

# Mother's social/economic aspects and level of knowledge about breastfeeding

## Aspectos socioeconômicos e conhecimento de puérperas sobre o aleitamento materno

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### ABSTRACT

**Purpose:** To investigate the association between maternal and social/economic aspects and mother's knowledge about breastfeeding.

**Methods:** A hospital-based study conducted with 71 postpartum women in hospital bed. Data was collected through questionnaires, one on social/economic factors and another one on knowledge about breastfeeding.

**Results:** Among the interviewed mothers, one did not attend the prenatal visits and 48 received some information about breastfeeding. All mothers knew that children who are breastfed are less exposed to diseases; 44 knew that until the sixth month of life, the child does not need water or any other supplement. About social/economic and knowledge aspects, there was a significant positive association between the two – i.e., postpartum mothers with higher family income tended to have a higher percentage of correct answers. **Conclusion:** Evidence from this study demonstrated that mothers are well informed about breastfeeding. Some socioeconomic factors can interfere with appropriate breastfeeding, such as income per capita; the higher the family income, the better the knowledge about breastfeeding.

**Keywords:** Breastfeeding; Knowledge; Child health; Childcare; Child nutrition sciences

### RESUMO

**Objetivo:** Averiguar a associação entre os fatores maternos e socioeconômicos com o conhecimento das mães a respeito do aleitamento materno. **Métodos:** Estudo realizado com 71 puérperas em leito hospitalar. Os dados foram coletados por meio de questionários, um socioeconômico e outro sobre conhecimento referente ao aleitamento materno. **Resultados:** Das entrevistadas, uma não frequentou as consultas pré-natais e 48 receberam alguma informação sobre aleitamento materno. Todas as mães sabiam que as crianças amamentadas no peito adquirem menos doenças; 44 sabiam que até o sexto mês de vida a criança não necessita de água ou outro complemento. Sobre as questões socioeconômicas e de conhecimentos, houve associação positiva significativa entre ambas, ou seja, puérperas com maior renda familiar tiveram maior percentual de acertos. **Conclusão:** A maioria das mães demonstrou conhecimento sobre os aspectos investigados. A renda *per capita* interferiu no conhecimento das puérperas sobre o aleitamento materno.

**Descritores:** Aleitamento materno; Conhecimento; Saúde da criança; Cuidado da criança; Ciências da nutrição infantil

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## INTRODUCTION

Breastfeeding is the one strategy that prevents child morbidity and mortality, in addition to promote physical, mental and psychological health of both the child and the breastfeeding mother since the first stage of human life<sup>(1,2)</sup>. This is something that creates an intense link between mother and baby.

World Health Organization and Brazilian Ministry of Health recommend exclusive breastfeeding for the first six months of a baby's life, but guide mothers to breastfeed the child for two years or more, if possible, in addition to supplementing the child's regimen with additional healthy food. Based on that stipulation, Brazilian health authorities have been developing since 1981 a set of activities to foster breastfeeding, coordinated by the Brazilian Ministry of Health<sup>(3-5)</sup>.

The professionalization of subjects to support and guide the nursing mother during the entire breastfeeding process occurs during prenatal and post-natal follow-up, a strategy that favorably influences longer periods of breastfeeding<sup>(4-6)</sup>. According to the Ministry of Health, after launching the Brazilian Breastfeeding Network (*Rede Amamenta Brasil*, 2008), the number of breastfeeding days tend to increase – along with the increase of maternity leave to a six-month period, since the mothers have additional time to dedicate to their children<sup>(3)</sup>.

Breastfeeding seems a simple and objective practice, a natural-born instinct, but in order to succeed it requires instructions and a complex set of interaction conditions in the baby's and mother's social environment – i.e., family influences such practice<sup>(7)</sup>. For several researchers who study the relationship between breastfeeding and psychological aspects, the breastfeeding is an action that stimulates the increased link between mother and baby<sup>(2,8)</sup>.

Studies indicate that the level of mother's knowledge about breastfeeding is not different according to the social and economic level, level of education, race and age<sup>(6,9,10)</sup>. When asked on several aspects of breastfeeding, a significant percentage of mothers demonstrates little knowledge about it, even though they confirmed being previously educated on the theme by primary health services professionals, pediatricians, pregnancy groups, etc<sup>(6)</sup>. Educational actions should preconize the importance of breastfeeding in all levels of health service, for all the mothers, increasing their knowledge on the practice<sup>(3-5)</sup>.

