explain the outcome suggest that mothers have little or no autonomy to breastfeed their babies within the first hour of life, and depend on the institutional practices that prevail at the maternity hospitals.

DESCRIPTORS: Breast Feeding. Postpartum Period. Hospitals, Maternity. Maternal-Child Health Services. Cross-Sectional Studies.

INTRODUCTION

Breastfeeding in the first hour of life is recommended by the World Health Organization (WHO)[a] and corresponds to step four of the Baby-Friendly Hospital Initiative (BFHI). This is one of the fundamental strategies to promote, protect and support breastfeeding in Brazil[21] and it is based on the newborns' (NB) capacity to interact with their mothers in the first minutes of life. This contact

[a] United Nations International Children's Emergency Fund. Breast-feeding management and promotion in a baby-friendly hospital: an 18-hour course for maternity staff. New York: 1993.

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Received: 10/19/2009
Approved: 6/7/2010

Article available from: www.scielo.br/rsp

is important to establish the mother-baby bond.[4] In addition, it increases the duration of breastfeeding, [2,4,13,18,25] the prevalence of breastfeeding in maternity hospitals,[25] and reduces neonatal mortality.[10] However, the practice of breastfeeding in the first hour of life is relatively low in Brazil (43%) (National Survey of Demography and Maternal and Child's Health, 2008).[b]

The set of practices, structures and routines and the quality of human resources of maternity hospitals may interfere in the time that elapses until the first breastfeed,[3] since the hospitals' financing source (public, military, private or contracted out to National Health System (SUS) produces differences in the quality of assistance, of the practices and in morbidity.[15]

A prior study evaluated factors associated with the time that elapses between birth and the first breastfeed in the first 24 hours of life.[3] Then, there was the need to perform an evaluation focusing on step four of BFHI, in view of its importance in the breastfeeding policy in Brazil.[21] In relation to the first paper, there were changes: in the type of outcome, in time (from continuous to dichotomic), and in the connection functions of the statistical models (from survival analysis in the first paper to Poisson distribution with robust variance in the current paper). The variables are similar, but some of them were excluded from the current paper, as they were associated with what happened after the first hour of life. Thus, the present study aimed to identify factors associated with breastfeeding in the first hour of life.

METHODS

Cross-sectional study with data extracted from a research carried out in the municipality of Rio de Janeiro, Southeastern Brazil, between 1999 and 2001 to investigate perinatal morbidity and mortality.[15] A stratified sample was used, proportional to the number of deliveries expected in the period in all maternity hospitals with more than 200 deliveries/year in the municipality. The 47 selected maternity hospitals were grouped into three strata, according to the financing source: 1-municipal and federal (n=12; 34.8% of deliveries); 2- SUS-contracted philanthropic and private, military and state-owned (n=10; 34.4% of deliveries); 3-private (n=25; 30.8% of deliveries).[15]

In our study, 10,071 mothers with valid information about their deliveries were interviewed. Mothers who were incapable of and/or prevented from breastfeeding due to one or more of the following characteristics were excluded: NB with very low birth weight (inferior to 1500g); gestational age (Capurro method) inferior to 32 weeks; early fetal or neonatal death; maternal death; NB in Intensive Care Unit (ICU); puerperal woman in ICU; HIV-positive serology during prenatal care documented in the mother's medical record; and Apgar score lower than seven at the fifth minute. Overall, 895 deliveries (8.9% of the sample) were excluded. Approximately 8.5% of the mothers (n=779) did not want to or did not know how to answer the question about breastfeeding or not in the first hour of life (missings); therefore, 8,397 deliveries were analyzed in the current study. Missing and non-missing groups were similar regarding the study's main variables, like age, level of schooling and parity (99% confidence interval - 99%CI). Of the total number of deliveries, 101 referred to two or more babies. In these cases, the time that elapsed until the breastfeeding of the first baby was considered.

The outcome – breastfeeding in the first hour of life (yes/no) – was obtained from the interview questionnaire with the puerperal woman through a 24-hour recall. Breastfeeding in the first hour of life was considered to be the offer of the breast in up to sixty minutes after birth.

