



RESEARCH ARTICLE

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MATERNAL KNOWLEDGE ABOUT BREASTFEEDING PROTECTIVE FACTOR TO BREAST CANCER

¹Débora Priscila Costa Freire; ²Poliana Pereira Costa Rabêlo; ³Jaiza Sousa Penha; ³Pablo Nascimento Cruz; ⁴Waleska Lima Alves Simas; ^{5*}Cindy Rebouças Palmeira; ⁶Rita Rozileide Nascimento Pereira and ⁷Isaura Leticia Tavares Palmeira Rolim

¹Nursing Professor – State University of Maranhão Bacabal, Maranhão, Brazil

²PhD in Public Health Nursing – University of São Paulo, São Paulo, Brazil. Professor at the Nursing Department – Federal University of Maranhão, Maranhão, Brazil

³Nurse. Student of Post-graduation in Women's Health – Federal University Hospital of Maranhão, Maranhão, Brazil

⁴Nurse. Student of Post-graduation in Women's Health and Mental Health – Federal University Hospital of Maranhão, Maranhão, Brazil

⁵Student of the Professional Master's Program City Health – University of Fortaleza, Ceará, Brazil

⁶Student of the Nursing Master's Program – Federal University of Maranhão, Ceará, Brazil

⁷PhD in Public Health Nursing – Federal University of Ceará, Ceará, Brazil. Professor at the Nursing Department – Federal University of Maranhão, Maranhão, Brazil

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ABSTRACT

The mammary carcinoma is among the cancers with the highest incidence in the world and has been gradually increasing. Breastfeeding is among the modifiable risk factors of this pathology, thus, an allied protective factor. However, in Brazil, there is a shortage in the measures of orientation of women in relation to these factors. Therefore, this study aimed to verify whether women who breastfeed make use of this practice aware of the protective factor for breast cancer. In this way, a descriptive study with transversal and quantitative approach was developed. The sample consisted of 91 mothers of exclusive breastfeeding, in a capital of Northeastern Brazil, during the period of September and November 2016. After applying a structured form, the data were processed and analyzed. The most relevant results indicated that the majority of the sample has knowledge about breastfeeding as a protective factor against breast cancer, but only a minority lists this factor as important. Despite the large proportion of women aware about the benefits of breastfeeding, it is ideal to work better this knowledge in prenatal visits and by a multidisciplinary professional framework.

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INTRODUCTION

The cancer is a chronic disease, characterized by disorganized cell growth, which results from changes in the genetic code. From 5% to 10% of the neoplasms directly result from the inheritance of genes related to cancer, but a large part involves damages to the genetic material of physical, chemical or biological origin that accumulate throughout life (Inumaru *et al.*, 2011). As a direct result of major global transformations of recent decades, which changed the situation of peoples' health by accelerated urbanization, new ways of life and patterns of consumption, the incidence of cancer has been growing in

*Corresponding author: Cindy Rebouças Palmeira,
Student of the Professional Master's Program City Health – University of Fortaleza, Ceará, Brazil

Brazil and around the world in a rhythm that accompanies the aging population due to the increased life expectancy (Brazil, 2006). Among the most incident cancers in the world, the mammary carcinoma is the most frequently diagnosed in women. According to the World Health Organization, it is the fifth largest cause of cancer deaths in the world, being responsible for 508,000 deaths in 2011 around the world (World Health Organization, 2015). In Brazil, breast cancer is the leading cause of cancer death among women, being the second most common neoplasm, losing only for non-melanoma skin cancer. For the year 2016, the estimate was 57,960 new cases of breast cancer diagnosed (Brazil, 2011, 2015). Studies list risk factors considered non-modifiable that include: age greater than 50 years (the most recurrent factor

