



# Follow-up of the care of postpartum women and newborns in a Human Milk Bank

*Acompanhamento dos atendimentos de puérperas e recém-nascidos em um Banco de Leite Humano*

*Seguimiento de la atención de puérperas y recién nacidos en un Banco de Leche Humana*

Laryssa Schultz dos Passos<sup>1</sup>

Caroline Kroll<sup>2</sup>

Larissa Borges<sup>1</sup>

Erika Dantas de Medeiros Rocha<sup>3</sup>

Lidiane Ferreira Schultz<sup>3</sup>

<sup>1</sup>Maternidade Darcy Vargas. Joinville, SC, Brasil.

<sup>2</sup>Universidade da Região de Joinville. Joinville, SC, Brasil.

<sup>3</sup>Associação Educacional Luterano Bom Jesus, Instituto de Ensino Luterano de Santa Catarina. Joinville, SC, Brasil.

## ABSTRACT

**Objective:** To evaluate the association between maternal characteristics and assistance services provided by a Human Milk Bank (HMB) to women in the puerperal period and their hospitalized newborns. **Methods:** A quantitative cross-sectional study conducted at a public maternity in southern Brazil between July and December of 2017. It was used a structured form for data collection. The statistical analysis was conducted using Chi-Square for association or Fisher's Exact test. **Results:** In total, 316 mothers were part of this study. The main reasons were weight loss of the newborn and difficulty in handling. Statistically significant associations were found between follow up services from HMB and mother's age (18-23 years old: 58.1%; 24-29: 63.8%; 30-35: 78.9%; 36-41: 71.8%, and 42-47: 85.7%;  $p = 0.036$ ), mother's race/color (brown: 47.2%; white: 68.9%; black: 77.8%;  $p = 0.031$ ), and type of delivery (normal: 61.0%; caesarean section: 75.2%;  $p = 0.011$ ). **Conclusion and implications for practice:** Mothers of older age, who were black and with children born by cesarean section were the ones who sought more often and had most follow-ups at the HMB of the maternity. The results found may contribute to the planning, monitoring and elaboration of strategies for breastfeeding actions.

**Keywords:** Human Milk Banks; Breastfeeding; Postpartum period.

## RESUMO

**Objetivo:** Avaliar a associação entre as características maternas e o acompanhamento dos atendimentos no Banco de Leite Humano (BLH) à puérpera e ao recém-nascido internado. **Método:** Pesquisa transversal, quantitativa, realizada em uma maternidade pública da Região Sul do Brasil nos meses de Julho a Dezembro de 2017. Utilizado um formulário estruturado para coleta dos dados. Para as análises, testes de associação de Qui-quadrado ou Exato de Fisher. **Resultados:** Ao total, 316 mães fizeram parte do estudo. Os motivos principais para encaminhamento ao BLH foram perda de peso do recém-nascido e dificuldade na pega. Foram encontradas associações estatisticamente significativas entre o acompanhamento do banco de leite humano e as variáveis idade materna (18-23 anos: 58,1%; 24-29 anos: 63,8%; 30-35 anos: 78,9%; 36-41 anos: 71,8% e 42-47 anos: 85,7%;  $p=0,036$ ), raça/cor materna (parda: 47,2%; branca: 68,9%; preta: 77,8%;  $p=0,031$ ), tipo de parto (normal: 61,0%; cesárea: 75,2%;  $p=0,011$ ). **Conclusão e Implicações para Prática:** As mães com idade mais avançada, de raça/cor preta e com filhos nascidos de parto cesárea foram as que fizeram maiores procuras e acompanhamentos ao banco de leite humano da maternidade. Os resultados encontrados poderão contribuir para o planejamento, monitoramento e elaboração de estratégias para ações em aleitamento materno.

**Palavras-Chave:** Bancos de Leite; Aleitamento Materno; Período pós-parto.

## RESUMEN

**Objetivo:** Evaluar la asociación entre las características maternas con el seguimiento de las atenciones en el Banco de Leche Humana (BLH) a la puérpera y al recién nacido internado. **Método:** Investigación transversal, cuantitativa, realizada en una maternidad pública de la Región Sur de Brasil entre julio y diciembre de 2017. Utilizado formulario estructurado para recolección de datos. Para los análisis, test de asociación de Qui-Cuadrado o Exacto de Fisher. **Resultados:** Al total, 316 madres formaron parte del estudio. Los motivos principales para el encaminhamiento al BLH fueron la pérdida de peso del recién nacido y la dificultad en el agarre. Se encontraron asociaciones estadísticamente significativas entre el seguimiento del BLH y las variables edad materna (18-23 años: 58,1%; 24-29 años: 63,8%; 30-35 años: 78,9%; 36-41 años: 71,8% e 42-47 años: 85,7%;  $p=0,036$ ), raza/color materna (parda: 47,2%; blanca: 68,9%; negra: 77,8%;  $p=0,031$ ), tipo de parto (normal: 61,0%; cesárea: 75,2%;  $p=0,011$ ). **Conclusión e Implicaciones para la Práctica:** Madres con edad avanzada, raza/color negra y con hijos nacidos de parto por cesárea, hicieron mayores búsquedas y acompañamientos al BLH de la maternidad. Los resultados encontrados pueden contribuir a la planificación, monitoreo y elaboración de nuevas estrategias para acciones en lactancia materna.

