PROTECTIVE FACTORES FOR BREASTFEEDING IN THE FIRST HOUR OF LIFE

Fatores de proteção para a amamentação na primeira hora de vida

Factores de protección para la lactancia em la primera hora de vida

Original Article

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ABSTRACT

Objectives: To identify the factors associated to breastfeeding in the first hour (BFH) among children of pregnant women enrolled in Family Health Units (FHU) in Vitória-ES. **Methods**: Longitudinal, observational and descriptive study. Socioeconomic and health data of women in third trimester of pregnancy enrolled in FHU were collected in home visits from October to December 2009. A further visit was made 30 days after delivery, to collect data on the childbirth and breastfeeding conditions. The prevalence of BFH was calculated and analyzed according to socioeconomic and health variables, using the chi-square or Fischer's exact test. The associated factors were identified through multivariate logistic regression. **Results:** The study obtained data from 169 puerperal women and their babies. The prevalence of BFH was about 63% (107). Statistically significant association was found between BFH and type of delivery (p=0.007), rooming-in (p<0.001), maternal educational level (p=0.03), apprehension/fear of breastfeeding (p=0.06) and educational level of the householder (p=0.02). **Conclusions:** The variables that were associated with BFH were vaginal delivery and rooming-in. Breastfeeding in the first hour of life should be encouraged in maternity wards, mainly with rooming-in practice, since it can positively influence the total time of breastfeeding.

Descriptors: Breast Feeding; Postpartum Period; Rooming-in Care; Parturition.

RESUMO

Objetivo: *Identificar os fatores associados à amamentação na primeira hora (APH) de vida dos filhos de gestantes cadastradas nas Unidades de Saúde da Família (USF) de Vitória-ES.* **Métodos:** *Estudo longitudinal, observacional e descritivo. Foram coletados dados socioeconômicos e de saúde das gestantes no terceiro trimestre de gestação, cadastradas em USF, em visita domiciliar entre outubro e dezembro de 2009. Após 30 dias do parto, uma nova visita foi realizada para a coleta de dados sobre as condições de nascimento e amamentação da criança. Calculou-se a prevalência de APH e analisou-se segundo variáveis socioeconômicas e de saúde, utilizando o teste do qui-quadrado ou exato de Fisher. Os fatores associados foram identificados na regressão logística multivariada.* **Resultados:** *Obtiveram-se dados de 169 puérperas e seus respectivos bebês. A prevalência de APH foi de cerca de 63% (107). Encontrou-se associação estatística significante entre APM e tipo de parto (p=0,007), alojamento conjunto (p<0,001), escolaridade materna (p=0,03), receio/medo de amamentar (p=0,06) e grau de instrução do chefe (p=0,02).* **Conclusão:** *As variáveis que se mantiveram associadas à APH foram parto vaginal e alojamento conjunto. A APH deve ser incentivada nas maternidades, principalmente em alojamentos conjuntos, pois pode impactar positivamente no tempo total de amamentação.*

Descritores: *Aleitamento Materno; Período Pós-Parto, Alojamento Conjunto; Parto.*

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Received on: *08/19/2012*
Revised on: *11/22/2012*
Accepted on: *01/02/2013*

RESUMEN

Objetivo: *Identificar los factores relacionados con la lactancia en la primera hora (LPH) de vida de los hijos de embarazadas registradas en las Unidades de Salud de la Familia (USF) de Vitoria-ES.* **Métodos:** *Estudio longitudinal, observacional y descriptivo. Fueron recogidos datos socioeconómicos y de salud de embarazadas en el tercer trimestre del embarazo y registradas en USF, en visita domiciliaria entre octubre y diciembre de 2009. Tras 30 días del parto, una nueva visita fue realizada para recoger datos de las condiciones del nacimiento y lactancia del niño. Se calculó la prevalencia de LPH y se analizó según las variables socioeconómicas y de salud, utilizando la prueba del chi-cuadrado o exato de Fisher. Los factores asociados fueron identificados en la regresión logística multivariada.* **Resultados:** *Se obtuvieron datos de 169 puérperas y sus respectivos bebés. La prevalencia de LPH fue de cerca del 63% (107). Se encontró la asociación estadística significativa entre APM y el tipo de parto (p=0,007), alojamiento conjunto (p<0,001), escolaridad materna (p=0,03), miedo de amamantar (p=0,06) y el grado de instrucción del jefe (p=0,02).* **Conclusión:** *Las variables que se mantuvieron asociadas a la LPH fueron el parto natural y el alojamiento conjunto. La LPH debe ser incentivada en las maternidades, principalmente en los alojamientos conjuntos, pues puede impactar positivamente en el tiempo total de la lactancia.*

Descriptores: *Lactancia Materna; Período de Postparto; Alojamiento Conjunto; Parto.*

INTRODUCTION

Worldwide, breastfeeding has been encouraged and supported by national and international organizations due to its positive effects on the baby's and mother's health. The World Health Organization (WHO)[1] recommends exclusive breastfeeding (EBF) up to six months, with continued breastfeeding (BF) up to two years of age in order to provide babies with healthy growth and development, and also better protection against several diseases.