among the others), personal or family history of breast cancer, nulliparity, first pregnancy after 30 years, hormone replacement therapy and prolonged use of oral contraceptives, among others. In addition to these, there are those potentially modifiable factors that include: regular intake of alcoholic beverages, even in moderate amount (30g/day), absence or short periods of time of breastfeeding, sedentary lifestyle and obesity in post-menopausal women (Brazil, 2012; Batiston *et al.*, 2011; Malta *et al.*, 2011). The prevention of breast cancer includes measures for early detection and control of modifiable risk factors related to lifestyle habits. Moreover, knowledge of the existence of risk and protective factors associated with it can facilitate the early detection, contribute in the screening of the pathology, in addition to preventing its onset (World Health Organization, 2015; Borghesan, 2008; Batiston *et al.*, 2011; Malta *et al.*, 2011). Maintaining a healthy weight and the practice of regular exercise can reduce up to 28% the risk of breast cancer (Brazil, 2009). In addition to these, researches show that the decrease in the consumption of alcohol and exclusive breastfeeding for a minimum period of six months influence the reduction of the risk for breast cancer (Division of Cancer Prevention and Control, 2014; Brazil, 2010). For many years, the arguments in favor of breastfeeding were centered on the benefits brought by this practice to the child's health. Later, the benefits that breastfeeding brings to the woman began to receive more relevance and highlight. Some of these advantages are: prevention of episodes of bleeding in the postpartum period, stimulation of the uterus return to its normal size, strengthening the bond between mother and child, besides the protection factor against breast cancer, with the latter little known among women (Gradim *et al.*, 2011). Studies conducted between 2005 and 2015 show a significant reduction in the risk of breast cancer in women who are breastfeeding in relation to those who never breastfed. Furthermore, breastfeeding induces the maturation of the mammary glands, making the cells more "stable", less susceptible to the development of cancer (Gradim *et al.*, 2011; Tejedor *et al.*, 2015). However, it is a mistake to think that only the early and prolonged breastfeeding prevents the appearance of cancer. Other factors, such as preventive examinations and changes in life style, should be adopted. For this reason, for the prevention and early detection of breast cancer, health professionals need not only to act in its screening, but also consider its risk and protective factors, directing their clients (Tejedor *et al.*, 2015). Currently in Brazil, there seems to be a shortage in relation to measures of health prevention and promotion, especially regarding the orientation of women in relation to the factors that influence the protection against breast cancer. With this purpose, the aforementioned research questions the actions of guidance in relation to factors that protect against breast cancer, specifically in relation to breastfeeding, to women attending the Milk Bank of a university hospital in northeast Brazil. Thus, the development of this study aimed to verify whether women who breastfeed regard this act as a protective factor against breast cancer.

MATERIALS AND METHODS

This study has descriptive nature, with cross-sectional design and quantitative approach. The survey was conducted with puerperal women from 0 day to 6 months of exclusive breastfeeding met by the Human Milk Bank of a university hospital in northeast Brazil. The participants included: puerperal women aged greater than or equal to 18 full years

exclusively scheduled for childcare appointment present in their respective hour and day. There was exclusion of those who had no clinical conditions to answer the questionnaire and/or women belonging to indigenous groups (because they obey a specific flow chart along with the National Research Ethics Committee), and those who were present in the Human Milk Bank but for purposes other than child care. After sample calculation (with 95% confidence level and 5% error margin) defined by the monthly demand met by this sector, the sample was composed of 91 women, and the selection of the subjects was performed by convenience. The data were collected during the months of September and November 2016, by means of individual interviews conducted in the waiting room of the Human Milk Bank where mothers waited for childcare consultation. A structured form with 14 closed questions was used, applied and completed by the researchers. The same was composed of three parts, the first dealing with demographic data, the second contemplating obstetric data and the last part based on assertions used by Azevedo *et al.* (2010), who investigated the orientation of puerperal women from a conjunct lodging of a maternity in the state of Ceará, Brazil, on breastfeeding and the beneficial factors related to it. Data tabulation and processing used the Epi-Info 7 software. Tables and charts were constructed using Microsoft Office Excel. The study was permeated by ethical standards referred to in Resolution 466/12 of the National Health Council. The study complied with all recommendations and legal requirements laid down for the activities of researches involving human beings. All participants signed the Informed Consent Form.