For the analysis, 26 variables of the questionnaire were selected: household characteristics (basic sanitation and people/room ratio), personal characteristics (level of schooling, marital status, parity, skin color), gestational characteristics (desire to become pregnant, physical aggression suffered by the pregnant woman during pregnancy, smoking, alcohol ingestion, maternal age, support given by the child's father), prenatal care characteristics (receiving information about breastfeeding during prenatal assistance, abortion attempt, prenatal score), hospital assistance characteristics (newborn taken to the mother right after birth, presence of a companion in the delivery room), and characteristics of the evaluation of delivery assistance and breastfeeding information (Tables 1, 2 and 3).

Other variables were obtained from the medical record: newborn intercurrences immediately after delivery, birth weight, presence of congenital anomalies, number of fetuses, newborn's sex, use of oxytocin during hospitalization and type of delivery. The financing source of the maternity hospitals was established by the authors of the original research based on information available in the SUS.

Bivariate analysis (Pearson's chi-square test) was performed for each variable in order to investigate the association with the outcome. Variables with p value < 0.20 were selected for the statistical model, thus avoiding residual confounding. The variables parity, maternal age and birth weight were categorized for this stage of the analysis, but the last two were considered continuous in the other stages of the study, and parity was considered ordinal.

The individual level factors that were statistically significant in the univariate analysis were hierarchized by

[b] Ministério da Saúde. Pesquisa Nacional de Demografia e Saúde da Criança e da Mulher. Brasília; 2008. p.244-6.

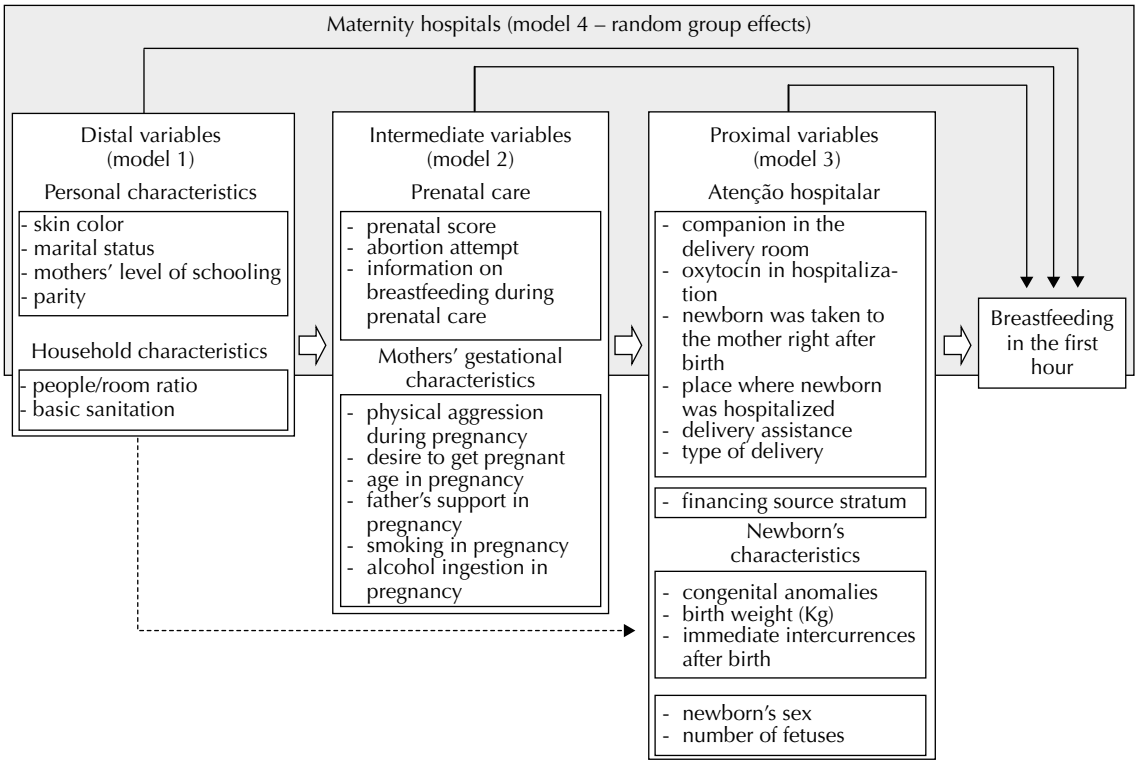

Figure. Breastfeeding in the first hour of life according to a hierarchized, random-effect model at maternity hospital level. Municipality of Rio de Janeiro, Southeastern Brazil, 1999-2001.

level of proximity to the outcome and in groups: distal (mother's personal characteristics and household characteristics – model 1), intermediate (prenatal care characteristics and mother's gestational characteristics – model 2) and proximal (hospital assistance characteristics and newborn's characteristics – model 3) (Figure).