In view of the benefits of BF, there was a need for the implementation of public policies such as: the Baby-friendly Hospital Initiative (BFHI), mandatory rooming in, implementation of milk banks in all Brazilian regions, the approval of the Brazilian Norm for Baby Food Commercialization, among others[2]. According to the Ministry of Health, the rates of EBF up to four months has increased circa 15% in the period from 1999 to 2008[2].

The increased prevalence of breastfeeding may relate to the decrease in the occurrence of diarrhea among infants, corroborating with the implementation and development of public policies for promotion, protection and support of BF[3,4].

Human milk is considered the healthiest food that can properly meet all the physiological needs of infants, besides being – undoubtedly – the most complete food with all the nutritional components needed for the baby's healthy development. The impact of natural breastfeeding on the reduction of government and family expenditures are also important, since the formula feeding is associated with high direct and indirect costs[5].

Although the effects of BF on babies' health are widely known, the rates of EBF up to six months are still low, requiring efforts by both the government and healthcare professionals to reverse this situation. Taking into account that the length of breastfeeding determines the benefits on the babies' health and that the total time of BF can be influenced by breastfeeding in the first hour after birth[6,7], actions that provide the early breastfeeding initiation after birth are essential and must be encouraged.

Besides being associated with longer BF, breastfeeding in the first hour after birth provides the first contact between mother and child, reduces postpartum bleeding, stabilizes temperature, glycemia and respiratory rate of the newborn, and it also reduces breast engorgement[8]. The sucking reflex of the child is most active and energetic during the first 30 to 60 minutes after birth; hence the importance of providing physical contact between mother and child in view of its contribution to the establishment or continuity of mother-baby bonding, stimulating breastfeeding[9,10].

It seems important to reduce postpartum procedures for low-risk babies[11,12] because there is evidence that early breastfeeding initiation is associated with longer duration of total breastfeeding and earlier release of oxytocin, favoring milk ejection and the lactogenic effect of baby's suction[13,14].

Thus, it is important to know what, in fact, influences on breastfeeding during the first hour after birth, since this practice is essential to BF and EBF. Therefore, this current study aimed to identify factors related to breastfeeding during the first hour after birth of children of women enrolled in the Family Healthcare Units (FHU) of Vitória city, ES, Brazil.

METHODS

This is a longitudinal, descriptive and observational research conducted with pregnant women enrolled in the FHU of Vitória city, ES, Brazil.

The municipality of Vitória, ES, is divided into six Health Regions and, at the time this research took place, the system comprised 28 Healthcare Units: 4 Basic Healthcare Units (BHU), 4 Units with the Community Healthcare Agents Program (CHAP) and 20 Family Healthcare Units (FHC). Approximately 70% of the municipality is covered by the Family Health Strategy (FHS).

The study comprised pregnant women identified in the prenatal follow-up electronic system of the Brazilian National Healthcare System (SUS/SISPRENATAL) during the period from October to November 2009; all the women lived in Vitória city, ES, and were in the third gestational trimester. All of them signed the free informed consent term. The pregnant teenagers signed the term with a legal representative – mother or spouse. Then, the undergraduate students applied the questionnaire and collected data from the mother's healthcare cards (first visit) and baby's healthcare card (second visit) available at their homes. Women who had moved away or refused to participate in the study were excluded.

After the identification in the FHU, the pregnant women who were in the third gestational trimester were visited at home. Nursing and Nutrition undergraduate students accompanied by community healthcare agents, conducted an interview using a form with questions about socioeconomics and the pregnant woman's health. The second visit took place in the period from 15 to 30 days after birth; however, it was not possible to obtain data from all the women because some had moved away from their homes (many women who receive prenatal care in the FHU do not live nearby), and also because of abortion and refusal to continue participating in the study.

The students obtained information on the type of birth, rooming in, economic status[15], breastfeeding intention, previous breastfeeding experiences, partner and family support for breastfeeding, among others. The choice of dependent variables for this study took into account the factors that could interfere with breastfeeding after birth.

All the variables that were potentially associated with the dependent variable – breastfeeding within the first hour after birth – were assessed using the Chi-square test and Fisher's Exact test, when needed, with a 5% significance level. In addition to these tests, logistic regression models were used to identify factors associated with the lack of BF within one hour of birth.