**Palabras clave:** Bancos de Leche; Lactancia Materna; Período Postparto.

### Corresponding Author:

Lidiane Ferreira Schultz  
E-mail: lidiane.schultz@amsic.com.br

Submitted on 03/19/2019.

Accepted on 10/21/2019.

DOI: 10.1590/2177-9465-EAN-2019-0086.

## INTRODUCTION

Breastfeeding (BF) is the best and most efficient source of nutrition for infants,<sup>1</sup> with multiple nutrients essential for proper growth and development, better intestinal microbiota,<sup>2</sup> that favors the functioning of the cardiopulmonary system,<sup>3</sup> increases the intelligence coefficient, creates emotional bond between mother-baby, prevents infectious diseases, food intolerance and allergies,<sup>4</sup> reduces acute respiratory infections and reduces malnutrition even among those with lower socioeconomic conditions.<sup>5</sup>

In the long-term, other benefits are also highlighted as lower risk for overweight, obesity, the development of chronic noncommunicable diseases, lymphomas, and type I diabetes in adulthood.<sup>5</sup> For mothers, it protects against breast cancer, ovarian cancer, type 2 diabetes, depression, postpartum anxiety,<sup>5-7</sup> sleep disorders and stress.<sup>8</sup>

The Lancet Breastfeeding Series Group points to economic losses and environmental disadvantages when children do not receive breastfeeding, about US\$ 302 billion annually, or 0.49% of the world's gross national income,<sup>9</sup> so, breastfeeding is an intelligent investment with an excellent cost-effective ratio.<sup>10</sup>

Seeking to reduce child morbidity and mortality and increase the prevalence of breastfeeding, several programs and health policies were created, with emphasis on the training of health professionals, information to the population, expanded care and assistance to women during pregnancy, childbirth, postpartum and childcare after birth.<sup>11</sup> Laws have also been enacted to protect women at work during breastfeeding and to combat the free advertising of artificial milk for babies.<sup>12,13</sup>

These programs include "The Brazilian Human Milk Bank Network", which was developed to provide subsidies and regulations and is an important strategic element of public policy in favor of breastfeeding. The first HMB in the country, was implemented in 1943, to collect and distribute human milk attending mainly specific situations, such as prematurity, nutritional disorders and allergies to heterologous proteins.<sup>14-16</sup>

Beginning in 1981, with the development of the National Breastfeeding Incentive Program, the HMB assumed an expanded role with specialized service to the mother-baby pair, linked to a maternal and/or child care hospital that aims to protect, promote and support breastfeeding, collect and distribute certified quality human milk and contribute to the reduction of newborn and mother morbidity and mortality.<sup>17,18</sup> Between 2009-2016, around 17 million women were assisted worldwide and Brazil has 223 (77.4%) of the world's HMB.<sup>19</sup>

Women need knowledge, assistance and trust in the health professional, in order to acquire self-efficacy for breastfeeding.<sup>20</sup> The nurse needs to play this role through support, awareness, teaching, monitoring during all stages of the gestational and puerperal process, having the HMB as a reference structure for the establishment of lactation and fostering the bond between mother, baby, family and professional during hospitalization and after hospital discharge.<sup>21-23</sup>

Knowing the types of procedures performed in the HMB for the hospitalized mother and newborn, which are the maternal predictor variables associated with the demand and the number of visits performed during the hospitalization of the mother-baby dyad may favor new strategies for promotion, protection, support, intervention and referrals to the HMB.

Given the above, the present study aimed to evaluate the association between maternal characteristics and the follow-up of care in the human milk bank to the postpartum woman and the hospitalized newborn.

Few studies are evidenced in nursing regarding the characterization and associations between mother-babies and procedures performed at the HMB, justifying the research.

## METHODS

Quantitative cross-sectional study conducted in a Human Milk Bank of a maternity hospital in southern Brazil, state reference for high-risk pregnancy and use of the Kangaroo Method.

