Objective: to understand how mothers perceive the breastfeeding process for their premature infants hospitalized in the Neonatal Intensive Care Unit. Method: descriptive-exploratory study of a qualitative approach, carried out with eight mothers in a city in the interior of Ceará state, Brazil. The data were collected through a semistructured interview between August and September 2015. Content analysis of the speeches was performed. Results: it was evidenced the perception of breastfeeding as important for the child with respect to growth, development and hospital recovery. Difficulties reported were related to milk quantity and ejection. The milking of the mothers was perceived as a technique not similar to breastfeeding and difficulty-generator. Conclusion: breastfeeding was perceived by the mothers of hospitalized preterm infants as an achievement reached by the joint efforts of the mother-child binomial.


Objetivo: compreender como as mães percebem o processo de amamentação de seu filho prematuro hospitalizado na Unidade de Terapia Intensiva Neonatal. Método: estudo descritivo-exploratório de abordagem qualitativa, realizado com oito mães em uma cidade do interior do Ceará, Brasil. Os dados foram coletados por meio de entrevista semiestruturada entre agosto e setembro de 2015. Realizou-se a análise de conteúdo dos falas. Resultados: evidenciou-se a percepção da amamentação como importante para a criança no que diz respeito ao crescimento, desenvolvimento e recuperação hospitalar. Dificuldades relacionaram-se à quantidade e ejeção do leite. A realização da ordenha para as mães foi percebida como técnica não similar ao aleitar e geradora de dificuldades. Conclusão: a amamentação ao seio foi percebida pelas mães de prematuros hospitalizados como uma conquista alcançada pelos esforços conjuntos do binômio mãe-filho.

Objetivo: comprender cómo las madres perciben el proceso de lactancia de su hijo prematuro hospitalizado en la Unidad de Terapia Intensiva Neonatal. Método: estudio descriptivo-exploratorio de enfoque cualitativo, realizado con ocho madres en una ciudad del interior de Ceará, Brasil. Los datos fueron recogidos por medio de entrevista semi-estructurada entre agosto y septiembre de 2015. Se realizó el análisis de contenido de los discursos. Resultados: se evidenció la percepción de la lactancia como importante para el niño sobre el crecimiento, desarrollo y recuperación hospitalaria. Dificultades se relacionaron a la cantidad y saque de la leche. La realización de la ordeña para las madres fue percibida como técnica no similar al dar de mamar y generadora de dificultades. Conclusión: la lactancia al seno fue percibida por las madres de prematuros hospitalizados como una conquista alcanzada por los esfuerzos conjuntos del binomio madre-hijo.


Introduction

Breastfeeding is the safest and most appropriate form of nutrition in early childhood as it offers nutritional, immunological, psychological and economic benefits and is associated with a decreased risk of developing disease and infant morbidity and mortality. Especially for preterm newborns, breast milk is an ideal substance because it provides better digestion, immunological components and nutritional elements in the quantities needed for the baby’s recovery and development.

The World Health Organization (WHO) places Brazil as the tenth country with the highest number of preterm births with an estimated prevalence of 9.2%. According to the Information System on Live Births (SINASC), between 2000 and 2010, the prevalence of preterm births in the country increased from 6.8% to 7.1%. The premature neonate often needs care from the neonatal intensive care unit (NICU), which takes the baby to the context of hospital admission, a scenario responsible for the separation of the mother-child binomial, sometimes for long periods of time. In this perspective, the breastfeeding process is perceived as beneficial, since it also enables the transmission of affective bonds and the formation of a link between mother and child.

Despite all the benefits, it is observed that exclusive breastfeeding is hardly offered during hospital admission of the newborn. Also, when discussing breastfeeding in the context of prematurity, some difficulties, both biological and psychosocial, may be encountered. Premature infants have an anatomical and physiological immaturity that provides ineffective control of sucking, swallowing and breathing, which leads them to use orogastric tubes and makes breastfeeding impossible. It is during this period that mothers experience the practice of milking, an action that requires commitment and training so that breast milk is offered to the newborn.