Then, the statistical models were estimated, and hierarchized multilevel regression analysis with Poisson distribution – robust variance - was employed to evaluate the outcome. The program R[c] was utilized in the analysis.

Regression with Poisson distribution was used for point and interval estimates because logistic regression with binomial distribution can overestimate the associations with the outcome, as the event is not rare.[6] The hierarchization of variables enabled to evaluate the effect of the groups of variables according to proximity to the outcome. The multilevel approach was useful to evaluate the group effect (cluster) of the 47 studied maternity wards.

Values between zero and one obtained from statistical models represent protective factors, while values higher than one have a risk meaning. As breastfeeding in the first hour of life is the evaluated outcome, the Prevalence Ratios (PR) obtained in the models that present values higher than one should be interpreted as factors that increase the prevalence of breastfeeding in the first hour. Factors between zero and one should be interpreted as factors that reduce the prevalence of breastfeeding in the first hour, both in relation to a certain reference category.

The residuals were evaluated by means of the functions of the R-package. The complete model was compared by analysis of deviance to the other models without the variables with $p > 0.05$, under the null hypothesis that the embedded model with deviance, with less parameters, better adjusts the data to the estimated parameters.[11]

The standardized residuals were graphically observed (versus the linear predictors), as well as the normality of the residuals, the influential observations (Leverage), and the distance measure of the vector of estimates caused by setting the i-th information aside (Cook's distance).[11] To evaluate the quality of the models' adjustment, the goodness-of-fit test was used, with chi-square distribution, under the null hypothesis that the model is well adjusted (with 5% level).

[c] The R Foundation for Statistical Computing [cited 2010 Jan 01]. Available from: http://www.r-project.org. Vienna University of Economics and Business, Vienna; 2002

After estimating the effects of the third model, multilevel analysis was performed (model 4), in which the 47 maternity hospitals were inserted in order to control for group effect, with intercept variation.[12] At the end of this process, the possible interactions between the individual level variables were tested through analysis of deviance (99%CI).

As models 3 and 4 were not nested, the comparison between them was performed by means of the Akaike Information Criteria – AIC.

The models were composed of: six variables of the distal level (model 1); nine of the intermediate level (model 2) and ten variables of the proximal level (model 3) (Figure 1).

The study was submitted to the Research Ethics Committee of ENSP/FIOCRUZ (protocol no. 16 of 2007).

RESULTS

The study showed that 16.1% of the NB were breastfed during the first hour of life. Large disparities were observed in breastfeeding initiation between the strata of finance of the maternity wards: more than one third of the babies born in municipal and federal maternity hospitals were breastfed in the first hour, compared to less than 2% of the babies born in private maternity hospitals (Table 1). This proportion also varied between babies born by Cesarean section (5.8%) and those delivered vaginally (26.4%).

Approximately half of the puerperal women underwent Cesarean section. The majority received the newborn right after birth, one third could have a companion in the delivery room and one tenth of the newborns presented some type of intercurrence after birth, like hypoxia, bradycardia, among others (Table 1).

Around one fourth of the women did not receive any type of information on breastfeeding during the prenatal assistance (Table 1). Among maternal and NB characteristics (Table 2), only number of fetuses, presence of congenital anomalies and birth weight were not associated with the outcome. One third had concluded secondary or higher education (Table 3).

The prevalence of breastfeeding in the first hour of life was approximately 50% lower among newborns with intercurrences right after birth and newborns that were not taken to their mothers while in the delivery room, and also among mothers submitted to Cesarean section. This prevalence was approximately 90% lower at private, military, state-owned or SUS-contracted maternity hospitals when compared to the babies born at municipal or federal maternity wards.

The distal and intermediate variables lost statistical significance when the more proximal variables and the context effect of the maternity hospitals were added (Table 4).

The inclusion of the maternity hospitals as group effect (model 4) was statistically significant, which indicates

Table 1. Proportion of children who were breastfed in the first hour of life, according to prenatal care and hospital assistance characteristics in the maternity hospitals. Municipality of Rio de Janeiro, Southeastern Brazil, 1999-2001.