The Human Milk Bank of this Maternity was created in 1980, being a state reference since 1999, and is intended to train professionals working in the institution, to care for hospitalized mothers and newborns and also of other health facilities in the state. In 2017, the prevalence of individual visits to the dyad was between 1,340 and 1,488 visits/month.<sup>24</sup>

Based on the monthly visits, we determined the months from July to December 2017, as it is representative of the visits in 2017. A sample size calculation was performed by means of the systematic probabilistic sample method, using the SestatNet® statistical program of the Universidade Federal de Santa Catarina (UFSC), thus determined the study participants (n=316) mother-baby dyad.

As inclusion criteria, postpartum women over 18 years of age and full-term newborns (37 weeks to 41 weeks and 6 days), admitted to the maternity hospital in the months of July to December 2017. Were excluded postpartum women on drug therapy which contraindicated breastfeeding, who suffered abortion or death of the baby and newborns admitted to the Neonatal Intensive Care Unit.

Data were collected from March to May 2018, through the Micromed institution's internal information system, including data regarding the mother and newborn characterization, postpartum epidemiological and social profile, reasons for referral to the milk bank, practical procedures performed by the milk bank's assistant team and the frequency of care during the mother-baby dyad's hospitalization. The data was organized in a spreadsheet in Microsoft® Office Excel 2013.

For descriptive data analysis absolute and relative frequencies were used. The Chi-square association test was used to verify the association between maternal predictor variables and the search for the milk bank, and adopting a significance level of 5%.

Approved by the Research Ethics Committee with opinion No. 2,649,604 dated April 10, 2018, protocol CAAE 87656718.9.0000.5365.

## RESULTS

A survey of 316 mother-baby pairs shows that the prevalence of maternal age is between 18-23 years, predominantly white, single and with high school, with a prevalence of 1-2 live births per postpartum. Regarding the number of consultations performed during the prenatal period, most included six to ten consultations, and had normal delivery.

Related to pathologies during pregnancy, there was a predominance of urinary tract infection, followed by Pregnancy Specific Hypertensive Disease, and most participants had no comorbidities related to current pregnancy.

The referral of the mother-baby to the HMB took place for several reasons such as excessive weight loss of the newborn after birth, difficulties in breastfeeding handling, aid for the correct positioning during breastfeeding and management of the fissures. The present study showed that the mother-baby pair are referred or seek the institution's HMB within the first 25-48 hours after birth, the main reasons for care were significant weight loss of the newborn, followed by difficulty in breastfeeding handling.

During treatment at the HMB, management techniques between the dyad are evaluated to determine how the newborn sucks in the breast, quantify the approximate volume of milk ingested, perform weight control before and after breastfeeding. In addition, it evaluates the technique of positioning of the newborn to the breast and the initial creation of affective bond between mother and child, as these are multidimensional factors that are related to difficulty during the initial process of breastfeeding.

Table 1 describes the procedures performed during the first care of the mother-baby dyad.

**Table 1** – Characterization of the procedures performed at the Human Milk Bank in the 1st Care to the postpartum woman and to the newborn in a Maternity in Southern Brazil, 2018.

First Care Procedures	Total	%
Newborn at breast	<b>280</b>	<b>26.6%</b>
Orientations	<b>315</b>	<b>29.9%</b>
Assistance to the engorged breast	0	0%
Massage and manual milking	116	11.0%
Massage and mechanical milking	11	1.0%
Lactation and relactation stimulation	73	6.9%
Assistance to fissure	6	0.6%
Breast bandage	0	0%
Newborn's weight	<b>167</b>	<b>15.9%</b>
Finger Feeding	10	0.9%
Offering oral milk	75	7.1%
Medical consultation	0	0.0%
<b>Total Procedures</b>	<b>1053</b>	<b>100%</b>

Regarding the predominance of procedures performed during the first care of the dyad, it was emphasized that the guidelines related to the practice of breastfeeding were highlighted, followed by the newborn's breastfeeding and weight verification before and after breastfeeding. Importantly, all three of these techniques are correlated and usually occur simultaneously during the evaluation of the newborn to the breast.

However, 211 mothers returned to the HMB, being followed during the daytime breastfeeding, with an average of five visits throughout the hospitalization. By measuring the number of procedures and the frequency of the other visits, the reasons for the first visit were highlighted again. These were the maternal guidelines regarding the practice of breastfeeding, placement of the newborn to the breast, together with the verification of the newborn's weight.

Table 2 shows the procedures performed at the HMB during follow-up of the mother-newborn pair at the HMB.