Despite the availability of modern equipment and qualified professionals, there have been difficulties in relation to breastfeeding of premature babies. Mothers often have problems in maintaining breastfeeding during the period of hospitalization in the NICU. Predominant factors for this difficulty are the special care given to the newborn and the lack of social support. Among the difficulties, we can mention the high frequency of early weaning and increased dependence on hospital milk banks. For example, a study conducted with 11 mothers and their respective preterm infants showed that all mothers received milk from the milk bank during the hospitalization period and only 18.1% mother were exclusively breastfeeding at the time of hospital discharge.

Specifically in prematurity, breastfeeding becomes a complex act, since it requires that the mother has a lot of dedication, added to the support and encouragement of relatives and competent health professionals. Getting to know how these mothers perceive the process of breastfeeding in the face of the prematurity of their children will make it possible to recognize factors that may interfere in a positive or negative
way with the act of breastfeeding. In view of the above, the objective of the present study was to understand how mothers perceive the breastfeeding process for their premature infants hospitalized in the NICU.

**Method**

This is a descriptive and exploratory study with a qualitative approach. The research was developed in a maternity hospital reference in neonatology and breastfeeding, in the municipality of Juazeiro do Norte, which is located in the south of the state of Ceará, Brazil. The participants of the study were 8 mothers who were present in the NICU and who met the following inclusion criteria: being with their premature newborn with less than 37 weeks admitted to the NICU and breastfeeding; and being present during the period of data collection, from August to September 2015. It was an exclusion criterion for the mother to be unable to interact through verbal communication.

A semi-structured interview was used as a data collection technique, based on the following guiding question: “How do you perceive the breastfeeding process of your premature child in a NICU?” The interview script also included the participants’ socioeconomic data. A MP3 Player recorder was used during the interview, which enabled recording for later transcription of the speeches.

Because it was a qualitative research, external validation and empirical saturation criteria were used. The first criterion aims to identify the number of participants from other qualitative studies previously developed in the same theme. For this study, we used the parameter of at least 5 and at most 12 mothers interviewed, as established in previous studies. The second criterion was based on theoretical saturation, that is, the criterion of empirical saturation of speeches, when there is no more inclusion of participants due to the repetition of the speeches. In accordance with these criteria, a number of eight participants were chosen for this research.

Participants were identified in the text by the letter M followed by a number, according to the sequence of interviews, as follows: M1, M2, M3, M4, M5, M6, M7 and M8. The data were interpreted through content analysis, which took place in three stages: pre-analysis, phase in which a floating reading of the interviews was carried out, in order to identify the keywords matching the objective of the study; deepening and exploration of the material, stage in which representative parts of the interviews were cut, classified and aggregated into empirical categories or themes; and treatment of results and interpretation, in which the information on the interviews was related to the scientific literature.

The present study complied with the guidelines and norms of Resolution n. 466/2012 of the National Health Council/Ministry of Health, which deals with research involving human beings. The project was approved by the Ethics and Research Committee, with Opinion number 1,179,550. All the mothers interviewed signed the Free and Informed Consent Form (FICF).

**Results**

The age of the 8 study participants ranged from 18 to 36 years. In relation to schooling, 5 had completed high school. As for marital status, all the 8 participants were married and 5 of them had only 1 child. Concerning the occupation, 4 mothers reported being housewives; the others were students, administrative assistant, farmer and factory worker. As for the monthly income, 5 mothers had monthly income of 1 to 3 minimum wages; the others reported income less than 1 minimum wage. Regarding race/color, 5 defined themselves as black, 2 as brown and 1 as white.

The analysis of the participants’ speeches allowed the identification of four categories that consolidate several aspects related to the way mothers of preterm and hospitalized infants perceive breastfeeding.
Perception of prematurity

This category covers the mothers’ understanding about the premature baby. In general, participants referred to the premature newborn as a child who needs more care and attention, who has small size and greater fragility.

It’s too small [laughs], I don’t know. We feel afraid to holding [holding] them because they were born too skinny [...] (M2).

Such a tiny thing, so cute. But it requires a lot of care. (M3).

I think we have to be even more careful than with a normal baby. Why they were born with a little more difficulty than a stable nine-month baby. (M4).

Other mothers referred to a premature baby as a child who was born prematurely and did not have enough time to fully develop.

It is a child who did not fully develop, was born before the given time. (M5).

Premature baby is a child born prematurely, who did not have time to form within the mother. (M7).