In Brazil, even though the practices and incentives to breastfeeding have been increasing in the past few years, that behavior is still little prevalent<sup>(11)</sup>.

Breastfeeding is not a completely intuitive behavior and its correct technique, most of the times, needs to be learned<sup>(12)</sup>. In a clinical trial enrolling 405 mothers from the Southern region of Brazil, we noticed that simple interventions in the post-natal period may increase the level of breastfeeding and, possibly, the breastfeeding rates<sup>(10)</sup>.

Pro-breastfeeding initiatives are beneficial both in developing countries and in developed countries.

In Brazil, it is worth noting that the more developed regions show a standard of breastfeeding similar to the one in developed countries, i.e., women with higher educational and social/economic levels breastfeed longer<sup>(8)</sup>.

Literature on the subject is vast, even though the nomenclature used presents considerable variation and several breastfeeding forms are studied, such as breastfeeding, natural breastfeeding, lactation, exclusive breastfeeding and mixed breastfeeding. Those variations make it harder to compare the findings.

The objective of this study was to assess the knowledge of mothers, while still admitted to the maternity hospitals, about breastfeeding and its relationship with the mother and pregnancy history.

## METHODS

This is an analytical study developed with mothers and carried out while in the maternity hospital.

The project was approved by the Research Ethics Committee of *Faculdade Nossa Senhora de Fátima* (Process n°. 214/08). All the recommendations found in Resolution 196/96 of the Brazilian National Health Council (*Conselho Nacional de Saúde*, CNS) were followed.

For the calculation of the sample, we took into consideration all post-partum women admitted to the maternity hospital during one whole year, adding up to 630 pregnant women. The calculated sample was composed of 71 mothers, consecutively selected, whose delivered carried out in that maternity hospital during 2013, taking into consideration a 95% confidence level and a 9% error margin. Removed from the research data collection were mothers of newborns who were not being naturally breastfed.

The Informed Consent Form (ICF) was read, verbally explained and then signed by the mothers who accepted to participate in the study. After signing the form, those who were in hospital bed replied to two standard, structured questionnaires for this study, based on data assessment from specialized literature<sup>(8,10)</sup>. The first questionnaire, composed of objective questions related to social/economic issues, was meant to obtain the following information: identification/telephone of the mother, age of mother and father, level of education of the mother, marital status, *per capita* income, maternity leave benefit, whether the parents were employed, number of children, use of bottles and bottle nipples, model of bottle nipples, how long the previous children (if any) were breastfed for, prenatal visits, number of visits, participation of the mother in any pregnancy group, types of delivery and gender of the newborn.

The second questionnaire listed eight objective questions to assess the information demonstrated by the mothers about breastfeeding. The questions addressed the following topics: necessity to use water and/or tea during exclusive breastfeeding,

time interval between each breastfeeding instance, duration of breastfeeding, existence of weak breastmilk, protection against childhood diseases offered by human milk, intervention of using a bottle in a successful breastfeeding, influence of the mother's emotional conditions on the milk production and use of contraceptive pills to decrease the amount of milk. In this questionnaire, the mothers were given one point for each question replied to correctly, up to a total score of eight points. That score was assessed and transformed into percentage. For the analyses of the replies, some concepts and considerations offered by the Brazilian Ministry of Health (2011) related to "breastfeeding" were used.

The design of questionnaires was based on data from studies on the theme and validated based on a previous pilot study<sup>(10)</sup>. Data was tabulated and processed using the SPSS application (version 17.0). For the description of qualitative data, absolute and relative frequency analyses were performed. For the quantitative data, average and standard deviation (symmetrical distribution) or median and interquartile range (asymmetrical distribution) were applied. In order to compare averages, a t-Student test or the variance analysis (ANOVA) were performed. In case of asymmetry, Mann-Whitney or Kruskal-Wallis tests were used.

In order to assess the association between the quantitative variables and the percentage of correct answers, the Pearson's (symmetrical distribution) or Spearman's (asymmetrical distribution) Correlation Tests were used.

Tests whose results were  $p \leq 0.05$  were considered statistically significant.

## RESULTS

The characteristics of the studied population are found on Table 1.

For the eight questions related to the knowledge on breastfeeding, most of post-partum women achieved a score of 82.7 (SD=18.7) in their answers, and an average total of 6.6 hits (Table 2).