The analysis of the association between maternal predictor variables and the search for the milk bank is shown in Table 3. Among those who searched for the HMB, there was a higher prevalence of older mothers, especially those who were between 30 and 35 years old, which is statistically significant. In addition, there was a statistically significant association between HMB search and race/color, with a higher prevalence of black race/color mothers. Regarding prenatal consultations, there was an association between this variable and the search for HMB, with a higher prevalence of mothers who had attended more than ten prenatal consultations. The type of delivery was also shown to be significantly associated with the seeking for the

**Table 2** – Characterization of the procedures performed at the Human Milk Bank during follow up of the postpartum woman and of the newborn in a Maternity Hospital in Southern Brazil, 2018.

First Care Procedures	Total	%
Newborn at breast	<b>636</b>	<b>26.0%</b>
Orientations	<b>676</b>	<b>27.6%</b>
Assistance to the engorged breast	5	0.2%
Massage and manual milking	153	6.3%
Massage and mechanical milking	84	3.4%
Lactation and relactation stimulation	257	10.5%
Assistance to fissure	17	0.7%
Breast bandage	2	0.1%
Newborn's weight	<b>446</b>	<b>18.2%</b>
Finger Feeding	50	2.0%
Offering oral milk	119	4.9%
Medical consultation	3	0.1%
<b>Total Procedures</b>	<b>2448</b>	<b>100%</b>

**Table 3 – Association between maternal predictor variables and the search for the Human Milk Bank in a maternity hospital in southern Brazil, 2018.**

Variables	Search for the Human Milk Bank		p
	No (n=105)	Yes (n=211)	
	n (%)	n (%)	
Maternal age (years)			<b>0.022</b>
18-23	44 (41.9)	61 (58.1)	
24-29	34 (36.2)	60 (63.8)	
30-35	15 (21.1)	56 (78.9)	
≥36	12 (26.1)	34 (73.9)	
Race/Color			<b>0.031</b>
White	84 (31.1)	186 (68.9)	
Brown color	19 (52.8)	17 (47.2)	
Black	2 (22.2)	7 (77.8)	
Schooling			0.122
Higher Education	10 (33.3)	20 (66.7)	
Complete high school	35 (26.1)	99 (73.9)	
Complete primary education	43 (40.2)	64 (59.8)	
Elementary school incomplete	17 (37.8)	28 (62.2)	
Marital status			0.974
Married / Consensual Marriage	42 (33.3)	84 (66.7)	
Single / widow / divorced	63 (33.2)	127 (66.8)	
Number of children			0.600
1-2	81 (34.0)	157 (66.0)	
2-4	21 (32.8)	43 (67.2)	
≥5	2 (18.2)	9 (81.8)	
Prenatal Consultations (nº)			<b>0.049</b>
>10	24 (30.8)	54 (69.2)	
6-10	65 (31.3)	143 (68.8)	
<6	16 (53.3)	14 (46.7)	
Type of delivery			<b>0.008</b>
Normal	73 (39.0)	114 (61.0)	
Cesarean	32 (24.8)	97 (75.2)	
Gestational disease			0.893
No	67 (33.5)	133 (66.5)	
Yes	38 (32.8)	78 (67.2)	

HMB. Of the mothers who sought the HMB, most of them had the cesarean section of their current child. The other variables such as education, marital status, number of children and presence of gestational disease had no statistically significant association with the search for HMB.

## DISCUSSION

Breastfeeding should begin as early as the first hour of birth with skin-to-skin contact and continue exclusively until the child's six months of life. Despite an upward trend, research shows that

currently about 54% of newborns are breastfed in the first hour of life, of which only 38% remain exclusively until six months in the Americas region and only 32% continue to breastfeed until 24 months, being a major challenge and a major public health problem.<sup>25</sup>

Researches show that young mothers and adolescents are those who breastfeed for less time and higher maternal age is related to the intention to breastfeed<sup>26,27</sup> results also found in this study with prevalence of postpartum women aged 30 to 35 years who sought most for care and for guidelines at the HMB.

Regarding the postpartum marital status, no statistically significant association was observed. However, studies have highlighted that mothers with a steady partner when compared to those who do not have a partner, breastfeed their child longer.<sup>25-27</sup>

There was a statistically significant association between the search for the HMB and race/color, with a higher prevalence of black race/color mothers. Regarding this variable, between 1960 and 2000 in Brazil, there was a shorter median duration of breastfeeding among white mothers compared to black mothers suggesting cultural influences on infant feeding patterns in different ethnic groups.<sup>28</sup> Recognizing beliefs, myths, culture and family habits are paramount for nurses in monitoring the postpartum woman and the newborn during breastfeeding and referral to the HMB.

