

## ICNP® terminology subset for care of women and children experiencing breastfeeding



*Subconjunto terminológico da CIPE® para assistência à mulher e à criança em processo de amamentação*

*Subconjunto terminológico de CIPE® para atención de mujer y niño en proceso de lactancia*

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### ABSTRACT

**Objective:** To describe the development of a terminology subset of the International Classification for Nursing Practice for care of women and children in process of breastfeeding.

**Method:** Methodological study developed in six stages according to the guidelines recommended by the International Council of Nurses.

**Results:** Seventy-four nursing diagnoses/outcomes and 213 nursing interventions were performed and classified according to the theoretical model Interactive Theory of Breastfeeding.

**Conclusion:** The subset is expected to safely and systematically steer nurses that work in this area, promoting the implementation of the nursing process and quality of care, focusing on women, children and families that are experiencing the breastfeeding process.

**Keywords:** Breastfeeding. Nursing diagnosis. Classification. Nursing process. Nursing theory. Terminology.

### RESUMO

**Objetivo:** Descrever a elaboração de um subconjunto terminológico da Classificação Internacional para a Prática de Enfermagem para assistência à mulher e à criança em processo de amamentação.

**Método:** Estudo metodológico desenvolvido em seis etapas seguindo as diretrizes recomendadas pelo Conselho Internacional de Enfermeiros.

**Resultados:** Foram elaborados 74 diagnósticos/resultados de enfermagem e 213 intervenções de enfermagem, classificados de acordo com o modelo teórico Teoria Interativa de Amamentação.

**Conclusão:** Acredita-se que o subconjunto poderá orientar de forma segura e sistemática os enfermeiros que trabalham na área materno-infantil, favorecendo a execução do processo de enfermagem e promovendo a qualidade da assistência centrada na mulher, na criança e na família que estão vivenciando o processo de amamentação.

**Palavras-chave:** Amamentação. Diagnóstico de enfermagem. Classificação. Processo de enfermagem. Teoria de enfermagem. Terminologia.

### RESUMEN

**Objetivo:** Describir el proceso de elaboración de un subconjunto terminológico de la Clasificación Internacional para la Práctica de Enfermería para atención de la mujer y el niño en proceso de lactancia.

**Método:** Estudio metodológico desarrollado en seis etapas siguiendo las directrices recomendadas por el Consejo Internacional de Enfermeras(os).

**Resultado:** Fueron elaborados 74 diagnósticos/resultados y 213 intervenciones de enfermería, clasificadas según el modelo teórico utilizado, la "Teoría Interactiva de Lactancia".

**Conclusión:** Se considera que el subconjunto podrá orientar de manera segura y sistemática a los enfermeros actuantes en el área materno-infantil, favoreciendo la ejecución del Proceso de Enfermería y promoviendo la calidad de la atención centrada en la mujer, el niño y la familia que están atravesando el proceso de lactancia.

**Palabras clave:** Lactancia Materna; Diagnóstico de Enfermería; Clasificación; Proceso de enfermería; Teoría de Enfermería; Terminología.

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## INTRODUCTION

Breastfeeding brings several advantages for children, women, families and society. For infants, the benefits occur in the nutritional, physiological, developmental, immunologic, emotional and cognitive states. During breastfeeding mother and child interact, which favors the strengthening of bonds that promote mutual learning and impacts affective, relationship, behavioral, motor, social and cognitive aspects<sup>(1-2)</sup>.

Although breastfeeding is a recurrent and widely researched process, it is necessary to improve the nursing knowledge regarding specialized terminologies and the nursing language related to this phenomenon. Up to this date, there is only one project registered at the International Council of Nurses (ICN) about the design of a terminology subset for breastfeeding based on the International Classification for Nursing Practice (ICNP®) under the responsibility of one of the authors of the present study.

The creation of specialized terminologies originates from a conceptual and theoretical framework. The present study uses the breastfeeding concept expressed as follows: "a process of dynamic interaction in which mother and child interact with each other and the environment to reach the benefits of human milk offered in the breasts to the child, being a unique experience in each event"<sup>(3)</sup>. This concept goes beyond the idea of nourishing a child with human milk, encompassing features of a complex and comprehensive phenomenon, with potential biological, psychological, cultural, social, economic and political influences.