There was a positive association between the percentage of knowledge on breastfeeding and family income ( $r=0.268$ ;  $p=0.05$ ), i.e., post-partum women with higher family income tend to have a higher percentage of correct answers (Figure 1).

## DISCUSSION

While comparing the results of this study to other previously published researches, it was assessed that the information level of mothers regarding breastfeeding is satisfactory<sup>(6,9,10,13-15)</sup>.

The percentage of 82.7% of correct answers to 92.8% of the interviewed mothers demonstrates that most acknowledge that the mother's emotional conditions may interfere with the amount of milk produced. Literature indicates that some mothers give up breastfeeding when they are stressed due to

**Table 1.** Characterization of the studied sample

Variables	n <sup>#</sup>	Descriptive statistics
		Average (SD)
Mother's age (years)	70	28.3 ± 6.0
<b>Level of education</b>		<b>n (%)</b>
1st Grade (incomplete)		4 (5.7)
1st Grade (complete)		12 (17.1)
2nd Grade (incomplete)		13 (18.6)
2nd Grade (complete)		21 (30.0)
University (incomplete)		10 (14.3)
University (complete)		10 (14.3)
Present marital status	70	n (%)
Married/with a partner		63 (90.0)
Single		7 (10.0)
		<b>Median (P25-P75)</b>
Average income (Brazilian reais)	54	2000 (1500-3075)
		<b>n (%)</b>
Maternity leave	69	47 (68.1)
Mother/work	70	51 (72.9)
Pre-natal visit	70	69 (98.6)
		<b>Average (SD)</b>
Pre-natal visits	63	10.6 ± 4.2
		<b>n (%)</b>
Participation in pregnancy groups	68	10 (14.7)
Was given guidance on BF	69	48 (69.6)
Underwent a C-Section	71	65 (91.5)
Gender of baby: female	71	41 (57.7)
Primigravida	71	41 (58.6)
Used bottle with her previous children	29	20 (69.0)
Used pacifiers with her previous children	30	17 (56.7)
Type of pacifier	17	
Regular		9 (52.9)
Orthodontic		8 (47.1)
		<b>Median (P25-P75)</b>
Time of breastfeeding of previous children (months)	27	9 (3-19)

# assessment performed with available data only; for that reason, there is a different n for each variable

Note: SD = standard deviation; P25-P75 = percentile 25 – percentile 75

scarcity or absence of their breast milk. When they face such situation, they adopt other ways to feed the child<sup>(16)</sup>.

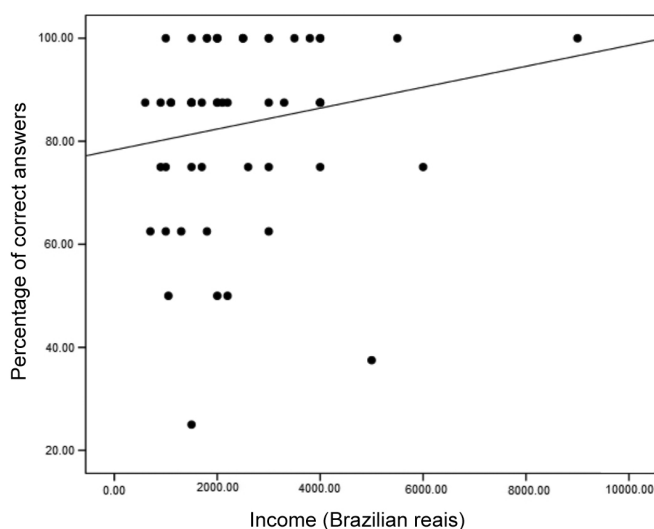
A study performed with mother of premature children concluded that one of the main steps to provide assistance to the breastfeeding mother is to assess her knowledge regarding breastfeeding<sup>(17)</sup>. The authors of this study reported the importance of a strict relationship between wet nurse, her family and

**Table 2.** Level of knowledge about breastfeeding demonstrated by mothers

Questions	n	n (%)
Enough amount of breast milk	67	44 (65.7)
Baby fed whenever he/she feels like	68	61 (89.7)
Baby fed for as long as he/she would like	69	62 (89.9)
Weak breast milk	66	10 (15.2)
A breastfed child is less prone to diseases	70	70 (100)
Bottles are harmful for a successful breastfeeding experience	64	59 (92.2)
Emotional conditions of the mother also affect the amount of milk produced	69	64 (92.8)
Some pills make the production of milk to decrease	58	55 (94.8)
<b>Average (<math>\pm</math>SD)</b>		
N° of correct answers*	71	6.6 ( $\pm$ 1.5)
Percentage of knowledge*	71	82.7 ( $\pm$ 18.7)

\*Counted as error when the mother did not answer a question

**Note:** SD = standard deviation

**Figure 1.** Association between percentage of knowledge and family income

an interdisciplinary team, in order to provide safety, confidence and, consequently, to be successful in this process. Additionally, they point out the importance of continuing such support after hospital discharge, which is still a major challenge in the speech therapy area.