The Ministry of Health recommends at least six prenatal consultations<sup>29</sup>. In this study, we found an association between searching for HMB of mothers who had performed more than ten prenatal consultations. Another research describes that having an average of six prenatal consultations does not guarantee breastfeeding and reinforces the importance of implementing breastfeeding actions since pregnancy, mainly providing effective guidance to pregnant women and their families.<sup>25</sup>

Regarding parity, the lower the number of children, the greater the search and attendance performed at the HMB. The experience of previous pregnancy, caring for or having more mature children is described as a protective factor for breastfeeding practice and adherence.<sup>25</sup> Being primiparous becomes a variable with higher risk for breastfeeding abandonment according to a study.<sup>25</sup> These results point to the importance of encouraging and promoting breastfeeding in the puerperal period and during hospitalization, especially for these mothers.

The cesarean type of delivery was also significantly associated with the demand for HMB. Normal childbirth is a factor predisposed to contribute to the promotion of breastfeeding in the delivery room along with skin-to-skin contact.<sup>30</sup> In the first breastfeeding, the newborn maintains thermal stability, improves fetal-neonatal adaptation, favors intestinal colonization with maternal skin flora increasing immunity. And for the mother, it produces an intensification of her motherhood and pleasure in caring for her child, while consolidating the symbiotic link between the binomial.<sup>30-32</sup> Early breastfeeding is significant in spontaneous vaginal delivery corresponding to 80% when compared to cesarean deliveries 50%.<sup>32</sup>

Regarding the search for the HMB, it was found that the mother-baby dyad sought and/or was referred to care after 48 hours of life of the newborn, highlighting reasons such as significant weight loss of the newborn followed of difficulty in breastfeeding handling. The prevalence of maternal demand for difficulty with incorrect handling, allegation of insufficient milk and breast-related problems such as fissure, engorgement and mastitis to the HMB were also described in another research.<sup>33</sup>

It also points out that the first care at the HMB promotes reassurance and welcoming of mother and baby in support of breastfeeding, enables the early identification of breast complications and difficulties in breastfeeding. Addressing doubts, fears, insecurities and demystifying pre-established concepts that influence early weaning were also described in a study on HMB care.<sup>33</sup> Other authors argue that by guidance alone breastfeeding does not occur effectively, making it necessary to instrumentalize the nursing mother so that she has full confidence in herself to breastfeed her infant.<sup>30,32</sup>

A systematic review compared the types of breastfeeding counseling (individual and group) to verify their effect on breastfeeding rates up to 48 hours postpartum, in the first month and between 1 and 5 months. Results showed a significant increase in breastfeeding by 43% until 48 hours postpartum when mothers received individual follow-up.<sup>30</sup>

The practice of stimulating breastfeeding during hospitalization requires the action of the health professionals involved, continuously and persistently. In addition to the technical-scientific knowledge to promote and support breastfeeding, the perception of maternal and neonatal vulnerability is essential for subsequent maternal stimulation and self-efficacy during breastfeeding.<sup>32</sup> Another important evidence in this study was the need for return and follow-up in the HMB of 211-mother-baby pair, totaling 2,448 procedures performed at the HMB.

No other studies were found to compare and discuss follow-up of return to HMB in the hospital environment by the postpartum woman and her child. Therefore, it becomes possible to identify that not only in the HMB these guidelines and procedures in favor of breastfeeding should be performed being fundamental in the accommodation units the reception, guidance, follow-up by the nurse.

As a limitation of the study we point out few national and international scientific references for further discussion of the data generated as a result of this research.

A strong point for this research is the pioneering in the Brazilian theme to study associations of maternal characteristics, reasons for searching for or referrals to the HMB as well as the types of care provided.

## CONCLUSION

The study allowed describing and associating the maternal characteristics and the reasons for referrals and accompanying them to the HMB. Mothers and babies received care from the HMB team in the initial process of breastfeeding during hospitalization and before hospital discharge.

It is suggested to health professionals working in the inpatient / accommodation units intermittent training, promoting technoscientific updating, thus offering effective guidance to the postpartum women, partner, family member and referral to the HMB when necessary having this place as a recognized structure and reference in favor of breastfeeding.

Knowing the variables and associations regarding maternal characteristics and seeking care for HMB during postpartum hospitalization may favor primary care professionals educational strategies during the puerperal pregnant period, mediated by a multidisciplinary health team continuously in favor of breastfeeding. This process, however, should be understood as the pursuit of therapeutic carving, dialogue and serving as a facilitator for learning and empowering the mother, so that the woman feels supported and thus can perform the breastfeeding process with safety by preventing early weaning.

