



SELF-EFFICACY IN NURSING DONORS OF HUMAN BREAST MILK
AUTOEFICÁCIA EM AMAMENTAÇÃO DE DOADORAS DE LEITE MATERNO HUMANO
AUTOEFICACIA EN LACTANCIA DE DONADORES DE LECHE MATERNO HUMANO

Lorena Sousa Soares¹, Raylane da Silva Machado², Silvana Santiago da Rocha³, Luisa Helena de Oliveira Lima⁴,
 Grazielle Roberta Freitas da Silva⁵, Mônica Oliveira Batista Oriá⁶

ABSTRACT

Objective: to analyze the self-efficacy in nursing donors of human breast milk, according to the Breastfeeding Self-Efficacy Scale Tool - Short Form (BSES-SF) and associate it with maternal characteristics and family functioning (Family Apgar). **Method:** this is a descriptive and exploratory study, with the cross-sectional cohort. They interviewed 51 donor mothers of milk. The collected data were analyzed and processed by software R[®]. **Results:** the total score of the BSES-SF ranged from 36 to 70 (middle and high efficiencies). The variables “normal births”, “prenatal performed” and “used milk collection service at home” were significant at the 0.1% level (α), “Previous pregnancies” and “Cesarean deliveries” at the level of 0.05 (α) and “Family Apgar”, “occupational situations” and “previous deliveries” at the level of 0.01% (α). **Conclusion:** nurses should consider the care in its broadest aspect, paying attention not only to the physical demands but also to other influences that affect the decisions and behaviors of women. **Descriptors:** Self-Efficacy; Breast-Feeding; Human Milk; Milk Banks.

RESUMO

Objetivo: analisar a autoeficácia em amamentação de doadoras de leite materno humano, segundo o instrumento Breastfeeding Self-Efficacy Scale - Short Form (BSES-SF), e associá-la às características maternas e a funcionalidade familiar (Apgar Familiar). **Método:** estudo descritivo-exploratório, de corte transversal. Foram entrevistadas 51 mães doadoras de leite. Os dados coletados foram analisados e processados pelo software R[®]. **Resultados:** o escore total da BSES-SF variou de 36 a 70 (eficácias média e alta). As variáveis “Partos normais”, “Realizou pré-natal” e “Utilizou serviço de coleta de leite no domicílio” foram significantes ao nível de 0,1% (α), “Gestações anteriores” e “Partos cesáreos” ao nível de 0,05 (α) e “Apgar familiar”, “Situação ocupacional” e “Partos anteriores” ao nível de 0,01% (α). **Conclusão:** o enfermeiro deve considerar o cuidado no seu aspecto mais amplo, atentando, não apenas, às demandas físicas, como também às outras influências que afetam nas decisões e nos comportamentos da mulher. **Descritores:** Autoeficácia; Amamentação; Leite Humano; Bancos de Leite.

RESUMEN

Objetivo: analizar la autoeficacia la lactancia de donadoras de leche materno humano, según el instrumento Breastfeeding Self-Efficacy Scale - Short Form (BSES-SF) y asociarla a las características maternas y la funcionalidad familiar (Apgar Familiar). **Método:** estudio descriptivo-exploratorio, de cohorte transversal. Fueron entrevistadas 51 madres donadoras de leche. Los datos recogidos fueron analizados y procesados por el software R[®]. **Resultados:** la puntuación total de la BSES-SF varió de 36 a 70 (eficacias media y alta). Las variables “Partos normales”, “Realizó prenatal” y “Utilizó servicio de recolección de leche a domicilio” fueron significantes a nivel de 0,1% (α), “Gestaciones anteriores” y “Partos cesáreos”, a nivel de 0,05 (α) y “Apgar familiar”, “Situación ocupacional” y “Partos anteriores”, a nivel de 0,01% (α). **Conclusión:** el enfermero debe considerar el cuidado en su aspecto más amplio, tentando, no apenas, a las demandas físicas, como también, a las otras influencias que afectan en las decisiones y en los comportamientos de la mujer. **Descriptores:** Auto-Eficacia; Lactancia; Leche Humano; Bancos de Leche.