Aligned to this concept, the Theory of Interactive Breastfeeding<sup>(3)</sup> aims to describe, explain, predict and prescribe the breastfeeding phenomenon, taking into account the factors that precede and influence it and those that result from this act; thus, it is suitable for the design of terminology catalogs about breastfeeding. This theory was developed deductively, based on Imogene King's Conceptual Model of Interactive Open Systems and literature evidence, and consists of 11 interrelated concepts: mother-child dynamic interaction, woman's biological conditions, child's biological conditions, woman's perception, child's perception, woman's body image, space for breastfeeding, mother's role, organizational systems for the protection, promotion and support of breastfeeding, family and social authority, and woman's decision making<sup>(3)</sup>.

According to the Interactive Theory of Breastfeeding, to achieve a successful breastfeeding experience it is necessary that mother and child present appropriate biological conditions, such as an adequate anatomy of the breasts,

milk production and anatomy and physiology of the child's stomatognathic system<sup>(3)</sup>. It is also understood that feeding the infant with the milk produced in her own body is part of the female nature and considered a divine gift, but also a duty or responsibility in the mother's role that surpasses the will to breastfeed<sup>(4-5)</sup>.

The first days are crucial to the success of breastfeeding, because they are a period of learning for the mother and the child and also the moment when difficulties associated with the activity emerge. At this time, health professionals, relatives and friends must encourage the mother. Therefore, promoting and supporting breastfeeding must be included among primary actions in health programs<sup>(6)</sup>.

It must be stressed that "theories designed in the nursing field explain the complexity of representative concepts about phenomena that define and limit their area of interest" and that they guide the execution of the nursing process "the methodological instrument through which these theoretical frameworks are applied in the professional practice"<sup>(7)</sup>.

The systems of standardized language to organize terms or expressions accepted by nurses to describe evaluations, interventions and results are paramount in the nursing process<sup>(8)</sup>. The International Classification for Nursing Practice is one of these systems and, to encourage its use in nursing recordings in electronic medical forms or in manual systems of information, ICN has been recommending the creation of ICNP® catalogs, including ICNP® terminology subsets, care plans, clinical protocols, guides for clinical practice and nursing minimum data sets<sup>(9)</sup>. By considering them as technological instruments to be used during the execution of the nursing process, ICN considers that the application of ICNP® catalogs and, by extension, ICNP® terminological subsets, facilitates clinical decision-making by nurses, offers support to the systematic documentation of care, fosters research and promotes the formulation of healthcare policies focused on qualifying professional practice<sup>(10)</sup>.

Regarding the design of ICNP® terminology subsets, ICN advocates that they may be directed to specific groups (individual, family and community), to priorities in the health area (specific health conditions, environments or care specialties), or to nursing phenomena<sup>(11)</sup>. Among the specialties recommended by ICN, a few stand out for the purposes of the present study, namely: women's health, obstetric nursing and family health nursing.

The first description of a method to develop ICNP® catalogs was issued by ICN in 2008 and has ten steps<sup>(10)</sup>. A paper describing the reduction of this number of steps to six was published in 2010, aligning them to the three components of the life cycle of the ICNP® terminology: research

and development, maintenance and operations, and dissemination and education<sup>(11)</sup>.

The present study is based on the ICN recommendation to design subsets of specialties and in the relevance of the use of nursing models and theories. Therefore, the objective of the study is to describe the development of an ICNP® terminology subset for care of women and children in process of breastfeeding.

## ■ METHODS

This was a methodological study<sup>(12)</sup> carried out in six steps: 1) identification of the public and health priorities; 2) collection of relevant terms and concepts for the health priorities; 3) mapping of the concepts identified with ICNP®; 4) creation of new concepts or adaptation of existing ones to make them clearer; 5) conclusion of the catalog; and 6) promotion of the material<sup>(11)</sup>.

To execute the second step, a literature survey was performed in the databases Latin America and Caribbean Center on Health Sciences Information (LILACS) and Medical Literature Analysis and Retrieval System Online (MEDLINE) in May 2015, with the Virtual Health Library descriptors (DeCS) “breast feeding” and “mother-child relations” in English, Portuguese and Spanish. The guiding question was “What are the conditions that influence breastfeeding?”. The inclusion criteria were: original papers, published between 2010 and 2014, in English, Portuguese or Spanish, presenting an abstract and approaching the breastfeeding process. The period of five years was chosen because of the need to include papers that show recent findings about the subject.