The results of this research are expected to provide support for other studies related to the reasons for seeking and referrals to the HMB and types of care provided, thus strengthening actions for breastfeeding in the various scenarios of health services, which involve prenatal care, delivery room, inpatient care, accommodation units, immediate and late postpartum and HMB.

## AUTHORS' CONTRIBUTIONS

Conception and outline of the research design. Data analysis and findings interpretation. Writing and critical revision of the manuscript. Approval of the final version of the article. Responsibility for all aspects of the content and integrity of the published article. Laryssa Schultz dos Passos. Lidiane Ferreira Schultz.

Research conception. Writing and critical revision of the manuscript. Approval of the final version of the article. Responsibility for all aspects of the content and integrity of the published article. Erika de Medeiros Rocha.

Data acquisition and systematization. Writing and critical revision of the manuscript. Approval of the final version of the article. Responsibility for all aspects of the content and integrity of the published article. Larissa Borges.

Data analysis. Critical revision of the manuscript. Approval of the final version of the article. Responsibility for all aspects of the content and integrity of the published article. Caroline Kroll.

## ASSOCIATE EDITOR

Stela Maris de Mello Padoin

## REFERENCES

1. World Health Organization. Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services. Geneva: WHO; 2017.
2. Ley D, Desseyn JL, Mischke M, Knol J, Turck D, Gottrand F. Early-life origin of intestinal inflammatory disorders. *Nutr Rev* [Internet]. 2017; [citado 2019 mar 11];75:175-87. Disponível em: <https://www.ncbi.nlm.nih.gov/pubmed/28340001>