In this study, 65.7% of the mothers believed that exclusive breastfeeding is enough until six months old, in agreement with what is globally preconized since the 1970s: the breastmilk is ideal for the child's growth and development<sup>(18)</sup>. Even though the mothers believed in the sufficiency of exclusive breastfeeding, it is worth noting that many of them use bottles or other

complements, which collaborates with early weaning<sup>(19)</sup>.

Breastfeeding on demand is still an unknown aspect by the interviewed mothers. Additionally, despite the information on all factors linked to breastfeeding in campaigns and breastfeeding programs, the investigated casuistry still demonstrated that 15.2% of the mothers believe in the existence of weak breast milk.

The interviewed mothers reported that breastfed children will be less prone to acquired diseases, which is in agreement with the researched literature. That finding relates to the improved level of knowledge of present-time mothers, causing improvements to their child's health<sup>(20)</sup>.

In the literature, the relationship between the use of contraceptive pills and early weaning is mentioned, which is recognized by the mothers interviewed in this study<sup>(6)</sup>.

In addition to the negative effects known, bottle interferes with the successful breastfeeding technique<sup>(21)</sup>. In this study, 92.2% of the mothers stated that the use of bottles is bad to breastfeeding. However, among the mothers who had previously delivered other children, 69% offered them bottles and 56.7% offered them pacifiers. Among the types of pacifiers used, 52.9% were regular and 47.1% were orthodontic. Even though we observe balanced use between the types of pacifiers, literature indicates that orthodontic pacifier is more appropriate for children, since it is less harmful to the craniofacial development than other kinds of pacifiers<sup>(22)</sup>.

The positive association between the percentage of knowledge and family income matches what was found while studying the literature, which affirms that mothers with a higher level of family revenue demonstrated a deeper knowledge on breastfeeding<sup>(23)</sup>. Even though the mothers with higher level of education demonstrated deeper knowledge on breastfeeding, such data was curiously insignificant to this study, even though factors such as the number of prenatal visits may have favorably influenced the information on breastfeeding provided by the mothers<sup>(6)</sup>.

## CONCLUSION

Most of the interviewed mothers demonstrated knowledge on the investigated aspects. There was a positive association between percentage of knowledge and family income.

## REFERENCES

- King FS. Como ajudar as mães a amamentar. 4a ed. Brasília, DF: Ministério da Saúde; 2001.
- Venancio SI, Almeida H. Método Mãe Canguru: aplicação no Brasil, evidências científicas e impacto sobre o aleitamento materno. *J Pediatr (Rio J)*. 2004;80(5 suppl):s173-80. <http://dx.doi.org/10.1590/S0021-75572004000700009>
- Fundação Oswaldo Cruz. Aleitamento materno. Rio de Janeiro: Fiocruz; 2011 [citado 23 jul 2011]. Disponível em: <http://www.redeblh.fiocruz.br/cgi/cgilua.exe/sys/start.htm?sid=384>