¹Nurse, Ph.D. student, Postgraduate Nursing, Federal University of Piauí/UFPI. Teresina (PI), Brazil. E-mail: lorenacacaux@hotmail.com;

²Nurse, Master degree student, Post-graduate in Nursing, Federal University of Piauí/UFPI. Teresina (PI), Brazil. E-mail: raylane.s.machado@gmail.com;

³Nurse, Ph.D. Professor, Postgraduate in Nursing, Federal University of Piauí/UFPI. Teresina (PI), Brazil. E-mail: silvanasantiago27@gmail.com;

⁴Nurse, Ph.D. Professor, Postgraduate in Nursing, Federal University of Piauí/UFPI. Teresina (PI), Brazil. E-mail: luisahelena.lima@yahoo.com.br;

⁵Nurse, Ph.D. Professor, Postgraduate in Nursing, Federal University of Piauí /UFPI. E-mail: grazielle_roberta@yahoo.com.br;

⁶Nurse, Ph.D. Professor, Postgraduate in Nursing, Federal University of Ceará/UFC. Fortaleza (CE), Brazil. E-mail: monica.oria@ufc.br

INTRODUCTION

The Human Milk Bank (HMB) is characterized as one of the most important strategic elements of Brazilian public policy for breastfeeding. Since the implementation of the first milk bank in Brazil in 1943, they have been the exceptional situations support structures of weaning, as well as breastfeeding service units.¹

Internationally, the presence of HMBs in maternities and neonatal care units is associated with increased breastfeeding rates at hospital discharge of newborns with low weight. An Italian research has shown that any breastfeeding rate at discharge tends to be higher (60.4% vs. 52.8%, $p = 0.09$) and the use of infant formula tends to be lower (26.5 % vs. 31.3%) in hospitals with HMBs.²

The Human Milk Bank encourages psychosocial functions and builds a network of possibilities related to family and social nucleation, favoring the acquisition of human milk by women unable to breastfeed. In this respect, the nursing team has the responsibility of providing information on breastfeeding, clinical management and techniques for the prevention of early breastfeeding difficulties.³

Traditionally, guidance on breastfeeding has also been developed in a timely and objective way. Therefore, there is the need to strengthen the practice of breastfeeding counseling.⁴ Educational activities, and host of prenatal services in hospitals and nurseries, made with quality and humanization are fundamental to promoting breastfeeding and for attracting donor human milk.⁵

A review of the risks and benefits of human milk donated showed that the benefits of breastfeeding, as well as the risks of some artificial formula, are well known. This growing recognition of the advantages of breastfeeding is reflected in the increased incidence of breastfeeding in recent years. However, the most common reasons for early weaning are a low supply of milk, real or perceived, followed by the type of nipple or breast pain. However, with increasing awareness of the superiority of breast milk, more parents are turning to human breast milk donated to complement their babies after they are weaned.⁶

The process of meeting women donors is present in their evaluative exercise for the donation of human milk but little encouraged by health professionals. Health services that work directly with women and their families during pregnancy and postpartum period disclose, in a fundamental way, the real role

of HMB, its advantages for the donor woman and the use of her milk after pasteurization.³

A Spanish research aimed at determining the influence of maternal education programs on early initiation of breastfeeding and maintenance for up to two months of newborn found that in mothers who had participated in such programs, the prevalence of breastfeeding was higher. However, it must be considered that it is important not to confuse educational interventions to promote breastfeeding with what can be oriented when there are specific needs, as in the case of milk donation and newborns with low weight.⁷

In this sense, one of the aspects that influence the early weaning and poor adherence to milk donation is self-efficacy or maternal confidence in her ability to breastfeed. Research indicate that 27% of women with low levels of confidence in breastfeeding during prenatal interrupt breastfeeding within the first week after delivery and that the small level of confidence in the MB were 3.1 times more likely to stop breastfeeding than those who had complete confidence.^{8,9}

From this scenario, it is believed that the donors have high efficiency in breastfeeding, showing success in the process, being necessary to investigate if in Teresina (PI) that reality also corresponds to the national evidence. Moreover, it is necessary to understand the family influence in the process of breastfeeding and donation, for planning purposes and the pursuit of excellence in triad care mother-child-family. In this sense, the present study aimed to analyze the self-efficacy in nursing donor of human breast milk and associate it with maternal characteristics and family functioning (Family Apgar).

METHOD

Descriptive study with cross-sectional cohort between August and November 2013, in a public hospital in the city of Teresina, the capital of the State of Piauí, Northeast Brazil. The population was composed of donor mothers of human breast milk who were hospitalized and/or accompanying their hospitalized children, internal donors, that due to the low socio-economic status, geographical distance and the difficulty of access to the cities of origin, are welcomed by the maternity from social assistance measures, to await the health condition of the improvement of their children.