The exclusion criteria were: reflection studies, reviews, updates, case reports, letters to journal editors, editorials, theses and dissertations. Two authors conducted the survey independently. The studies that were not available in the mentioned databases were obtained in the full text format at CAPES' *Portal de Periódicos* (Portal of Journals, in English). Papers were selected based on analysis of the titles, abstracts and main texts of the publications.

The number of selected papers was 251 for MEDLINE and 28 for LILACS; after applying the criteria and evaluating the abstracts, 68 studies were chosen for thorough reading, among which 52 were considered suitable for being included in the present study. The papers were read exhaustively so that the text could be deeply explored. The excerpts that referred to relevant clinical terms about breastfeeding were highlighted.

Subsequently, a manual mapping was performed with ICNP® axes to identify the terms related to the breastfeed-

ing process; last, the diagnoses/outcomes and interventions were created according to the ICN guidelines and the norm ISO 18.104:2014 (Informatics in health care: category structures to represent nursing diagnoses and actions in terminological systems<sup>(10,13-14)</sup>).

In the conclusion step, the list of nursing diagnoses/results and interventions was organized according to the concepts of the Interactive Theory of Breastfeeding, because it is understood that the theoretical framework is part of the documentation of important information for nurses, together with the subset organization and presentation.

Taking into account the nature of methodological research and the absence of human beings in the study, it was not necessary to submit the project to approval by the institution's research ethics committee.

## ■ RESULTS

The terminology subset described in the present study identifies as the public the pair mother-child that is experiencing breastfeeding and its families; the health priorities were established as maternal and obstetric nursing and women's health. In the second step, a literature survey was carried out to identify phenomena and concepts relevant to breastfeeding and that were crucial to the design of the subset. Some of them were: exclusive breastfeeding, predominant breastfeeding, complementary feeding, breastfeeding, bottle feeding, lactation, mother-child position, suction, rooting reflex, attachment, myths, beliefs, positive and negative feelings, pain, fissure, engorgement, trans-lactation, infections, flaccid breasts, mother's responsibility and duty, privacy, embarrassment, shame, knowledge, advantages, decision, mother-child bond, choice, family and professional support, campaign, incentive and child feeding groups.

These concepts were correlated to those derived from the Interactive Theory of Breastfeeding: mother-child dynamic interaction, woman's biological conditions, child's biological conditions, woman's perception, child's perception, woman's body image, space for breastfeeding, mother's role, organizational systems for the protection, promotion and support of breastfeeding, family and social authority, and woman's decision making. The two procedures in the second step allowed that all the concepts of the grounding theory were used as organizational categories for nursing results and diagnoses related to breastfeeding.

The third step of the subset design consisted of the mapping of the identified concepts based on ICNP® by selecting terms from the ICNP® 7-Axis Model issued in 2015<sup>(14)</sup> that were semantically related to the concepts of

the Interactive Theory of Breastfeeding. In this process, 23 terms from the axis "Focus" and ten from the axis "Judgement" were identified and six combined diagnoses were considered relevant to nursing care when it comes to the mother-child pair in the breastfeeding phenomenon.

In the fourth step, the creation of the existing concepts considered not only the ideas from the Interactive Theory of Breastfeeding, but also the whole theoretical framework, because it is understood that different concepts relate in a dynamic process. Therefore, the diagnoses/results and interventions should be organized according to the

structure of the nursing theory, not just the empirical basis of breastfeeding.

In the ending step, 74 nursing diagnoses/results were stated, ten of which are available at the 2015 version of ICNP®. For this set of information, 213 nursing interventions were outlined.

The nursing diagnoses, outcomes and interventions conceptually aligned to the ideas proposed in the Interactive Theory of Breastfeeding were organized in alphabetical order following the ICN guidelines for the presentation of ICNP® subsets<sup>(10)</sup>. This list is shown in Chart 1.