RESULTS

After organizing the data and analyzing its consistency, the 91 participants in the study were portrayed according to socio-demographic conditions, showing that 54.94% were in the age range between 18 and 28 years. With regard to marital status, 62.64% of women were unmarried and of these, 64.91% lived in a stable union. Regarding schooling, the majority had at least secondary education 72.53%, moreover, 60.44% did not work, as shown in Table 1.

Table 1. Distribution of women met by the Human Milk Bank of the HUUFMA according to soci-demographic data. São Luís - MA, 2016

Variables	N	%
Age		
18-28 Years	50	54.94
29-39 Years	37	40.66
40 or more	4	4.40
TOTAL	91	100
Marital Status		
Unmarried	57	62.64
Married	31	34.06
Divorced	3	3.30
TOTAL	91	100
Stable Union		
Yes	37	64.91
No	20	35.09
TOTAL	57	100
Education		
Complete Elementary 1 / Incomplete Elementary 2	3	3.30
Complete Elementary 2 / Incomplete High School	14	15.38
Complete High School / Incomplete Higher Education	66	72.53
Complete Higher Education	8	8.79
TOTAL	91	100
Work		
Yes	36	39.56
No	55	60.44
TOTAL	91	100

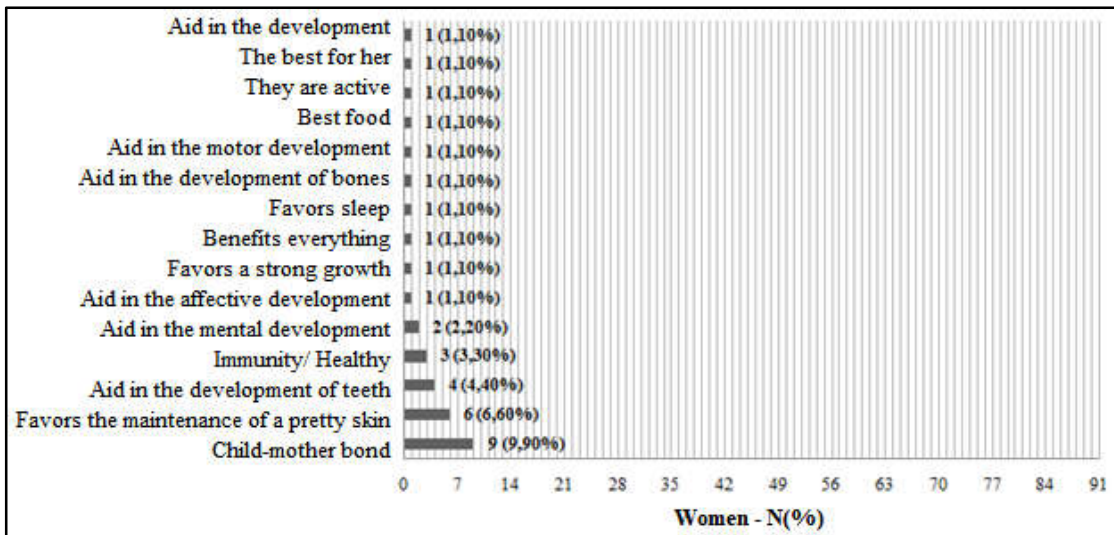


Chart 1. Other benefits of Breastfeeding for the Baby listed by the Mother

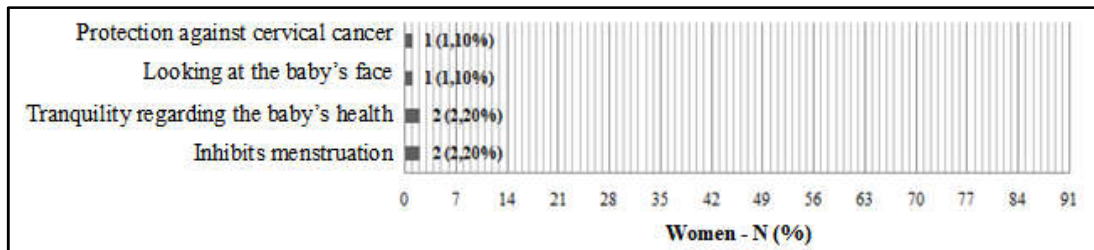


Chart 2. Other Benefits of Breastfeeding for the Mother Listed by Her

In relation to obstetric history, 47.25% were primigravidae and 52.75%, multigravidae. Among the whole sample, 21.98% had suffered at least one abortion. In relation to the number of children, 52.75% of the women had only one child. Regarding the type of delivery, there was a predominance of vaginal, in which 52.75% of women had only this type of delivery; however, the number of cesarean sections was still high (34.06%), not including in this percentage the number of women who had both types of deliveries, with 13.19%. All women participating in the study had hospital deliveries; however, 2.10% among all had home deliveries besides hospital ones. Regarding the last pregnancy, responsible for their care at the time of the survey, in accordance with the confidence interval, the majority (53.85%) underwent seven or more prenatal consultations, followed by 36.26% who performed between 4 and 6 consultations, and 4.40% who performed between 1 and 3 prenatal consultations. In this way, we can infer that the prenatal coverage recommended by the Ministry of Health has been sufficient for the majority of the population, because it recommends at least 6 prenatal consultations during the gestational period.