Variable	n	% children breastfed in the first hour	p
Variable			
Hospital assistance			<0.001
Maternity hospitals (according to the financing source)	2,863	39.2	
Municipal and federal	2,602	6.8	
SUS-contracted, military, state-run and philanthropic	2,699	1.6	
Type of delivery			<0.001
Vaginal	4,187	26.4	
Cesarean section	4,081	5.8	
Had a companion in the delivery room			<0.001
Yes	3,161	19.0	
No	5,228	14.4	
Evaluation of delivery assistance			<0.001
Very good	4,568	13.9	
Good, regular, bad	3,781	18.7	
Received oxytocin during delivery			<0.001
Yes	3,289	20.4	
No	4,502	12.2	
The doctor took the newborn to the mother right after birth			<0.001
Yes	7,342	17.2	
No	978	9.0	
Prenatal care			
Prenatal score			<0.001
Adequate and more than adequate	3,266	8.6	
Intermediate	2,516	16.5	
Did not have prenatal assistance/ Inadequate	2,204	24.8	
Abortion attempt			<0.001
No	7,967	15.8	
Yes	416	23.1	
Information on breastfeeding during prenatal care			0.005
Yes	6,244	15.4	
No	2,139	18.3	

Table 2. Proportion of children who were breastfed in the first hour of life, according to maternal and newborns' characteristics. Municipality of Rio de Janeiro, Southeastern Brazil, 1999-2001.

Variable	n	% children breastfed in the first hour	p
Maternal and gestational			
Father's support during pregnancy			<0,001
Yes	7,533	15.6	
No	842	20.9	
Maternal age in the gestation (in years)			<0.001
Up to19 years	1,577	22.4	
20 to 34 years	5,840	15.3	
35 and older	976	11.2	
Ingested alcohol during pregnancy			0.030
No	6,800	15.7	
Yes	1,597	18.1	
Smoked during pregnancy			<0.001
No	7,331	15.3	
Yes	1,066	22.1	
Physical aggression during pregnancy			<0.001
No	8,108	15.8	
Yes	164	27.8	
Desire to get pregnant			<0.001
Yes	3,081	11.5	
Wanted to wait a little more	2,697	18.5	
Did not want to get pregnant anymore	1,862	22.0	
No	1,226	21.3	
Newborn			
Sex			0.019
Female	4,054	17.1	
Male	4,138	15.2	
Number of fetuses			0.320
Single	7,993	16.0	
Twins or more	101	11.9	
Presence of congenital anomalies			0.159
No	7,769	16.3	
Yes	153	11.8	
Birth weight <2500g			0.429
No	7,716	16	
Yes	516	17.4	
Immediate intercurrences after birth			<0.001
Yes	1,027	8.8	
No	6,715	15.7	

Table 3. Proportion of children who were breastfed in the first hour of life, according to maternal and newborns' characteristics. Municipality of Rio de Janeiro, Southeastern Brazil, 1999-2001.

Variable	n	% children breastfed in the first hour	p
Skin color			<0.001
White	4,306	12.6	
Non-white	4,031	19.8	
Parity			<0.001
Primiparous	4,096	12.3	
Two or three children	3,538	18.5	
Four or more children	756	25.9	
Marital status			<0.001
Married	6,939	15.1	
Single, divorced, widow	1,453	21.1	
Mother's level of schooling			<0.001
Complete secondary education or higher education	3,220	7.6	
Incomplete secondary education	1,897	17.3	
Complete primary education	2,542	23.4	
Illiterate / incomplete primary education	711	25.7	
People/room ratio			<0.001
Up to one	4,277	11.0	
Between one and two	3,036	18.6	
More than two	1,059	29.6	
Basic sanitation			<0.001
Inadequate	1,226	21.3	
Adequate	7,132	15.3	

that the maternity hospital determines the prevalence of breastfeeding in the first hour of life. After this, the effects of the variables included in model 3 maintained its estimates similar to those of the model without this group effect (Table 4). However, the increase in the length of the confidence intervals made the variable "use of oxytocin during delivery" loses statistical significance.

Models 1, 2 and 3 were statistically different among each other (deviance test, $p<0.01$), and had a good adjustment of residuals. Model 4 could not be compared to the others by means of the deviance test due to the inclusion of the group variable (maternity hospitals).