The analyses were performed using the statistical package SPSS 17.0. The variable entry criterion was set to a significance level less than or equal to 0.10. In the end, the model that best explained breastfeeding within one hour of birth presented $p<0.05$.

Complying with ethical obligations, the research Project entitled "Breastfeeding and factors associated with early introduction of food" was approved by the Research Ethics Committee of the Health Sciences Center of the Federal University of Espírito Santo under registration No. 143/09. This research does not have any conflicts of interest.

RESULTS

The research obtained data on the first month of life of 169 participants' babies – 84% of the total of pregnant women identified in the FHU. In all, 32 participants were excluded due to change of address (28), refusal to participate (3) and abortion (2). The pregnant women's mean age was 25.5±5.9 years, and median age was 28. The women assessed had an average education of 7.7±3 years. Circa 43% of the women were pregnant for the first time.

Table I – Distribution of the study population according to sociodemographic variables and maternal characteristics – Family Health Strategy, Vitória, ES, Brazil.

Variable	n	%
Maternal age (years)		
≤ 19	29	17.2
20 – 30	110	65.1
>31	30	17.7
TOTAL	169	100
White / Non-white		
White	18	10.9
Non-white	147	89.1
TOTAL 164	100	
Maternal Education		
< 8 years	39	23.1
≥ 8 years	130	76.9
TOTAL	169	100
Maternal Occupation		
Housewife	68	44.4
Housemaid	62	40.5
Unemployed	4	2.6
Other	19	12.4
TOTAL	153	100
Lives with partner		
Yes	132	81
No	31	19
TOTAL	163	100
Socioeconomic Status		
B	11	6.9
C	106	63.3
D + E	42	26.9
TOTAL	159	100
Planned Pregnancy		
Yes	57	35.2
No	105	64.8
Total	162	100

* n values are different because some data were not informed by the mothers.

Table I shows the sociodemographic characteristics of the pregnant women participating in the study. Most of them were between 20 and 30 years of age (110; 64.8%), belonged to class C – according to the Brazilian classification of socioeconomic status – (106; 63.3%), were classified as non-white (n=147; 89.1%), reported being a housemaid (68; 44.4%), and lived with a partner/husband (132; 81%). It is worth saying that not all women answered all the questions.

Regarding the prenatal consultations, 75.6% (122) of the women interviewed reported attending more than six consultations. More than 80% (130) of mothers who had other children said they had already breastfed. Table II shows the maternal variables according to breastfeeding within one hour of birth. Association was found between breastfeeding within one hour of birth and: vaginal delivery (p=0.007), rooming in (p=0.000), maternal education level (p=0.03), fear of breastfeeding (p=0.06) and education level of the head of the household (p=0.02).

Most babies (141; 83.5%) received breast milk as the first type of food at the maternity hospital or hospital, 13 (8%) were premature babies, 155 (92%) were within normal birth weight, and 88 (51.5%) were born by vaginal birth. Table III presents the results of the logistic regression. It initially included the variables "vaginal delivery", "rooming in", "maternal education", "fear of breastfeeding", and "education level of the head of the household" relating to "breastfeeding within one hour of birth". In the final model, only the variables "vaginal delivery" and "rooming in" remained associated with breastfeeding within one hour of birth.

Rooming-in puerperal women were 9 times more likely to breastfeed babies within one hour of birth. Those who gave birth by caesarean delivery were 2 times more likely not to breastfeed within one hour of birth.

Table II – Distribution of breastfeeding within one hour of birth according to sociodemographic variables. Vitória, ES, Brazil.

Variable	Breastfeeding within one hour of birth						*p* value*
	Yes		No		Total		
	n	%	n	%	n	%	
Maternal age (years)							0.53
≤ 19	19	65.5	10	34.5	29	17.1	
20 – 30	72	65.4	38	34.6	110	65.1	
≥ 31	18	60	12	40	30	17.8	
Maternal education (years)*							0.03
< 8	25	64.1	14	35.9	39	23.1	
8 to 10	40	70.2	17	29.8	57	33.7	
≥ 11	44	60.3	29	39.7	73	43.2	
Fear of breastfeeding*							0.06
Yes	12	11.1	96	88.9	108	63.9	
No	13	21.3	48	78.7	61	36.1	
Type of birth*							0.007
Vaginal	64	72.7	24	27.3	88	52.1	
Ceasarean	42	51.8	39	48.2	81	47.9	
Rooming-in*							0.000
Yes	103	68.7	47	31.3	150	88.7	
No	4	21	15	79	19	11.3	

x^2 test/Fisher

Table III – Adjusted analysis of variables associated with breastfeeding within one hour of birth, Vitória, ES, Brazil.