As for the guidance received about breastfeeding, most interviewees (97.80%) claimed to have obtained information about breastfeeding. In what refers to the location where they had received this orientation, 62.64% received at maternity units, representing a significant portion of the sample. Following these, 16.48% reported having received guidance still in prenatal and other 13.19% received the guidance only in the Human Milk Bank (HMB), where the care occurs for women already in the puerperal period, during the follow-up of their children or those with breastfeeding difficulties. When questioned about the responsible for this information, the majority (63.74%) pointed out the Nurse.

In addition to those who attributed this guidance to the Physician and Nurse, accounting for 15.38% of the sample. The nurse is the main professional responsible for information regarding breastfeeding received by mothers, representing more than 75% of the study sample. The medical professional was responsible for only 28.57% of the guidance received, including those guidelines received only by the Physician or those received in conjunction with the Nurse. As for the benefits of breastfeeding listed by participants, they were: concerning the benefits of breastfeeding for the child, 100% cited at least two factors, then ranked the factors listed in increasing order of importance: (1) Protection against diseases (75.82%); (2) Encouragement to nutrition and weight gain (15.39%); and (3) Favors the baby's growth (6.59%). As regards the benefits of breastfeeding for themselves, among mothers surveyed, 100% cited at least two factors, among these, taking into consideration the following classification in ascending order of importance, there are: (1) Increased mother-son bond (48.35%); (2) Protection against breast cancer (19.78%); (3) Return of the uterus to its normal size (9.89%); (4) Reduction of postpartum bleeding (7.69%); (5) Favors the return to the weight at the beginning of the pregnancy (5.49%); (6) Prevention of breast engorgement (4.40%); and (6) Practicality and economy (4.40%). In relation to other benefits listed by mothers, among the most cited benefits for the child (Chart 1), there are: Immunity (3.30% of women), help in mental development (2.20%), aid in the development of the teeth (4.40%), maintenance of a healthy skin (6.60%) and bond between mother-son (9.90%), considering that each woman interviewed could cite more than a factor as a benefit. In relation to other benefits cited by the puerperal women as advantages of breastfeeding for themselves (Chart 2), we have, within the most often cited: inhibits menstruation and tranquility concerning the baby's health, each one of these

regarded by 2.20% of women and “looking at the baby’s face” and “protection against cervical cancer”, each one of these considered by 1.10% of the surveyed women.