Nursing diagnoses/results	Nursing interventions
<b>Theory concept – Mother-child dynamic interaction</b>	
Effective breastfeeding; Effective exclusive breastfeeding; Impaired breastfeeding; Impaired exclusive breastfeeding; Improved breastfeeding; Improved exclusive breastfeeding; Interrupted breastfeeding; Interrupted exclusive breastfeeding; Risk of impaired exclusive breastfeeding; Risk of interrupted exclusive breastfeeding;	Demonstrating how to massage the breasts; Demonstrating the manual breast milking technique; Encouraging breastfeeding in the first half hour after birth; Encouraging exclusive breastfeeding until the baby is six months old; Encouraging on-demand breastfeeding; Encouraging the mother to massage the breasts before breastfeeding; Evaluating breastfeeding; Evaluating breast emptying; Evaluating mother-child interaction; Evaluating the mother-child position during breastfeeding; Evaluating the mother during the execution of manual milking; Evaluating the suction reflex of the newborn; Examining the mother's breasts; Executing manual milking whenever necessary; Massaging areolas before breastfeeding; Reinforcing the different positions for breastfeeding; Reinforcing the importance of breast attachment and correct position of the newborn; Reinforcing the breast exchange in alternating nursing sessions; Reinforcing the advantages of breastfeeding; Reinforcing the care with breasts and nipples; Reinforcing the correct technique to breastfeed; Showing the mother different positions to breastfeed; Stimulating the milk ejection reflex before beginning breastfeeding; Supervising the mother while she executes the manual breast milking; Supervising the mother while she executes the breast massage; Supervising the position of the mother and the newborn during breastfeeding; Supervising the suction reflex of the newborn; Teaching about the benefits of breastfeeding; Teaching about the importance of offering alternating breasts in consecutive nursing sessions; Teaching the mother to open the newborn's mouth wide before breastfeeding; Teaching the mother to hold a large breast during breastfeeding; Teaching how to attach and remove the newborn to breastfeed;

	<p>Teaching about beginning the next nursing session with the breast used in the last session;</p> <p>Teaching about the importance of the frequent use of double strap bras to sustain the breasts and keep them tight;</p>
<b>Theory concept – Woman’s perception of breastfeeding</b>	
<p>Adequate ability to breastfeed;</p> <p>Appropriate belief about breastfeeding;</p> <p>Appropriate knowledge of breastfeeding;</p> <p>Impaired perception about breastfeeding;</p> <p>Inappropriate belief about breastfeeding;</p> <p>Inadequate ability to breastfeed;</p> <p>Lack of knowledge of breastfeeding;</p> <p>Partial knowledge of breastfeeding;</p> <p>Positive perception about breastfeeding;</p> <p>Risk of impaired perception about breastfeeding;</p> <p>Risk of inadequate ability to breastfeed;</p>	<p>Developing educational activities about breastfeeding;</p> <p>Evaluating capacity to breastfeed;</p> <p>Evaluating expectation about breastfeeding;</p> <p>Evaluating knowledge about breastfeeding;</p> <p>Evaluating perception about breastfeeding;</p> <p>Teaching about storage of human milk;</p> <p>Identifying cultural practices that may influence breastfeeding positive/negatively;</p> <p>Identifying difficulties in the breastfeeding capacity;</p> <p>Identifying emotions that may influence breastfeeding negatively;</p> <p>Offering written material about breastfeeding;</p> <p>Referring the parents to classes or support groups about breastfeeding;</p> <p>Reinforcing the orientations about breastfeeding;</p> <p>Reinforcing the positive cultural practices related to breastfeeding;</p> <p>Showing the manual breast milking technique;</p> <p>Showing the mother different positions to breastfeed;</p> <p>Supervising the mother’s capacity to breastfeed;</p> <p>Supervising the mother’s capacity to massage the breasts;</p> <p>Supervising the mother’s capacity to milk the breasts;</p>
<b>Theory concept – Child’s perception of breastfeeding</b>	
<p>Impaired perception about breastfeeding;</p> <p>Positive perception about breastfeeding;</p>	<p>Evaluating the newborn’s behavior during breastfeeding;</p> <p>Evaluating the newborn’s incapacity to attach to the areola-nipple region;</p> <p>Evaluating the newborn’s position during breastfeeding;</p> <p>Evaluating the newborn’s reflexes during breastfeeding;</p> <p>Evaluating whether the newborn arches the body during breastfeeding;</p> <p>Evaluating whether the newborn cries when placed near the breasts;</p> <p>Evaluating whether the newborn is calm during breastfeeding;</p> <p>Evaluating whether the newborn’s mouth is in the correct position;</p> <p>Identifying anomalies in the newborn;</p> <p>Identifying signs of irritability in the newborn;</p> <p>Reinforcing the importance of the mother to be calm during breastfeeding;</p> <p>Supervising the newborn’s behavior during breastfeeding;</p>
<b>Theory concept – Woman’s biological conditions</b>	
<p>Absent lactation;</p> <p>Adequate lactation;</p> <p>Breast engorgement;</p> <p>Breast infection;</p> <p>Candidiasis in the breasts;</p> <p>Decreased lactation;</p> <p>Exacerbated lactation;</p> <p>Improved breast engorgement;</p> <p>Improved breast infection;</p>	<p>Administering prescribed medicines;</p> <p>Applying a cold compress under the supervision of a healthcare professional;</p> <p>Applying a hot compress under supervision of a healthcare professional if necessary;</p> <p>Cleaning the newborn’s mouth after breastfeeding;</p> <p>Determining characteristics of the nipple fissure;</p> <p>Determining severity of the breast engorgement;</p> <p>Determining severity of the breast infection;</p> <p>Encouraging breastfeeding with the affected breast;</p> <p>Encouraging exclusive breastfeeding until the baby is six months old;</p>