Variable	OR	*p* value	CI 95%
Type of birth		0.01	
Vaginal	1		
Ceasarean	2.26		(1.09; 4.66)
Rooming-in		0.00	
No	1		
Yes	8.99		(2.32; 34.89)

OR = Odds ratio; CI = Confidence Interval

DISCUSSION

Even though the promotion of breastfeeding is considered one of the main strategies for child survival and prevention of health risks and problems at different stages of life, the total and exclusive duration of breastfeeding is still below the rates recommended by the WHO[1].

The results of this study point to rooming-in and vaginal birth as important factors for breastfeeding within one hour after birth. Other factors, such as the fear of breastfeeding, education level of the head of the household and maternal education level were associated with breastfeeding within one hour of birth only in the bivariate analysis.

The issues that lead to a successful breastfeeding must be assessed at different levels – culture, knowledge of the issue, family support, among others – according to their particularities. Some studies identified factors related to breastfeeding within one hour of birth: type of birth, place of birth and outpatient follow-up, use of the pacifier, maternal age and education level, previous breastfeeding experience, socioeconomic status, rooming-in, maternal occupation, among others[16-18].

The prevalence of breastfeeding within one hour of birth observed in the sample of this study was 63.5%. This percentage is above the one found in Southeastern Brazil according to the 2006 National Survey on Demography and Health of Women and Children[19] (37.8%) and the 2009 Survey on Prevalence of Breastfeeding in the Brazilian Capitals and the Federal District[2]. It is possible that, in Vitória city, ES, Brazil, the prevalence of breastfeeding within one hour of birth is higher due to a higher educational level of mothers and a large number of hospital beds with rooming-in services – even with a high prevalence of caesarean births.

According to steps 4 and 7 of the Baby-friendly Hospital Initiative (BFHI), helping mothers initiate breastfeeding within one hour of birth and practicing rooming in are the factors that lead to successful breastfeeding[20,21]. This current study showed a positive association between rooming in and breastfeeding within one hour of birth. Mothers who practiced rooming in were 9 times more likely to breastfeed their babies within one hour of birth. The literature proves that keeping mom and baby together strengthens their bond, provides breastfeeding counselling, and it also helps moms feel more secure to breastfeed[22,23].

The effect of caesarean section is evidenced in other studies[24,25]. It is responsible for halving the prevalence of breastfeeding within one hour of birth[26]. The delay in the first feed may be related to anesthesia and postpartum surgical procedures. In Rio de Janeiro, there was a higher prevalence of breastfeeding for natural births (33% at a public maternity hospital and 23.7% at a private maternity hospital) than caesarean births (6.9% at a public maternity hospital and 9% at a private maternity hospital) [27]. Nowadays, there is evidence of lower rates for both initiation and duration of breastfeeding among mothers who undergo caesarean births. It is known that caesarean birth makes it difficult for moms to room in and to early initiate breastfeeding[28].

The pregnant women assessed by this study received care at the FHU and were supported by the Brazilian National Healthcare System (SUS) to receive prenatal care and give birth. Another study conducted in Pelotas, RS, Brazil did not find any associations between breastfeeding (initiation and duration) and socioeconomic status of the families[29].

The findings of this current study show the importance ofgood counselling for the type of birth in order to reduce the number of unnecessary caesarean births, which – according to the WHO – should be around 15%[7], different from the rate of 48.5% found in the sample assessed. On the other hand, circa 90% of moms and babies practiced rooming in during the postpartum period, following what is recommended by the WHO[7].

Moreover, the state and city departments of health should provide institutional support, in addition to existing public policies, to highlight the importance of the benefits of breastfeeding within one hour of birth. It is important to increase the number of Baby-friendly Hospitals in view of its role in the protection of EBF after birth and also to encourage vaginal birth. Healthcare professionals must be informed to contribute to this important measure for promoting health in Vitória city, ES, Brazil.

It is important to say that this study presented some limitations such as: many participants lived in rented houses, some changed address, some were difficult to be contacted and the visits could only be performed with the company of community healthcare agents. Also, this study has no financial support, what made it difficult to collect data.

CONCLUSIONS

It was concluded that vaginal birth and rooming in are factors that relate to breastfeeding within one hour of birth. Therefore, strengthening these actions can change the attitudes towards breastfeeding in a certain reality, considering that breastfeeding within one hour of birth is important to promote breastfeeding and protect mom and baby.

ACKNOWLEDGEMENTS

We would like to thank the Nutrition and Nursing undergraduate students of the UFES and the healthcare professionals and users of the FHU who contributed to this work.

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