DISCUSSION

A significant portion of the sample (83.52%) recognized the breastfeeding as a protective factor against breast cancer. According to a study, the sociodemographic characteristics of the women can greatly influence the prenatal care and determine the level of knowledge about breastfeeding and its benefits for both the baby and the mother (Coutinho, 2014). For example, in developed countries, the breastfeeding period is considered to be greater due to facilitated access to information about the benefits of breastfeeding, on the other hand, in developing countries, women, in particular from least favored economic classes, have a lower level of instruction, thus, the beginning of prenatal care is late, resulting in lower rates of breastfeeding times, thus following in an unbalanced cycle that can generate, in the medium term, impact on the health of mother and child (Faleiros *et al.*, 2006). Researches show that a level of physiological and emotional maturity that understands women aged over 19 years and the level of education contribute to a better knowledge (Azevedo *et al.*, 2010; Coutinho, 2014; Silva *et al.*, 2009). In this way, the fact that the majority of women surveyed are between 18 and 28 years and completed secondary education contributed to a good result regarding the level of knowledge in relation to the benefits of breastfeeding in this study. Regarding marital status, the majority was in a stable union. According to studies, being married or living with a partner directly influences the acceptance and duration of breastfeeding, because the partner’s support exerts a positive influence on the act of breastfeeding (Azevedo *et al.*, 2010; Coutinho, 2014).

The literature states that factors such as tiredness, depression, aesthetics and return to work influence the maintenance of exclusive breastfeeding up to six months and this fact may interfere in the protection against breast cancer (Gradim *et al.*, 2011). Although the factor breastfeeding period is still much discussed in the literature, studies have proved that the longer the duration of lactation, the lower the rate of incidence of breast cancer, especially some types of breast cancer (Kotsopoulos *et al.*, 2012; Ani *et al.*, 2016). Another study even showed the association between breastfeeding and reduced risk of death in women already diagnosed with breast cancer (Löf-Johanson *et al.*, 2016). In this way, the woman in remunerated activity may introduce other foods into her baby’s diet before six months. In the present study, the majority of women surveyed (60.44%) did not work, which can promote the practice and maintenance of breastfeeding until six months of exclusive form and keep it up to two years, as recommended by the Ministry of Health so that the baby receives all immunological components of breast milk, as well as the protection to women regarding breast cancer increases (Azevedo *et al.*, 2010; Brasil, 2012b) As to obstetrical history, by the confidence interval, there was no statistical significance between primigravidae and multigravidae mothers, preventing affirming that the sample studied had previous contact, or not, with breastfeeding. However, the literature has no consensus about the influence of multiparity in the strengthening of breastfeeding (Coutinho, 2014). As for the number of prenatal consultations carried out in the last pregnancy, the majority of the puerperal women underwent 7 or more prenatal consultations, a number that matches the recommendation of

the Ministry of Health (Brasil, 2012b). This number matches the other studies that involved the evaluation of women’s knowledge about breastfeeding, in which the majority of the surveyed women attended at least 7 prenatal consultations, thus demonstrating that the prenatal assistance is reaching the goal of promoting an adequate monitoring during pregnancy (Azevedo *et al.*, 2010; Coutinho, 2014). The prenatal period is an excellent opportunity for pregnant women to receive information about breastfeeding. During this follow-up, they need to be informed about the main aspects of breastfeeding, such as the appropriate time of breastfeeding, as well as difficulties they may encounter during this process (Azevedo *et al.*, 2010).

According to a study conducted in 2010 involving 47 women-donors registered in the Human Milk Bank of a maternity in Maceió - AL, Brazil, whose main objective was to analyze the knowledge of these women about the benefits of breastfeeding received during the prenatal care, those mothers who during the prenatal care had received information about the benefits of breastfeeding demonstrated a better knowledge when compared to those who had not received such information (Coutinho, 2014). Another study showed that the number of prenatal consultations influence positively the level of knowledge in relation to breastfeeding and its benefits (Silva, 2009). In this way, we can see that it is indispensable to improve the quality of information provided to women in every phase of the pregnancy-puerperal cycle, but mainly in the prenatal care (Coutinho, 2014). In relation to the guidance on breastfeeding, almost all participants claimed to have received information about breastfeeding. These data coincide with the studies of Azevedo *et al.* (2010). Nevertheless, according to this study, the guidelines regarding breastfeeding were not given where the woman should receive them, because a significant portion of the sample (62.64%) had received this guidance already in the maternity leave only after the birth. These data were similar to the study carried out in Maceió - AL (Brazil), in which most of the women had attended prenatal care, which, however, was not the moment when these women had received guidance regarding breastfeeding (Coutinho, 2014). Azevedo *et al.* (2010) found the same problem in their study, in which, although most of the sample had attended at least 7 consultations, they had received guidelines only in the maternity. This alert that the prenatal care has left gaps in relation to the guidelines, including to avoid problems during the first few hours/days of breastfeeding that motivate the early weaning.