<p>Improved candidiasis in the breasts;  Improved nipple fissure;  Improved pain in the breasts;  Nipple fissure;  Pain in the breasts;  Risk of breast engorgement;  Risk of breast infection;  Risk of candidiasis in the breasts;  Risk of decreased lactation;  Risk of exacerbated lactation;  Risk of nipple fissure;  Risk of pain in the breasts;</p>	<p>Encouraging frequent rest periods for the mother;  Encouraging the mother not to stop breastfeeding;  Encouraging the mother to breastfeed frequently;  Encouraging the mother to expose the nipples to the sun;  Encouraging the mother to fully emptying the breasts;  Encouraging the mother to massage her breasts before breastfeeding;  Encouraging the mother to massage the breasts;  Encouraging the mother to offer the newborn the affected breast;  Encouraging the mother to perform massage and milking;  Evaluating lactation;  Evaluating pain after administration of medication;  Evaluating signs and symptoms of breast infection;  Evaluating skin integrity;  Evaluating the emptying of the breasts;  Evaluating the mother's breasts and nipples daily;  Evaluating the place where the surgical drain was inserted;  Evaluating the suction reflex of the newborn;  Evaluating type and place of breast engorgement;  Examining the newborn's oropharynx;  Executing the milk supplementing technique by sticking a urethral catheter to a finger and introducing them in the newborn's mouth (finger feeding);  Executing the milk supplementing technique through urethral catheter during breastfeeding (translactation);  Guiding the mother to enroll as a milk donor in case of breasts full of milk;  Informing about the proper way to take the medicines to treat the infection;  Informing about the types of medicines to increase milk production and their use;  Informing the mother about the importance to avoid the ingestion of alcohol during lactation;  Informing the mother about the importance to avoid the use of tobacco during lactation;  Interrupting breastfeeding if there is an abscess in the areola or if the baby regurgitates pus;  Massaging the breasts whenever necessary;  Milking the breasts whenever necessary;  Paying attention to nonverbal indicators of discomfort;  Referring the mother to a specialized unit if infection symptoms do not recede;  Reinforcing orientations about the factors that favor or hinder milk production;  Reinforcing the care with breasts and nipples;  Reinforcing the correct technique to breastfeed;  Reinforcing the importance of fully emptying the breasts;  Reinforcing the importance of medication and its use;  Reinforcing the importance of milking the breasts;  Reinforcing the importance of the correct attachment by the newborn;  Showing the mother how to massage the breasts;  Spreading human milk on the nipples after breastfeeding;  Supervising breast massage;  Supervising the mother during the execution of the milk supplementing technique by sticking a urethral catheter to a finger and introducing them in the newborn's mouth (finger feeding);</p>
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	<p>Supervising the mother during the execution of the milk supplementing technique through urethral catheter during breastfeeding (translactation);                  Supervising the mother in breast milking;                  Supervising the mother in the use of medications;                  Supervising the newborn's suction reflex;                  Teaching about the cleaning of the nipples after breastfeeding in case of infection;                  Teaching about the factors that favor or hinder milk production;                  Teaching about the importance of offering alternating breasts in alternating nursing sessions;                  Teaching about the importance of the correct attachment of the child during breastfeeding;                  Teaching about the ingestion of water;                  Teaching about the milk supplementing technique by sticking a urethral catheter to a finger and introducing them in the newborn's mouth (finger feeding);                  Teaching about the milk supplementing technique through urethral catheter during breastfeeding (translactation);                  Teaching about the use of medicines;                  Teaching nonpharmacological methods of pain relief;                  Teaching the mother about the importance of donating milk;                  Teaching the mother about the importance of exchanging breasts;                  Teaching the mother about the keeping of lactation;                  Teaching the mother about the possible causes of pain;                  Teaching the mother how to milk;                  Teaching the mother to keep an appropriate diet;                  Teaching the mother to open the newborn's mouth wide before breastfeeding;                  Teaching the mother to perform milking and massage;                  Teaching to avoid the use of breast pads;                  Telling the mother not to interrupt breastfeeding;</p>
<b>Theory concept – Child's biological conditions</b>	
<p>Effective sucking;                  Effective sucking reflex;                  Impaired sucking;                  Impaired sucking reflex;                  Risk of impaired sucking;                  Risk of impaired sucking reflex;</p>	<p>Checking whether the newborn's mouth is in the right position;                  Evaluating breast emptying;                  Evaluating breastfeeding;                  Evaluating mother-child position during breastfeeding;                  Evaluating the newborn's irritability reaction;                  Evaluating the newborn's psychomotor development;                  Evaluating the newborn's rooting reflex;                  Evaluating the newborn's sucking;                  Evaluating the newborn's sucking reflex;                  Evaluating the newborn's swallowing pattern;                  Evaluating the newborn's tongue tonus;                  Examining the breasts and nipples after breastfeeding;                  Explaining mother-child positions for breastfeeding;                  Massaging the newborn's face softly to stimulate the suction reflex;                  Monitoring the newborn's suction capacity;                  Monitoring the newborn's suction reflex;                  Monitoring the newborn's weight;                  Stimulating suction in the newborn;                  Supervising the mother-child positions during breastfeeding;                  Supervising the newborn's suction reflex;</p>