External donors (who are home milking) and donor performing milking in the collection centers at other institutions did not comprise the study population because of the difficulty

of their accessibility. The home milk collection is performed by nursing technicians of the HMB and consists of the collection service and transport of milk in a fit condition for the HMB. Also, professionals teach mothers the proper techniques to collect the milk and provide materials such as caps, masks and sterile glass jars with plastic cover.

The sample was for convenience, from the following inclusion criteria: internal donor mothers of human breast milk, who were nursing or who have had previous experience in breastfeeding; who donated breastmilk in the last thirty days and without physical or mental restrictions that prevented or contraindicated donation and breastfeeding. Thus, there were 51 donor milk mothers.

To collect data, three instruments were used: 1. A form for maternal characteristics (socioeconomic and obstetric); 2. Breastfeeding Self-Efficacy Scale - Short Form (BSES-SF), validated in Brazil and widely used in various countries; and 3. family Apgar.¹⁰⁻⁷

The BSES-SF, which includes 14 items, each with scores ranging from 1 to 5 points, have a minimum of 14, and a maximum of 70 points arranged randomly in two domain categories: technical (8 items) and Intrapersonal Thoughts (6 items). In the first category, the scale focuses on the technical aspects of breastfeeding most often cited by women: the correct position of the baby during breastfeeding, comfort during the act of breastfeeding, recognition of good lactation signs, sucking the nipple areola, among other factors. In the second category, it is considered the desire to breastfeed, internal motivation for breastfeeding, satisfaction with the breastfeeding experience, among other factors.¹⁸

The Family Apgar consists of five questions that enable the measurement of the level of satisfaction of the family components for five aspects considered basic in unity and functionality of any family: adaptation, companionship, development, affection and response capacity. Also, the instrument provides an important moment to reflect family relationships and contributes greatly to the understanding of the interviewees. The interviewer points out of the three choices for each of the five questions, which have the following score: 2 points for “usually”, 1 point for “sometimes” and 0 for “rarely”. The points for each of the five questions are

totalized and the results, suggesting: 7 to 10 points (highly functional family); 4 to 6 points (moderately dysfunctional family), and finally 0 to 3 points (severely dysfunctional family).¹⁷

The collected data were analyzed and processed by software R®. For univariate analysis, the nonparametric Spearman test was held on the assumption of a linear relationship of dependence between the scores of the SF-BSEF (dependent variable) and the other variables (independent variables). To achieve this, it is suggested a generalized linear regression model, where there is a medium degree and correlation of these variables (multivariate analysis).

The model fit or re-specification was held from the analysis of statistical significance displayed on the Student t-test. From these new values, the stepwise logic was used to check the importance of standardized estimate (the value of β), excluding from the model those variables less statistical significance in reaching the overall fit.

The Informed Consent Form was obtained from all study participants, which was approved by the Ethics Committee of the Federal University of Piauí, under CAAE: 03140012.5.0000.5214.

RESULTS

The total score of the BSES-SF of the sample ranges from 36 to 70 points ($M=57.6$, $SD=\pm 7.8$). For analysis purposes, the total score was classified as follows: low efficiency (14-32), medium efficiency (33-51) and high efficiency (52 to 70), so that 15.7% of women had a mean efficacy and 84.3% had high efficiency. It was noted that the score of the family Apgar ranged from 0 to 10, thereby demonstrating that the three classifications of family functioning were recorded: highly functional family (63%), moderately dysfunctional family (33%) and severely dysfunctional family (4%).

Table 1 shows the results of the generalized linear regression model with the variables that were statistically significant, with the estimate (β), standard deviation, t value and the statistical value of the test (p-value).

Table 1. Results of the generalized linear regression of the variables that were statistically significant. Teresina (PI), Brazil, 2013.

Variable	Estimate (B)	Standard deviation	T value	p-value {Pr(> t)}
Intercept (B ₀)	3.42913	0.44805	7.653	1.71e-09 ^a
Family Apgar	-0.23497	0.08581	-2.738	0.00902 ^b
Occupational situation	0.08546	0.02980	2.868	0.00643 ^b
Previous pregnancies	0.08805	0.03637	2.421	0.01988 ^c
Previous deliveries	-0.13802	0.04248	-3.249	0.00228 ^b
Normal deliveries	0.03177	0.01770	1.795	0.07983 ^d
Cesarean deliveries	0.03320	0.01599	2.077	0.04398 ^c
Prenatal care	-0.08909	0.04658	-1.913	0.06263 ^d
Use of milk collection service at home	-0.29996	0.16473	-1.821	0.07574 ^d

Level ofsignificance (α): ‘a’ 0.001; ‘b’ 0.01; ‘c’ 0.05; ‘d’ 0.1.