Promoting and encouraging breastfeeding depend on the commitment of health professionals responsible for the care of women in both prenatal as postnatal care. However, women should receive information especially during pregnancy, because, according to the study conducted by Coutinho (2014), women better assimilate the information transmitted to them during the prenatal period. In this study, the nurse instructed 63.64% of women surveyed. These data coincide with the study of Azevedo *et al.* (2010). This demonstrates the important contribution of nurses in health education, addressing the essential themes for encouraging breastfeeding. However, Azevedo *et al.* (2010) emphasizes the need for a multiprofessional work, in which each health professional is responsible for addressing the aspects of breastfeeding that most closely relate to his/her area of expertise, whether they be nutritionists, physicians, social workers, among others. With this, the women would benefit from an integral and complete

assistance both for her as for her child. Regarding the benefits of breastfeeding for the child listed by the mother, the protection against diseases was mentioned by all mothers and, in order of importance, this factor accounted for 75.82% of the most important benefits mentioned. This finding is consistent with other studies about the level of knowledge about the benefits of breastfeeding, in which most women had recognized the immunity as a benefit of breastfeeding for their children (Azevedo *et al.*, 2010; Silva *et al.*, 2009; Soares *et al.* 2016; Silva *et al.*, 2014). The level of knowledge of these women in relation to the benefits of breastfeeding for their children was good, when choosing at least two factors, such as the benefits of breastfeeding for the baby. These factors were also cited in other studies by the majority of the sample (Silva *et al.*, 2009; Morais *et al.*, 2010). In relation to the benefits of breastfeeding for the surveyed women, 97.80% stated the strengthening of the bond as a benefit of breastfeeding for themselves. When questioned about the level of importance of this factor, 48.35% of the sample cited this factor as the most important among all others. These data reveal the meaning assigned by women to breastfeeding, because Marques and Pereira (2010), in their study, corroborated this finding, in which a large proportion of women had considered breastfeeding as an uplifting process of their own mother-child relationship. A fact that, according to them, may contribute to the practice of breastfeeding.

Concerning the main objective of this study, 83.52% of the sample claimed to have knowledge that breastfeeding protects against breast cancer. When questioned about the level of importance of this factor, 19.78% of women said that breastfeeding as a protective factor for breast cancer was the most important factor, losing only to the bond between mother and son. This coincides with the study carried out in Maceió - AL (Brazil), in which the majority of the sample surveyed (68%) had this knowledge (Coutinho, 2014). However, in the research of Grandim *et al.* (2011), only 38% of the sample claimed to have this knowledge. This difference may refer to the year of development of these studies, revealing that women have gained greater number of information on this subject over the years. The benefits of breastfeeding for maternal health in the long term, such as reduced risk of breast cancer, are well documented in the literature (Ani *et al.*, 2016; Jamila *et al.*, 2016; Giudici *et al.*, 2016; Lambertini *et al.*, 2016; Tamimi *et al.*, 2016). In the present study, the percentage of mothers who had this knowledge about breastfeeding as a protective factor for breast cancer was relevant, with 83.52%. One of the limitations of the present study was the choice of location for data collection, and sometimes, the woman's need to care for her child during the same. This limitation may negatively influence in the memory of the guidelines and place where she had received them.

Conclusion

The study showed that women have knowledge about the benefits that breastfeeding brings to the mother-child dyad and for the health of both. It also revealed that the majority of women received information about breastfeeding in the maternity after the birth, and are aware that breastfeeding protects against breast cancer, but this factor does not appear as important. There should be a better utilization of prenatal care of pregnant women, recommending topics to be addressed in each consultation, primarily in relation to breastfeeding. Although the Nurse has been the main responsible for information about breastfeeding according to the mothers in

this study, the multidisciplinary work integrally covers the individual and consequently achieves the best results. Thus, it is necessary to sensitize the team of professionals involved in the pre and post-natal to work together.

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