	<p>Teaching about the appropriate technique to interrupt the newborn's suction;  Teaching about the importance to avoid the use of pacifiers, bottles and bottle nipples;  Teaching the mother to monitor the newborn's suction;  Teaching the mother to open the newborn's mouth wide to breastfeed;  Teaching the parents to recognize signs of hunger and satiety in the newborn;  Watching the newborn close to the breasts to determine the correct position, the audible swallowing and the suction/swallowing pattern;</p>
<b>Theory concept – Woman's body image</b>	
<p>Negative body image;  Positive body image;  Risk of negative body image;</p>	<p>Encouraging the mother to express her feelings;  Encouraging the expression of dissatisfaction about the body image;  Identifying the factors that interfere with body image;  Teaching about the physiological changes caused by pregnancy;  Teaching about the possible changes in sexual response;  Teaching the mother to notice the need to take care of herself;</p>
<b>Theory concept – Space for breastfeeding</b>	
<p>Adequate privacy to breastfeed;  Lack of privacy to breastfeed;  Risk of lack of privacy to breastfeed;</p>	<p>Adjusting the physical space for the mother's and child's needs;  Evaluating lighting, noise, comfort and privacy in the physical space;  Evaluating the mother's perception about the space for breastfeeding;  Evaluating the physical space for the mother's and child's needs;  Explaining to the family the need to respect privacy during breastfeeding;  Identifying the mother's feelings related to breastfeeding in public;  Promoting a safe, comfortable and private environment for breastfeeding;  Reinforcing the need of privacy for breastfeeding to the family;  Reinforcing the need of privacy for breastfeeding to the healthcare team;  Setting a calm environment for breastfeeding;</p>
<b>Theory concept – Mother's role</b>	
<p>Effective mother's role;  Impaired mother's role;  Risk of impaired mother's role;</p>	<p>Encouraging the mother to perform care procedures with the newborn;  Encouraging the mother to talk about her feelings and concerns;  Encouraging the mother to talk to and touch the newborn during breastfeeding;  Evaluating the capacity to play the mother's role;  Evaluating the interaction between mother and newborn;  Learning the mother's perceptions and beliefs about her role in the family;  Offering the mother opportunities to express her doubts about her abilities as a mother;  Preparing the woman to play the role of a mother;  Showing the care procedures to be applied to the newborn;</p>
<b>Theory concept - Organizational systems for the protection, promotion and support of breastfeeding</b>	
<p>Adequate family support for breastfeeding;  Adequate social support for breastfeeding;  Inadequate family support for breastfeeding;  Inadequate social support for breastfeeding;  Risk of inadequate family support for breastfeeding;</p>	<p>Developing educational actions to encourage breastfeeding;  Encouraging the family and friends to support the mother to breastfeed;  Explaining to the family and friends their importance in supporting breastfeeding;  Identifying family and social supporting agents for breastfeeding;  Motivating the family and friends to support the mother to breastfeed;  Supporting the mother to breastfeed;</p>