The participants’ speeches revealed that knowledge about prematurity is related to the characteristics presented by their children at birth. It is also emphasized that the nursing mothers recognized the immaturity of the baby’s physiological systems due to preterm birth.

Perception of maternal milk in prematurity

This category indicates what the mothers of preterm infants perceived about breast milk. The majority of interviewees did not recognize differences in their milk when compared to mothers who had a full-term child, as expressed by the participants’ statements:

I don’t think so. I think it’s the same thing. What one has, the other has: protein. (M4).

The milk? I think it’s the same thing. (M5).

I’m not sure, but I don’t think there’s a difference. (M6).

Other interviewees reported noticing differences in consistency and/or coloring of breast milk. These perceptions are grounded and influenced by the mother’s experience with other mothers who have full-term children, as evidenced by the following statements:

It’s different. Because it comes out thicker and in a color that is different from that of mothers that have non-premature babies. (M2).

My milk. I think it’s like it’s mixed with water. The milk of other mothers, I think it’s more concentrated, it’s very yellow. (M7).

I don’t know [...] it must be different [pause] I think it’s different, because it’s premature, right? (M8).

Understanding the mother’s perception about her milk is very important, since the findings of differences, whether positive or negative, can influence the decision regarding the realization of exclusive breastfeeding.

Perception of the importance of breastfeeding

All study participants pointed out in their answers that the act of breastfeeding is important for the child. This perception demonstrates knowledge about the nutritional aspects inherent in breast milk, as observed in the following reports:

I think it’s very important for the child [...] the baby recovers faster with breast milk. (M2).

I think it’s very important, right? Because [...] in addition to providing my milk, which is strong for the baby to be strengthened, it is a love, an increased bond that the mother establishes with the child and the child for the mother. (M4).

I understand that breastfeeding will help my daughter’s growth and development. Breast milk is very important because of the things it contains. Breastfeeding is crucial! (M5).

Everything she needs is basically in the milk. (M6).

I think that we have to breastfeed until six months, which is the time the child needs more breast milk. (M7).

Thus, it is evident that mothers know, even empirically, the importance of breastfeeding for the child, as they discussed some of the benefits of breastfeeding in disease prevention, better growth, development and mother-child bonding.
The deponents emphasized that, in prematurity, breast milk has a greater importance for the newborn in the face of their needs.

[..] it is even more important for the premature baby. Because it has everything in it. My milk is the most precious thing for him. (M3).

Breastfeeding is health for the child. Thus, when a child is born sick, the milk is as if it was a type of medicine, which cures the child faster. (M7).

Breast milk has been compared to a type of medicine because it can bring several advantages to the child's health, including a more adequate and effective recovery.

**Breastfeeding in prematurity**

For the mothers of this study, breastfeeding is represented by both the milking and the breastfeeding directly from the breast. However, the participants' statements evidenced an understanding of milking as an act that generates difficulties and negative feelings, while breastfeeding is perceived as an achievement reached by the joint efforts of the mother-child binomial. The following reports illustrate that:

*When I see that little thing, and I see I can breastfeed her... it's very good!* (M6).

*In first few days, my son did not catch it [the nipple]. Then, he began to be placed on the chest to stimulate the breast. Today he sucked, it was great.* (M5).

*I feed them every two hours. And if I need to, I spend the whole day here [hospital].* (M4).

The speeches show that positive sensations related to the ability to breastfeed are originated by both the previous experience of difficulties or impossibilities related to breastfeeding and by the recognition of the benefits of breast milk to the child. It also appears that, tied to the act of breastfeeding, the availability of being for subsequent periods in an environment different from its context of life, in this case the hospital institution, is embedded. This fact can reflect in the daily life of the woman who has other functions besides the maternal one. On the other hand, some participants pointed out to offer their milk to the child through milking, but not always understanding this process as an integral part of breastfeeding, as shown below:

*For now I'm not breastfeeding, I'm just milking [...] it's hard to take it because it comes out in little amount.* (M8).

*For me it's being weird. Because I have to milk, instead of breastfeeding [...] she does not take the nipple, she is very sleepy [...] as she is premature, she cannot get it [nipple].* (M7).