All the possible interactions between the correlated variables of model 4 were tested and, although three interactions presented statistical relevance, they did not add much to the model in terms of significance (analysis of deviance, 99%CI). Therefore, it was decided not to consider the interactions in order to maintain parsimony.

Table 4. Factors associated with breastfeeding in the first hour of life in maternity hospitals. Municipality of Rio de Janeiro, Southeastern Brazil, 1999-2001.

Variable	Factor			
	Distal (model 1)	Intermediate (model 2)	Proximal (model 3)	Multilevel (model 4)
	PR (99%CI)	PR (99%CI)	PR (99%CI)	PR (99%CI)
Skin color				
White	1	1	1	1
Non-white	1.16 (1.03;1.30)	1.14 (1.00;1.28)	1.11 (0.97;1.25)	1.07 (0.89;1.24)
Marital status				
Single, divorced, widow	1	1	1	1
Married	1.18 (1.02;1.33)	1.06 (0.90;1.23)	0.99 (0.83;1.15)	0.99 (0.79;1.20)
Parity	1.06 (1.02;1.10)	1.08 (1.02;1.14)	1.07 (1.01;1.12)	1.06 (0.99;1.13)
Level of schooling				
complete secondary education or higher education	1	1	1	1
incomplete secondary education	1.95 (1.74;2.17)	1.54 (1.31;1.78)	0.84 (0.63;1.05)	0.95 (0.67;1.22)
complete primary education	2.39 (2.18;2.60)	1.81 (1.57;2.05)	0.89 (0.69;1.10)	1.05 (0.79;1.32)
illiterate / incomplete primary education	2.38 (2.12;2.64)	1.83 (1.54;2.12)	0.89 (0.62;1.16)	1.04 (0.69;1.38)
People/room ratio				
Up to one	1	1	1	1
Between one and two	1.23 (1.07;1.39)	1.13 (0.96;1.30)	0.91 (0.76;1.07)	0.99 (0.79;1.19)
More than two	1.58 (1.38;1.77)	1.37 (1.16;1.59)	1.05 (0.84;1.25)	1.11 (0.85;1.38)
Desire to get pregnant				
Yes	-	1	1	1
Wanted to wait a little more	-	1.30 (1.14;1.47)	1.23 (1.07;1.40)	1.13 (0.92;1.33)
No	-	1.26 (1.07;1.46)	1.11 (0.91;1.31)	1.03 (0.78;1.27)
Age	-	0.98 (0.97;0.99)	0.99 (0.98;1.01)	0.99 (0.98;1.01)
Information on breastfeeding during prenatal care				
Yes	-	1	1	1
No	-	0.89 (0.74;1.04)	0.96 (0.81;1.11)	0.99 (0.80;1.18)
Prenatal score				
Adequate and more than adequate	-	1	1	1
Intermediate	-	1.34 (1.13;1.55)	0.88 (0.69;1.07)	0.93 (0.70;1.17)
Did not have prenatal assistance / Inadequate	-	1.56 (1.34;1.78)	0.92 (0.73;1.11)	0.96 (0.71;1.21)
Immediate intercurrences after birth				
No	-	-	1	1
Yes	-	-	0.49 (0.21;0.76)	0.47 (0.15;0.80)
Newborn taken to the mother right after birth				
Yes	-	-	1	1
No	-	-	0.54 (0.25;0.82)	0.62 (0.29;0.95)
Use of oxytocin during delivery				
No	-	-	-	-
Yes	-	-	0.86 (0.72;0.99)	1.05 (0.87;1.22)
Type of delivery				
Vaginal	-	-	1	1
Cesarean section	-	-	0.47 (0.27;0.68)	0.48 (0.24;0.72)
Maternity hospitals				
Municipal and Federal	-	-	1	1
SUS-contracted, Military, State-run and Philanthropic	-	-	0.18 (0.01;0.40)	0.16 (0.01;0.30)
Private	-	-	0.07 (0.02;0.11)	0.06 (0.01;0.11)

SUS: Brazil's National Health System

DISCUSSION

Although it is a practice recommended by the WHO, breastfeeding in the NB's first hour of life was not very frequent in the studied population and there was great variation in this outcome across the strata of maternity hospitals.