Risk of inadequate social support for breastfeeding;	
<b>Theory concept - Family and social authority</b>	
Conflicting attitude towards breastfeeding; Positive attitude towards breastfeeding; Risk of conflicting attitude towards breastfeeding;	Adjusting conflicting issues, respecting ethical aspects; Advising the family to support the mother to breastfeed; Advising the family to understand the mother's behaviors during breastfeeding; Encouraging the family to support the mother to breastfeed; Evaluating the breastfeeding history in the family; Evaluating the causes of conflicting attitudes towards breastfeeding; Evaluating the understanding/attitude of the family about breastfeeding; Explaining the importance of breastfeeding; Helping the mother and family to understand the importance to talk about the mother's feelings about breastfeeding; Identifying children feeding practices by the family; Identifying conflicting attitudes in the family towards breastfeeding;
<b>Theory concept – Woman's decision making</b>	
Decision-making impaired by breastfeeding; Decision-making made efficient by breastfeeding; Risk of impaired decision-making by breastfeeding.	Advising the family to understand the mother's behavior during breastfeeding; Encouraging the mother to express her feelings and anguish; Encouraging the mother to make decisions about her care and the newborn's; Encouraging the mother's self-confidence; Identifying cultural factors that influence the decision to breastfeed; Identifying encouraging factors for the decision to breastfeed; Identifying the factors that influence the decision to breastfeed; Listening to the mother carefully and support her.

**Chart 1** – Distribution of nursing diagnoses, outcomes and interventions from ICNP® according to the concepts of the Interactive Theory of Breastfeeding

Source: Primo, 2017<sup>(9)</sup>.

The nursing diagnoses/results (ND/NR) and interventions (NI) created and distributed according to the concepts of the Interactive Theory of Breastfeeding were classified as follows: ten ND/NR and 34 NI related to the concept mother-child dynamic interaction; 12 ND/NR and 18 NI to the woman's perception; two ND/NR and 12 NI to the child's perception; 21 ND/NR and 74 NI to the woman's biological conditions; six ND/NR and 26 NI to the child's biological conditions; three ND/NR and six NI to the woman's body image; three ND/NR and nine NI to space for breastfeeding; three ND/NR and nine NI to mother's role; six ND/NR and six NI to organizational systems for the protection, promotion and support of breastfeeding; three ND/NR and 11 NI to family and social authority; and three ND/NR and eight NI to woman's decision making.

The sixth step, which corresponds to the promotion of the subset, is being accomplished with the publication of the present paper and will contribute to the ICN initiatives to disseminate ICNP® catalogs.

## ■ DISCUSSION

The steps of identification of public and health priority and selection of terms and concepts relevant to the chosen priority relate to research and development<sup>(10-11)</sup>. The extraction of concepts from ICNP® and the literature survey and the inclusion to the concepts of the Interactive Theory of Breastfeeding enabled the nursing diagnoses to be supported on clinical evidence and on a theoretical framework.

According to ICN, specific theoretical or conceptual models are necessary to create nursing diagnoses, results and interventions in terminology subsets<sup>(10)</sup>. Thus, researchers are free to choose guiding models and theories that they consider more aligned with their clinical practice and context. However, the information gathered in the present study reveals that a medium-range theory has a significant potential to help design terminology subsets, taking into account its relatively concrete nature.

The breastfeeding process can be affected by historic, social, cultural and emotional factors from the mother, the

child and the family. Consequently, many aspects influence the way women will feed their children and how long breastfeeding will be present<sup>(5,15-16)</sup>. A theoretical model can help organize the phenomena related to breastfeeding without producing reductionist and dichotomized views. In the concept “woman’s perception of breastfeeding”, their perception is influenced by maternal knowledge and experiences of relatives, friends and neighbors, which are transmitted as advices and examples, with favorable or contrary opinions about breastfeeding. These notions originated in common sense are permeated by myths and taboos, which may determine the continuity or not of breastfeeding<sup>(6,15,17-18)</sup>. Because of that, diagnoses associated with the capacity, knowledge and beliefs of women about breastfeeding were created.

The concepts “woman’s and child’s biological conditions” showed a few clinical situations that may interfere negatively in breastfeeding, such as traumas, pain, infections, engorgement, alterations in milk production and in the anatomy and physiology of the newborn’s stomatognathic system<sup>(1-5)</sup>.