Waste: 4.1659 in 42 degrees of freedom.

Akaike information criterion - AIC: 36.982.

The variables “normal deliveries” (p=0.07983), “Prenatal care” (p=0.06263) and “Use of the human milk collection service at home” (p=0.07574) were significant to 0.1% level (α); “Previous pregnancies” (p=0.01988) and “cesarean deliveries” (p=0.04398) to the level of 0.05 (α) and “Family Apgar” (p=0.00902), “Occupational situation” (p=0.00643) and “previous deliveries” (p=0.00228) had to be significant at the level of 0.01% (α). The angular constant (B₀) is statistically significant at α level of 0.001%.

Also, it was observed that there is a positive relationship between BSEF-SF and occupational situation (β=0.08546), previous pregnancies (β=0.08805), normal deliveries (β=0.03177) and cesarean deliveries (β=0.03320). However, family Apgar (β=-0.23497), previous deliveries (β=-0.13802) Prenatal care (β=-0.08909) and use of human milk collection service at home (β=-0.29996) showed an inverse relationship with the response variable (BSES-SF).

Moreover, by the nature of the variable and because there is no categorical relationship between their answers, it was judged not to remove the variable model “occupational situation” (v4), analyzing it, thus qualitatively, from the literature existing because their exclusion could lead to changes in the statistical significance of the other variables.

In this research, there were some limitations that should be highlighted: the sample was not statistically calculated due to lack of systematic records of the internal donor; at times, the data collection was hampered by logistical difficulties related to the researcher and scholars who contributed to the study.

DISCUSSION

There were mothers identified with medium and high efficiency in nursing, corroborating other studies conducted in

Brazil.^{11,19} This may show good behavior in the promotion of breastfeeding and directly influence the initiative and/or maintenance of milk donation because the maternal confidence in the act of breastfeeding is an important factor in the initiation and maintenance of breastfeeding.⁹

As for sociodemographic data, only the occupational situation was significant, that is the better and more stable labor situation, the better self-efficacy in breastfeeding, corroborating another study, which also found few significant relationships¹⁹. However, this finding contradicts research that the return of women to work negative impact on the effectiveness of breastfeeding and, therefore, the milk donation.⁹

This fact can be explained by the reflection of the current situation in Brazil, where women need to contribute increasingly to the formation of the family budget and, often, to take the family's economy, which ultimately bring financial and personal autonomy to the woman, generating self-esteem and encouragement to keep breastfeeding. However, to maintain lactation after returning from mother to work, it is important that health professionals encourage the practice of milking, as well as the bond between the mother and the baby.²⁰⁻¹

There was a positive relationship between maternal confidence (BSES-SF) and previous pregnancies and both types of delivery (when analyzed separately and related specifically to the birth of the current child) and negative relationship with previous deliveries (total number), conducting prenatal care and use of the collection service at home.

By gestational problems, eight women had previous experience of abortion (n=3) or stillbirth (n=5) which generated great expectations in these women regarding current pregnancy and had a positive effect on breastfeeding. These women showed great pleasure and satisfaction in nursing and

obtained high scores in the BSES-SF. Also, this data can justify the negative relation to the total number of previous deliveries because a number of past pregnancies do not necessarily correspond to the number of births experienced and self-efficacy in breastfeeding may have increased after the birth of children.

The milk donation often helps build a story based on his experience that gives meaning to their loss and, ultimately, facilitates their recoverability. Milking and milk donation has been fundamental to the process of “re-create meaning” after the death of newborns, as demonstrated by other authors.²²

Mothers with experience and/or positive breastfeeding experiences have higher self-efficacy and fewer difficulties, concerns and doubts about the MB, even though each experience. On the other hand, the inexperience can be a major contributing factor to attention and care of the child, so that women have more security in the care required with her child.^{9,21}

As for the types of delivery, it was observed that both types (normal and caesarean section), positively influenced the self-efficacy in breastfeeding, regardless of par, that is in primiparous women, this time, influenced for breastfeeding. They are more likely to initiate breastfeeding but tend to keep it for less time when compared to multiparous. However, it must consider that the birth of every child is in a different context (maternal age, marital status, socioeconomic status, etc.) and therefore only previous experience of breastfeeding alone cannot be a protective factor for this practice.²³