No maternal factors explained the outcome, which may indicate that mothers have little or no autonomy to breastfeed their babies in the first hour of life. Therefore, they depend on the institutional practices that prevail in the maternity hospitals and on the professionals involved in the birth of their babies. Not always are the mothers' feelings and will respected in the moment of birth, and at this time of fragility, the professional conduct may be a determinant of breastfeeding in the delivery room.

Thus, the health professional plays a governing and regulating role over breastfeeding based on a constructed scientific knowledge,[19] and s/he must act ethically, respecting the mother-baby binomial to strengthen their bonds.

The prevalence of breastfeeding in the first hour of life that was observed in the maternity hospitals of the city of Rio de Janeiro is below the prevalence found in the Southeast region in three national surveys carried out in: 1996 (38.7%; National Survey on Demography and Health– PNDS[d]), 2006 (37.7%; PNDS[b]), and 2008 (63.5%; Research on Prevalence of Breastfeeding in the Brazilian Capitals and Federal District, 2009[e]). However, it was similar to another study conducted in two maternity wards of the city in the same period (19.5% in a public maternity hospital and 15.8% in a private hospital).[8] These differences may derive from a memory bias resulting from the methodology of the PNDS,[d] whose target population was formed by mothers of children aged up to 59 months. The discrepancies observed in the initiation of breastfeeding between public and private hospitals remained even after adjusting the model by individual and group factors. These differences were also observed in a study conducted in the city of São Paulo[23] and in Rio de Janeiro,[8] both in Southeastern Brazil, and they may be explained by the investment in the implementation of the BFHI in public maternity hospitals and by the strong growth of this initiative in the last decades in Brazil.[14]

At the time the study was carried out, the federal maternity hospitals were managed by the municipal sphere of Rio de Janeiro, except for Hospital Servidores do Estado, and were grouped in the same stratum. The municipal maternity hospitals traditionally receive training and follow the breastfeeding policies of the municipality;[5] many of them were undergoing the BFHI accreditation process and had a Human Milk Bank.

The first paper of the original study[15] grouped the maternity hospitals in three strata, according to the proportion of low birth weight, and the second stratum concentrated the most heterogeneous group of hospitals. In this stratum, the contracted maternity hospitals did not follow the public breastfeeding policies, although they were financed by the SUS. The other maternities of the same stratum, except for a university hospital, were not implementing the BFHI at the time.

The private hospitals (third stratum) tended not to adopt any policy for the promotion of breastfeeding at the time the study was carried out.

These differences between the breastfeeding policies adopted by the maternity hospitals were reflected on the differences in the prevalence of breastfeeding within the first hour of life.

About the statistical modeling process, the main advantage of maintaining the variables of a previous level that lost statistical relevance is to be able to observe of the process of intermediation of effects when a group of variables from a more proximal level is added.

In the univariate analysis, it was observed that the married mothers, with lower people/room ratio, with access to basic sanitation, who wanted to get pregnant, who did not suffer physical aggression during pregnancy, did not smoke and did not drink alcoholic beverages during pregnancy, who received support during pregnancy, received information on breastfeeding during pregnancy, who did not try to abort and had a better follow-up during prenatal assistance (distal and intermediate variables), had lower probability of breastfeeding in the first hour, while the contrary was expected. When these variables are analyzed together in a statistical model they cease to be significant, because maternal variables like age and parity can explain, for example, the access to the maternity hospitals and the type of delivery to which these women are submitted.[1]

The mothers' socioeconomic indicators may correlate with the type of hospital in which the babies are born.[15] The decision to have a Cesarean section may also be determined during the pregnant woman's contact with the healthcare services.[9] In the current study, the effect of these variables was mediated by factors related to delivery care (like the type of delivery, satisfaction with the provided assistance, use of oxytocin, and financing source of the maternity hospital) and by the maternity hospital as context effect.

In model 4, this group or context effect was so important that the factors "parity" and "use of oxytocin in the delivery room" ceased to be statistically significant in the final model.