The topic “body image” addresses the interference of aesthetic issues in the perception of the woman about breastfeeding. This item is important because when the mother believes that breastfeeding causes flaccid breasts and increased nipples, making them ugly, an unsuccessful breastfeeding process is more likely to happen<sup>(16,18)</sup>. In the concept “space for breastfeeding”, diagnoses related to privacy were performed. This took into consideration that some mothers see breastfeeding as an intimate process and prefer to share it with their partner; they also consider that breastfeeding in public is embarrassing, even if the people close to them are relatives and friends<sup>(4,19)</sup>.

In the concepts “organizational systems for the protection, promotion and support of breastfeeding” and “family and social authority”, the diagnoses were focused on the role of the state, family and society in the breastfeeding process. Family plays a key role and, together with the support of friends and neighbors. It is fundamental to the establishment and continuity of breastfeeding. Similarly, healthcare professionals interfere with the children’s dietary habits, because their orientations, practices and care routines encourage or not breastfeeding, the use of dairy substitutes and bottles<sup>(6,15-18)</sup>.

Thus, it is concluded that breastfeeding presents and originates comprehensive relationships that go beyond the nutritional dimension of the newborn. Without the adoption of a robust structure or theoretical model, there is a risk that nurses do not understand the amplitude of the phenomenon and implement compartmentalized practices.

As presented in the subset, 11 conceptual categories guide the design of nursing diagnoses and results and consequently of nursing interventions. The concepts are derived from and related to the three great systems: personal, interpersonal and social, from Imogene King’s conceptual model<sup>(3)</sup>. A medium-reach theory increases the breastfeeding scope, which explains the variety of elements in clinical practice, but also tries to capture the multidimensionality of the nursing work in the interactive breastfeeding process.

The greatest limitation to design the subset and establish generalization limits for it is related to two factors: the complexity of adopting a theory of systemic orientation and the novelty of the Interactive Theory of Breastfeeding and the consequent lack of validation for it. However, the authors recognize the need to submit the proposal to the evaluation of the scientific community.

It must be emphasized that the nursing diagnoses/results obtained through the Interactive Theory of Breastfeeding were not fully explored; other propositions that contemplate aspects of the mother-child relationship can still be elaborated. The specificities of the interventions during breastfeeding make care more complex, revealing the need to plan the nursing care focused on mother-child issues to promote and support exclusive breastfeeding until the sixth month of life<sup>(20)</sup>.

The ICNP® terminology subset for care of nursing mothers and breastfed children was developed as a general and innovative product to guide nurses that assist women, children and families that are experiencing breastfeeding, based on a comprehensive and systemic theoretical framework. It aims to contribute to the systematized documentation of the nursing care, applying terminologies that use the specialized language of nursing practice. Clinical judgement and decision-making are crucial for individualized care to patients and their families<sup>(10)</sup>; therefore, a subset, a decision flowchart and standard operational procedures do not mean the dismissal of expertise and professional competence.

## ■ CONCLUSION

The present study consisted of the creation of an ICNP® terminology subset with 74 nursing diagnoses/results and 213 nursing interventions for application in nursing processes centered in women, children and families undergoing breastfeeding.

The subset is a useful tool to investigate factors that influence breastfeeding and contributes to the nursing clinical practice in the mother-child area, helping nurses to develop critical thinking and decision-making skills to protect, promote and support breastfeeding. The subset is

an evidence-based and easily accessible reference and can contribute to organize individualized care plans.

The results of the present study may guide nurses to develop an ICNP® terminology subset. Knowledge can be more easily applied in care, teaching and research when diagnoses, outcomes and interventions are clearly defined and organized in a harmonious and significant theoretical framework.

Because it is based on a systemic and interactive nursing theory, the subset helps prevent a reductionist application of the nursing process. It also adds to the systematized documentation and allows the design of electronic medical records using ICNP® language.

The construct may be useful in the teaching-learning process by connecting the elements of a nursing theory with diagnosis-result-intervention taxonomies. It stresses the value of theoretical frameworks to guide and prescribe aspects of educational and care practices and serves as an example of nursing classifications, encouraging their correct design and use in nursing and health schools and health institutions.

It must be emphasized that the subset must be submitted to a validation process to be carried out by nurses that work in the field, and to a posterior clinical validation in hospitals or clinics with mothers and children that are experiencing breastfeeding.

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