3. Mizuno K. The first 1,000 days of life. *Pediatr Int* [Internet]. 2019; [citado 2019 mar 11];61:3-3. Disponível em: <https://onlinelibrary.wiley.com/doi/epdf/10.1111/ped.13744>
4. Frost BL, Jilling T, Lapin B, Maheshwari A, Caplan MS. Maternal breast milk transforming growth factor beta and feeding intolerance in preterm infants. *Pediatr Res* [Internet]. 2014; [citado 2019 mar 11];76(4):386-93. Disponível em: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4467901>
5. Victora CG, Bahl R, Barros AJ, França GV, Horton S, Krusevec J et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *Lancet* [Internet]. 2016; [citado 2019 mar 11];387(10017):475-90. Disponível em: <https://www.ncbi.nlm.nih.gov/pubmed/26869575>
6. Lara-Cinisomo S, McKenney K, Di Florio A, Meltzer-Brody S. Associations between postpartum depression, breastfeeding, and oxytocin levels in latina mothers. *Breastfeed Med* [Internet]. 2017; [citado 2019 mar 11];12(7):436-42. Disponível em: <https://www.ncbi.nlm.nih.gov/pubmed/28749705>
7. Horta BL, Lima NP. Breastfeeding and type 2 diabetes: systematic review and meta-analysis. *Curr Diab Rep* [Internet]. 2019; [citado 2019 mar 11];19(1):1. Disponível em: <https://www.ncbi.nlm.nih.gov/pubmed/30637535>
8. Diniz GB. Weaning-induced alterations on neuropeptidergic populations of the rat hypothalamus [tese]. Maastricht: Maastricht University; 2018 [citado 2019 mar 11]. Disponível em: [https://cris.maastrichtuniversity.nl/portal/en/publications/weaninginduced-alterations-on-neuropeptidergic-populations-of-the-rat-hypothalamus\(817eaf51-6189-4f43-98e2-5acd255e4f82\).html](https://cris.maastrichtuniversity.nl/portal/en/publications/weaninginduced-alterations-on-neuropeptidergic-populations-of-the-rat-hypothalamus(817eaf51-6189-4f43-98e2-5acd255e4f82).html)
9. Rollins NC, Bhandari N, Hajeerbhoy N, Horton S, Lutter CK, Martines JC et al. Why invest, and what it will take to improve breastfeeding practices? *Lancet* [Internet]. 2016; [citado 2019 mar 11];387(10017):491-504. Disponível em: <https://www.ncbi.nlm.nih.gov/pubmed/26869576>
10. Hansen K. Breastfeeding: a smart investment in people and in economies. *Lancet* [Internet]. 2016; [citado 2019 mar 11];387(10017):416. [https://doi.org/10.1016/S0140-6736\(16\)00012-X](https://doi.org/10.1016/S0140-6736(16)00012-X).
11. Fundo das Nações Unidas para a Infância. Iniciativa Hospital Amigo da Criança [Internet]. Brasília; 2008 [citado 2019 mar 11]. Disponível em: [http://bvsm.s.saude.gov.br/bvs/publicacoes/iniciativa\\_hospital\\_amigo\\_crianca\\_modulo1.pdf](http://bvsm.s.saude.gov.br/bvs/publicacoes/iniciativa_hospital_amigo_crianca_modulo1.pdf)
12. Lei n. 5.452, de 01 de maio de 1943 (BR). Aprova a consolidação das leis do trabalho. *Diário Oficial da União* [periódico na internet], Brasília (DF). 9 ago 1943; Seção 3: 11937 [citado 2019 mar 11]. Disponível em: <https://www2.camara.leg.br/legin/fed/declei/1940-1949/decreto-lei-5452-1-maio-1943-415500-publicacaooriginal-1-pe.html>
13. Lei n. 11.265, de 3 de janeiro de 2006 (BR). Regulamenta a comercialização de alimentos para lactentes e crianças de primeira infância e também a de produtos de puericultura correlatos. *Diário Oficial da União* [periódico na internet], Brasília (DF), 4 jan 2006 [citado 2019 mar 11]. Disponível em: [http://www.planalto.gov.br/ccivil\\_03/\\_Ato2004-2006/2006/Lei/L11265.htm](http://www.planalto.gov.br/ccivil_03/_Ato2004-2006/2006/Lei/L11265.htm)
14. Ministério da Saúde (BR), Instituto Nacional de Alimentação e Nutrição, Programa Nacional de Incentivo ao Aleitamento Materno. Normas gerais para bancos de leite humano [Internet]. Brasília; 1993 [citado 2019 mar 11]. Disponível em: [http://www.redeblh.fiocruz.br/media/p322\\_1988.pdf](http://www.redeblh.fiocruz.br/media/p322_1988.pdf)
15. Ministério da Saúde (BR). Banco de leite humano: funcionamento, prevenção e controle de riscos [Internet]. Brasília: Agência Nacional de Vigilância Sanitária; 2008 [citado 2019 mar 11]. Disponível em: <http://www.redeblh.fiocruz.br/media/blhanv2008.pdf>
16. Bavaresco LO. Aleitamento materno e o desenvolvimento cognitivo [especialização]. Florianópolis: Programa de Pós-graduação em Enfermagem, Universidade Federal de Santa Catarina; 2014 [citado 2019 mar 11]. Disponível em: <https://repositorio.ufsc.br/handle/123456789/172936>
17. Luna FDT, Oliveira JDL, Silva LRM. Banco de leite humano e estratégia saúde da família: parceria em favor da vida. *Rev Bras Med Fam Comunidade* [Internet]. 2014; [citado 2019 mar 11];9(33):358-64. Disponível em: <https://www.rbmf.org.br/rbmfc/article/view/824/663>
18. Resolução-RDC n. 171, de 4 de setembro de 2006 (BR). Dispõe sobre o regulamento técnico para o funcionamento de Bancos de Leite Humano. *Diário Oficial da União* [periódico na internet], Brasília (DF), 5 set 2006 [citado 2019 mar 11]. Disponível em: [http://bvsm.s.saude.gov.br/bvs/saudelegis/anvisa/2006/res0171\\_04\\_09\\_2006.html](http://bvsm.s.saude.gov.br/bvs/saudelegis/anvisa/2006/res0171_04_09_2006.html)