The Cesarean section was responsible for reducing by half the prevalence of breastfeeding in the first

hour in the maternity hospitals, considering the final model (model 4). The effect of the Cesarean delivery on the delay of the first breastfeed is shown by several studies,[1,3] and it may be related to the anesthetic and to the surgical procedures performed in the postpartum period. The study by D'Orsi et al, also conducted in Rio de Janeiro, found higher prevalence of breastfeeding at birth in the normal deliveries (33% in a public maternity hospital and 23.7% in a private maternity hospital) than in the Cesarean deliveries (6.9% in the public and 8% in the private maternity hospital).[8]

Breastfeeding in the first hour of birth was less prevalent among NB with immediate intercurrences after birth. Although this effect was expected, this study's design removed a priori from the analysis the NB that could have some difficulty in feeding from their mother's breast (such as babies with very low birth weight and Apgar score lower than seven). As this specific question was obtained by means of an interview with the mothers, and as the discrimination of the types of intercurrences varied considerably (it referred to an open question in the structured questionnaire), it was not possible to categorize this variable.

The mother not having contact with the newborn in the delivery room reduced the prevalence of breastfeeding in the first hour of life. Many times, this contact is delayed or minimized in favor of the several routines, care procedures and practices determined by the team of professionals and by the institutions, and many of them are possibly inefficient.[16]

A qualitative study found out that, although the mothers felt awkward to breastfeed in the delivery room, and although it was strange for them to see the newborn dirty with blood and amniotic fluid, breastfeeding right after the birth was accepted by the mothers and understood as a component of maternity.[17]

Even in a hospital that institutionalizes humanization routines there may be differences in the assistance procedures, and this can reduce the empowerment potential contained in the decision to breastfeed if women's sociocultural differences are not considered.[24]

Another study observed that, despite the importance given to the initial contact with the NB immediately after birth, they were separated from each other, which generated, in the mothers, feelings of fear and concern, but they also valued this separation, as they believed in the importance of these procedures for the maintenance of the physical integrity of their children.[7]

The maternity hospitals produce a group effect on breastfeeding in the first hour of life, that is, the prevalence of this practice is very similar among newborns at one single maternity hospital, but it varies across maternity hospitals independently of the individual factors that may favor or not breastfeeding in the first hour. The norms, routines, number of beds (and their form of occupation), investment in the professionals' qualification, the institutional tradition, the context of the neighborhood, accessibility and other possible factors that were not measured generate a unique reality in each maternity hospital regarding breastfeeding in the first hour of life, which could be verified by means of the multilevel approach.

The main limitation of the study was the fact that it was not originally designed to evaluate breastfeeding in the first hour of life. Thus, important pieces of information were not collected, such as: if the first breastfeed occurred in the delivery room, which professional took the baby to the mother's breast, aspects related to latch-on and breastfeeding position, among others that could enrich the analysis and discussion of the theme.

One of the ways of modifying the current reality is professional qualification. It is necessary that the professionals develop competencies and skills in breastfeeding to perform adequate interventions and overcome the possible barriers to breastfeeding, especially in the delivery room. To achieve this, state and municipal health departments should offer institutional support through BFHI training provided for professionals from the public, SUS-contracted and private networks (WHO/PAHO/UNICEF[a]).

In addition, it is fundamental that all the institutions, mainly the private, SUS-contracted, state-run, philanthropic and military ones, invest in the implementation of institutional and public policies, like the BFHI, that promote the practice of breastfeeding in the first hour already during prenatal assistance. The approach to women concerning breastfeeding should be continuous: it should be stimulated during prenatal care, its practice should be initiated early in the maternity hospital and supported during the mother-baby follow-up. All of these should be performed by professionals who are qualified in the handling of lactation and in hearing mothers' experiences and doubts. The interaction between the BFHI and the Breastfeeding-Friendly Primary Care Unit Initiative should be intensified, so that the breastfeeding promotion, protection and support policies succeed in extending the duration of exclusive breastfeeding, a challenge today in Brazil.[20]

Mothers must be empowered to breastfeed in the delivery room, respecting their particularities and sociocultural diversities. The women should be the subject in the act of breastfeeding in the first hour of life; this should not be one more procedure to which they are submitted in behalf of humanization ideas. This empowerment should begin during prenatal assistance, through a dialog between the health team and the woman about all the potential benefits of breastfeeding in the first hour of life, so that she is able to evaluate and construct her choices.

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The authors declare that there are no conflicts of interest.
Paper based on the doctoral thesis authored by Boccolini CS, submitted to the Escola Nacional de Saúde Pública – Fiocruz, in 2007.