4. Percegoni N, Araújo RMA, Silva MMS, Euclides MP, Tinôco ALA. Conhecimento sobre aleitamento materno de puérperas atendidas em dois hospitais de Viçosa, Minas Gerais. *Rev Nutr.* 2002;15(1):29-35. <http://dx.doi.org/10.1590/S1415-52732002000100004>
5. Hitos SF, Periotto MC. Amamentação: atuação fonoaudiológica: uma abordagem prática e atual. Rio de Janeiro: Revinter; 2009.
6. Escobar AMU, Ogawa AR, Hiratsuka M, Kawashita MY, Teruya PY, Grisi S et al. Aleitamento materno e condições sócioeconômico-culturais: fatores que levam ao desmame precoce. *Rev Bras Saúde Mater Infant.* 2002;2(3):253-61. <http://dx.doi.org/10.1590/S1519-38292002000300006>
7. Bastos GBP, Mota JAC, Nehmy RMQ. Nutrição infantil no final do séc. XVIII. *Rev Med Minas Gerais.* 2004;14(1 supl):173-80.
8. Giugliani ERJ. O aleitamento materno na prática clínica. *J Pediatr.* 2000;76(supl 3):s238-52.
9. Saes SO, Goldberg TBL, Ondani LM, Valarelli TP, Carvalho AP. Conhecimento sobre amamentação: comparação entre puérperas adolescentes e adultas. *Rev Paul Pediatr.* 2006;24(2):121-6.
10. Susin LRO, Giugliane ERJ, Kummer SC, Maciel M, Benjamin ACW, Machado DB et al. Uma estratégia simples que aumenta os conhecimentos das mães em aleitamento materno e melhora as taxas de amamentação. *J Pediatr (Rio J).* 1998;74(5):368-75.
11. Carús J, Vinholes D. Importância do aleitamento materno: enfoque histórico, epidemiológico e biológico. *J Bras Fonoaud.* 2007;3(9):144-50.
12. Medeiros APM, Ferreira JTL, Felício CM. Correlação entre métodos de aleitamento, hábitos de sucção e comportamentos orofaciais. *Pro Fono.* 2009;21(4):315-9. <http://dx.doi.org/10.1590/S0104-56872009000400009>
13. Agho KE, Dibley MJ, Odiase JI, Ogbonmwan SM. Determinants of exclusive breastfeeding in Nigeria. *BMC. Pregnancy Childbirth.* 2011;11(1):2. <http://dx.doi.org/10.1186/1471-2393-11-2>
14. Sasaki Y, Ali M, Kakimoto K, Saroeun O, Kanal K, Kuroiwa C. Predictors of exclusive breast-feeding in early infancy: a research report from Phnom Penh, Cambodia. *J Pediatr Nurs.* 2010;25(6):463-9. <http://dx.doi.org/10.1016/j.pedn.2009.04.010>
15. Zhou Q, Younger KM, Kearney JM. An exploration of the knowledge and attitudes towards breastfeeding among a sample of Chinese mothers in Ireland. *BMC Public Health.* 2010;10(1):722. <http://dx.doi.org/10.1186/1471-2458-10-722>
16. Laantera S, Pölkki T, Ekström A, Pietilä A. Breastfeeding attitudes of Finnish parents during pregnancy. *BMC Pregnancy Childbirth.* 2010;10(1):79. <http://dx.doi.org/10.1186/1471-2393-10-79>
17. Santana MCC, Goulart BNG, Chiari BM, Melo AM, Silva EHAA. Aleitamento materno em prematuros: atuação fonoaudiológica baseada nos pressupostos da educação para promoção da saúde. *Ciênc Saúde Colet.* 2010;15(2):411-7. <http://dx.doi.org/10.1590/S1413-81232010000200017>
18. Organização Mundial da Saúde. Proteção, promoção e apoio ao aleitamento materno: o papel especial dos serviços materno-infantis. Genebra: Organização Mundial da Saúde; 1989.
19. Araújo OD, Cunha AL, Lustosa LR, Nery IS, Mendonça RCM, Campelo SMA. Aleitamento materno: fatores que levam ao desmame precoce. *Rev Bras Enferm.* 2008;61(4):488-92. <http://dx.doi.org/10.1590/S0034-71672008000400015>
20. Komarsson KAC, Oriá MOB, Dodt RCM, Almeida PC, Lorena BX. Conhecimento das mães sobre o aleitamento materno: estudo descritivo. *Online Braz J Nurs.* 2008;7(2). <http://dx.doi.org/10.5935/1676-4285.20081558>
21. Sena MCF, Silva EF, Pereira MG. Prevalência do aleitamento materno nas capitais brasileiras. *Rev Assoc Med Bras.* 2007;53(6):520-4. <http://dx.doi.org/10.1590/S0104-42302007000600020>
22. Valdrigui HC, Vedovello Filho M, Coser RM, Paula DB, Rezende SE. Hábitos deletérios X aleitamento materno (sucção digital ou chupeta). *Rev Gaúcha Odont.* 2004;52(4):237-39.
23. Kummer SC, Giugliani ERJ, Susin LO, Folletto JL, Lermen NR, Wu VYJ et al. Evolução do padrão de aleitamento materno. *Rev Saúde Pública.* 2000;34(2):143-8. <http://dx.doi.org/10.1590/S0034-89102000000200007>