19. Fundação Oswaldo Cruz. Rede Global de BLH: modelo brasileiro auxilia mais de 17 milhões de mulheres [Internet]. Rio de Janeiro; 2019 [citado 2019 mar 11]. Disponível em: <https://agencia.fiocruz.br/rede-global-de-blh-modelo-brasileiro-auxilia-mais-de-17-milhoes-de-mulheres>
20. Brockway M, Benzie K, Hayden KA. Interventions to improve breastfeeding self-efficacy and resultant breastfeeding rates: a systematic review and meta-analysis. *J Hum Lact* [Internet]. 2017; [citado 2019 jun 2];33(3):486-99. Disponível em: <https://www.ncbi.nlm.nih.gov/pubmed/28644764>
21. D'Haenens F, Van Rompaey B, Swinnen E, Dilles T, Beeckman K. The effects of continuity of care on the health of mother and child in the postnatal period: a systematic review. *Eur J Public Health* [Internet]. 2019; [citado 2019 jun 2];ckz082. Disponível em: <https://www.ncbi.nlm.nih.gov/pubmed/31121019>
22. Barbieri MC, Bercini LO, Brondani KJM, Ferrari RAP, Tacla MTGM, Sant'Anna FL. Breastfeeding: guidance received in prenatal care, delivery and postpartum care. *Semin Cienc Biol Saude* [Internet]. 2015; [citado 2019 jun 2];36(1):17-24. Disponível em <http://www.uel.br/revistas/uel/index.php/seminabio/article/viewFile/16480/16920>
23. Li CM, Li R, Ashley CG, Smiley JM, Cohen JH, Dee DL. Associations of hospital staff training and policies with early breastfeeding practices. *J Hum Lact* [Internet]. 2014; [citado 2019 jun 2];30(1):88-96. Disponível em: <https://www.ncbi.nlm.nih.gov/pubmed/23603574>
24. Fundação Oswaldo Cruz. Banco de leite humano da Maternidade Darcy Vargas [Internet]. Rio de Janeiro: rBLH Brasil; 2019 [citado 2019 mar 11]. Disponível em: <https://rblh.fiocruz.br/banco-de-leite-humano-da-maternidade-darcy-vargas>
25. Ferreira HLOC, Oliveira MF, Bernardo EBR, Almeida PC, Aquino PS, Pinheiro AKB. Fatores associados à adesão ao aleitamento materno exclusivo. *Cien Saude Colet* [Internet]. 2018; [citado 2019 mar 11];23(3):683-90. Disponível em: <http://www.scielo.br/pdf/csc/v23n3/1413-8123-csc-23-03-0683.pdf>
26. Rocci E, Fernandes RAQ. Dificuldades no aleitamento materno e influência no desmame precoce. *Rev Bras Enferm* [Internet]. 2014; [citado 2019 mar 11];67(1):23-4. Disponível em: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0034-7167201400010002&lng=pt&nrm=iso&lng=pt](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-7167201400010002&lng=pt&nrm=iso&lng=pt)
27. Vieira TO, Martins CC, Santana GS, Vieira GO, Silva LR. Maternal intention to breastfeed: a systematic review. *Cien Saude Colet* [Internet]. 2016; [citado 2019 jun 2];21(12):3845-58. Disponível em: <http://www.scielo.br/pdf/csc/v21n12/1413-8123-csc-21-12-3845.pdf>
28. Oliveira DS, Boccolini CS, Faerstein E, Verly-Jr E. Duração do aleitamento materno e fatores associados entre 1960 e 2000. *J Pediatr* [Internet]. 2017; [citado 2019 mar 11];93(2):130-5. Disponível em: [http://www.scielo.br/pdf/jped/v93n2/pt\\_0021-7557-jped-93-02-0130.pdf](http://www.scielo.br/pdf/jped/v93n2/pt_0021-7557-jped-93-02-0130.pdf)
29. Portaria n. 570, de 1 de junho de 2000 (BR). Diário Oficial da União [periódico na internet], Brasília (DF), 8 jun 2000 [citado 2019 mar 11]. Disponível em: [http://bvsms.saude.gov.br/bvs/saudelegis/gm/2000/prt0570\\_01\\_06\\_2000\\_rep.html](http://bvsms.saude.gov.br/bvs/saudelegis/gm/2000/prt0570_01_06_2000_rep.html)
30. Haroon S, Das JK, Salam RA, Imdad A, Bhutta ZA. Breastfeeding promotion interventions and breastfeeding practices: a systematic review. *BMC Public Health* [Internet]. 2013; [citado 2019 mar 11];13(3):1-18. Disponível em: <https://bmcpublichealth.biomedcentral.com/track/pdf/10.1186/1471-2458-13-S3-S20>
31. Oddy WH. Aleitamento materno na primeira hora de vida protege contra mortalidade neonatal. *J Pediatr* [Internet]. 2013; [citado 2019 mar 11];89(2):109-11. Disponível em: <http://www.scielo.br/pdf/jped/v89n2/v89n2a01.pdf>
32. Coca KP, Pinto VL, Westphala F, Mania PNA, Abrão ACFV. Conjunto de medidas para o incentivo do aleitamento materno exclusivo intra-hospitalar: evidências de revisões sistemáticas. *Rev Paul Pediatr* [Internet]. 2018; [citado 2019 mar 11];36(2):214-20. Disponível em: <http://www.scielo.br/pdf/rpp/v36n2/0103-0582-rpp-2018-36-2-00002.pdf>
33. Figueiredo MCD, Bueno MP, Ribeiro CC, Lima PA, Silva IT. Banco de leite humano: o apoio à amamentação e a duração do aleitamento materno exclusivo. *Rev Bras Crescimento Desenvol Hum* [Internet]. 2015; [citado 2019 mar 11];25(2):204-10. Disponível em: [http://pepsic.bvsalud.org/pdf/rbcdh/v25n2/pt\\_11.pdf](http://pepsic.bvsalud.org/pdf/rbcdh/v25n2/pt_11.pdf)