For the mothers of this study, milking was perceived as a technique not similar to that of breastfeeding and that caused difficulties, mainly due to the reduced amount of milk ejection during the procedure or to the negative feelings of estrangement towards the method. Thus, for the participants, the inability to breastfeed was perceived, in part, as a consequence of the limitations of the neonate due to prematurity.

*As my [son] is premature, he is not taking milk from the breast. He will first go through the probe [...] then he will go to the finger. If he picks the finger, in a week [...] he will go to the breast.* (M1).

This report makes it possible to understand that the process of initiating breastfeeding is not only perceived as an act in itself, but as a long way to go, permeated by a variety of sensations, sometimes negative, but always full of expectations of one day being able to go beyond milking and reaching feeding through the breast.

**Discussion**

Prematurity is defined as birth occurring before the 37th week of gestation 
. This concept is corroborated by the perceptions exposed by the participants, when associating prematurity with preterm birth. The study reports that mothers often see their preterm children as fragile, demanding more care and more susceptible to diseases . Some of these perceptions are associated with the characteristics of preterm infants, which have specific characteristics such as: small size, extremely thin, disproportionate head for the rest of the body, skin can appear pink, clear and shiny, and small blood vessels are visible.
Regarding the properties of breast milk, most of the interviewees reported the perception of equality between their milk and that of full term infants' mothers. This perception is justified by the fact that the scientifically proven differences in the milk of preterm infants' mothers are nutritionally imperceptible to the naked eye. The milk of premature infants' has some substances, such as proteins and lipids, which are in adequate quantities for the situation of the preterm newborn. Conceptions about the nutritional aspects of breast milk can be influenced by previous experiences of the woman herself or by experiences shared with other mothers. In this sense, other studies indicate that the negative perception of the substance of the milk for the woman, in the present day, is one of the main causes of the early supplementation, as alleged by mothers.

The watery appearance of breast milk in the first few minutes of milking, or even the colostrum, causes some mothers to consider that their milk is inferior, leading them to believe in the inability to meet the child's food demands. Although the present study evidences reports that go against this understanding, such perceptions have not been shown to cause early weaning.

There are numerous advantages of breastfeeding a premature infant. In addition to the nutritional benefits, we can mention immunological importance, gastrointestinal maturation, better neurobehavioral, cognitive and psychomotor performance, protection against infections, besides the lower incidence of readmissions. All participants, to a greater or lesser extent, emphasized breastfeeding as important for the development of premature infants. In the mothers' perception, the advantages of breastfeeding are often associated only with its nutritional aspects, whereas the benefits to health and recovery of women are underestimated or even unknown, as other studies have shown.

Mothers of preterm infants often attribute the greater importance of breast milk in the context of prematurity based on the knowledge of immunological properties, healthy development and formation of mother-child bond from breastfeeding, as well as the recognition of the greater need for care and attention in feeding the premature neonate. Similar to the results of this study, it should be noted that breast milk is seen by many mothers as a powerful food for preterm infants. Mothers attribute to it the healing power of prematurity. Thus, breast milk has, in the mothers' view, benefits for the premature neonate, which favors the adoption of breastfeeding promotion practices in a hospital environment.

Premature infants often do not breastfeed directly on the breast, as they often use feeding tubes. For this reason, it is necessary to extract the milk from the breast. In the hospital environment, this is performed through milking, a practice commonly performed in neonatal units in order to feed the newborn and stimulate milk production. However, for some mothers, no procedure aimed at maintaining lactation is as effective as breastfeeding directly on the breast.

However, the concept of breastfeeding refers to the child who feeds on breast milk, either directly into the breast or through milking. The practice of withdrawing breast milk from the mother is often due to some difficulties encountered at the onset of breastfeeding of premature infants, such as the fact that the baby does not suckle the breast, even when stimulated, making it difficult for milk to come out and, consequently, the production of breast milk. The mother of a premature infant hospitalized in a NICU is often advised to perform milking, either to nurse by means of probes or to store breast milk, which is used to feed the newborn when the mother is not present. For the development of milking, it is necessary that the mother is well guided by the professionals, who must teach and assist in the technique, instructing her to perform massages in the breast for better milk letdown. One of the greatest difficulties encountered by mothers regarding milking is the mistaken perception that repetitive milk withdrawal generates damage and pain to the mother. The practice of withdrawing breast milk from the mother is often due to some difficulties encountered at the onset of breastfeeding of premature infants, such as the fact that the baby does not suckle the breast, even when stimulated, making it difficult for milk to come out and, consequently, the production of breast milk.
breast, thus leading to a feeling of discouragement in the continuity of breastfeeding\(^5\).