A study in England showed that in the observed associations, a particularly interesting trend was seen by caesarean section, in particular, planned caesarean sections, which were associated with a greater likelihood of cessation of breastfeeding after six weeks of the baby's birth. The information was not completed with the cesarean section reasons (maternal conditions, fetal conditions, and others), so it was difficult to suggest possible explanations for this trend.²⁴

As for prenatal care, the data of this study contradicts many studies that claim that performing prenatal also promotes self-efficacy and the practice of breastfeeding, as this monitoring benefits the preparation of the mother and family for breastfeeding.⁹ However, it is important to highlight the quality of prenatal care, as health professionals, especially nurses, should

provide adequate information and encourage women to breastfeed and to donate, according to their social and family background, entering if possible, the partner and other family members, so the effectiveness of this approach had a direct correlation with listening and contextualized clarification of questions of every woman and family.²¹ Failing to do so, there will be no impact of prenatal care on the nursing process.

Breast milk donated from the mother is the preferred method of infant feeding for many reasons, including its practicality and lack of processing, immune wealth, strengthening the mother-child bond and accessibility. Mothers who provide their expressed milk ensure greater attention to optimize health outcomes for their premature babies not only during hospitalization but also after discharge. A variety of factors influences the mother's ability to produce milk to feed her premature son. In general, the main factors that influence breastfeeding include maternal comfort with breastfeeding combined with the lack of comfort in providing the infant formula; personal intentions; medical, social and cultural support; race/ethnicity and socioeconomic status, educational level, and age. Additional problems include maternal and child health complications; specific concerns about insufficient breast milk, poor child catching the breast and weak or ineffective suction.²⁵

The fact that the use of a home collection of milk have had an inverse relationship with the service self-efficacy, although it has not been examined in other studies of current literature, can also be explained by the quality of care. Despite being a practical and easy method, which was aiming to help and encourage the donation of milk and maintenance of breastfeeding, professionals that make this approach and collection were not trained to encourage self-efficacy in breastfeeding. It is understood a need to improve the technical support, shelter and support to donors, in particular about educational aspects and attention to women. It is believed that during the HMB home visits of professionals, it is important to clarify the possible doubts that the donor may have and provide humane care, thus confirming to ease the doubts arising from the practice of donation, reducing the difficulties of mothers and contributing to maintenance breastfeeding and increasing the frequency and the time of donation.²⁶

There were no significant differences in clinical outcomes in the mother's milk

compared to pasteurized milk donated. Only a small and statistically significant difference in the growth of newborns can be observed for the mother's breast milk. Thus, it follows that every effort should always be placed in the support and promotion of breastfeeding and milk donation, not only as an alternative to mother's milk but also as a breastfeeding promotion and support strategy.²⁰

The association between Family Apgar scores showed an inverse relationship with the BSES-SF, disagreeing with studies that pointed the family and professional support as an essential element in enabling the practice of breast milk donation and breastfeeding.^{9,27} In this context, it can be justified this discordant relationship for autonomy and high self-efficacy donor in nursing. Despite the family dysfunction or lack of support recorded by Apgar scores, many mothers avoid this lack in self-contained way, providing basic care to their children, with the support of maternity professionals; nursing them and offering milk to their sons or HMB. Thus, it is appropriate that the nurse, for example, is cautious and careful to identify all the differences in each situation and risk factors such as family vulnerability, very common nowadays, with the spread of urban violence and illegal drugs.

CONCLUSION

This study achieved its objectives from the results, showing that in this population there is a high self-efficacy in nursing, high family functioning and reverse significance between these variables, so we should pay attention to the family context in which these mothers are inserted.

Breastfeeding processes and, moreover, the donation of milk require skills, learning and specific support from the family members and especially health professionals and, in this context, the BSES-SF, as well as other health instruments can be used to determine possible donors, identifying and evaluating high self-efficacy in nursing.

Professionals can organize, from the scores found, their customer service, becoming the directive to the real needs and potential of this population. The quality of the guidelines should be prioritized, with the advent of technologies (soft or hard), according to the specific demand (adolescents, families in social risk, vulnerable environments, for example). Professional work should address the potential and the previous knowledge of women and their families, to the empowerment and strengthening their skills so that the impacts on breastfeeding and donation processes are positive.

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Correspondence

Lorena Sousa Soares
Universidade Federal do Piauí - Campus
Ministro Reis Velloso
Avenida São Sebastião, 2918
Anexo do Curso de Medicina
CEP 64049-550– Parnaíba (PI), Brasil

English/Portuguese

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