In addition, for the woman, staying in the hospital for long periods, witnessing her child undergo different invasive treatments, being away from family members and living in a different environment with no privacy and different routines, makes the experience of breastfeeding a premature infant an even more complex and difficult process\(^6\).

On the other hand, breastfeeding directly at the breast also presents some barriers related to the physiological changes of prematurity, which may cause difficulties in the practice of breastfeeding, such as drowsiness of the baby at the start of the feeding, incomplete search reflex and ineffective sucking\(^23\). The present study identified the ineffective suction as a difficulty, due to the constant drowsiness of the neonate, reported by some mothers.

Other key issues for the breastfeeding at the breast to be effective are control of suction, swallowing, and respiration which, at prematurity, is indicative of prescribing and recommending breastfeeding\(^5\). It is thus perceived that the practice of breastfeeding a premature infant is often permeated by insecurities and lack of specific skills necessary for the care of preterm infants\(^22\).

Although for many mothers breastfeeding is an intensely desired act that generates feelings of achievement and pleasure, and mothers of hospitalized preterm infants express their desire and recognize the importance of breastfeeding, this process is permeated by difficulties that require professional support\(^22\). Therefore, it is fundamental that health professionals involve the family in this breastfeeding process, clarifying the importance and the need to breastfeed the premature infant, and building positive influences\(^19\).

In view of the findings, the performance of nursing professionals is seen as essential for the realization and continuity of breastfeeding of the premature infant, either by milking or directly to the breast, since nursing has indispensable presence in NICUs, acting intensely in the care for neonates and their families\(^22\).

The data generated by this study should be interpreted taking into account its limitations, namely, a study carried out with a sample group of exclusively breastfeeding women.

**Conclusion**

The present study was developed to understand how mothers perceive the breastfeeding process of their premature infants hospitalized in the Neonatal Intensive Care Unit. It enabled knowing that mothers attribute to breast milk the power of healthy development and faster recovery of the child, besides other advantages, such as the formation of an affective bond between mother and child. The practice of breastfeeding was carried out by all study participants, either by direct breastfeeding or by milking.

Participants’ statements revealed that breastfeeding, through milking, is an act that generates negative difficulties and feelings. In the context of prematurity and hospitalization, breastfeeding presents itself as a complex process that deserves attention both in nursing and in the network of social support to the nursing mother, so that it is possible to achieve breastfeeding and exclusive breastfeeding after hospital discharge. It is concluded that breastfeeding was perceived as an achievement reached by the joint efforts of the mother-child binomial.

The present study contributes in the scientific field by bringing data about the perception of mothers of premature infants about breastfeeding. This knowledge may subsidize nursing care to the mother and the neonate during hospitalization, in the search for comprehensive health care.

**Collaborations**

1. conception, design, data analysis and interpretation: Marcela Jucá Bezerra, Amanda Cordeiro de Oliveira Carvalho, Karla Jimena Araújo de Jesus Sampaio, Simone Soares Damasceno, Dayanne Rakelly de Oliveira, Maria de Fátima Esmeraldo Ramos de Figueiredo.
Perception of mothers of hospitalized premature newborns about breastfeeding

1. Damasceno, Dayanne Rakelly de Oliveira and Maria de Fátima Esmeraldo Ramos de Figueiredo;

2. drafting of the article, relevant critical review of the intellectual content: Marcela Jucá Bezerra, Amanda Cordeiro de Oliveira Carvalho, Karla Jimena Araújo de Jesus Sampaio, Simone Soares Damasceno, Dayanne Rakelly de Oliveira and Maria de Fátima Esmeraldo Ramos de Figueiredo;

3. final approval of the version to be published: Marcela Jucá Bezerra, Amanda Cordeiro de Oliveira Carvalho, Karla Jimena Araújo de Jesus Sampaio, Simone Soares Damasceno, Dayanne Rakelly de Oliveira and Maria de Fátima Esmeraldo Ramos de Figueiredo.

References


Received: July 18, 2016
Approved: May 8, 2017
Published: June 28, 2017