INTRODUCTION

In this article, the study of puerperal infection (PI) is discussed, the one generally related to postpartum infectious processes, whether due to genital causes such as uterine infections, appendages and operative wound, or known as extragenital, when linked to breast engorgement, mastitis, thrombophlebitis, respiratory complications and urinary infections, understood as an infected lesion in the placental area due to the invasion of pyogenic bacteria introduced into the genital tract, before, during or after delivery, which contributes to the increase of maternal morbidity and mortality.¹

It has been borne in mind that postpartum infections often occur and pose a risk to maternal health and life, significantly increasing the rate of maternal death in Brazil and worldwide. IP indexes ranging from 3% to 20% are presented internationally. It is pointed out in Brazil, by studies, that these parameters are between 1% and 7.2%. Despite the fact that the Brazilian rate is lower than the international rate, the financial losses of health institutions, psychological, social and spiritual, caused to users of health services, in this case, puerperal women and families.²

It should be emphasized that cesarean section is closely related to the higher incidence of postoperative infectious morbidity because it is a surgical and invasive procedure, when compared to the eutocic delivery, which is a natural and physiological process, presenting a greater number of maternal and fetal complications, such as anesthetic accidents, hemorrhages, vesical and intestinal lesions, stretching of the myometrial incision and amniotic embolism. There is a correlation between the duration of labor and PI. Therefore, the surgical procedure represents one of the risk factors for the development of this infection.³

It has been shown in studies that rapid release of bacteria from the genital tract to the endometrial cavity can also occur when the woman is undergoing an intrauterine intervention.⁴

It is emphasized that PI has an endogenous pathway with polymicrobial etiology, and the microorganism with the highest incidence is streptococcus, which causes infection of the genital tract. It is revealed, however, that there are pyogenic germs in the environment that can contribute to PI. It is essential to observe that some factors favor its appearance, such as: hemorrhage before delivery; prolonged delivery and birth trauma.⁵

It is attributed to the Ministry of Health (MH) that the return of the woman and the newborn to the health service should be between seven and ten days after birth, encouraged during prenatal, maternity and community agents in the home visit, with the aim of early detection of risk situations.⁶

It is understood that nurses can use Nursing Care Systematization (NCS) in their work routines with an approach focused on problem solving and nursing care administration, following the critical reasoning that will promote individualized care and to respond to the needs of women in a rational way, contributing to improve or maintain the level of health.⁷

It is known that the implementation of NCS, a theory that was proposed to follow the self-care of Dorothea E. Orem, is defined by George in the year 1993, as a therapeutic existence in which the practice of activities should be initiated and executed by the patient, for the benefit of oneself, for the maintenance of life, health and well-being. It depends, therefore, for this to become reality, from factors such as the user's age, state of development, standard and life experience, socio-cultural orientation, health and available resources.

It is now important to gain new skills in the ways of organizing work, and NCS is the ideal methodological model for nurses to apply their technical-scientific knowledge in practice and professional attitudes integrated to the social systems of relationships and interactions multiple, benefiting the care and organization of the necessary conditions in the care practice. It is also affirmed that the NCS's sustainability base is the Nursing Process (NP), which consists of phases that identify the problems and delineate the diagnoses to generate the care plan.⁸ This model has shown potentialities and difficulties in institutions, since it is part of the reorganization and systematization of health practices.⁹

The NP and the notion of caring are considered as a complex method in the area of Nursing. They face, by the knowledge of the professionals when detecting human needs, changes in their state of health; in logical reasoning; manual dexterity in the performance of care actions; ethical behavior; sensitivity and expression of emotions such as compassion and human solidarity. It stands out to be a method that works as a technological instrument or methodological model, guides professional practice and assumes characteristics of nurses reflexive technique on the meanings implicit in their actions, reactions and connections with the user, enabling a change of reasoning, judgment of care and transforming the way you think about changing your practice.¹⁰

It is understood that the applicability of NCS involves the NP, which aims to contribute to the quality of care in search of solutions to problems that require cognitive skills, interpersonal skills, with dynamics of systematized and interrelated actions, aiming at meeting the needs population.⁷
Due to the high frequency, incidence and risks to which these women are subjected when they are affected by PI in their postpartum adjustment, it is evident that health professionals, in especially nurses, need to be aware of the appearance of symptoms, and it is fundamental to practice the NCS to better organize its activities and guarantee quality care.

Due to the alarming levels of PI, the fourth place among the causes of maternal mortality was the interest in researching this issue, raising the need to identify Nursing diagnoses at the hospital level with the aim of contributing to the nurses' work process, given that obstetric care is based only on pre-established technical procedures and standards, making it difficult to provide comprehensive care for the basic needs affected.

It is believed that this study will stimulate nurses to practice NCS in the care practice, aiming to improve health conditions, since this systematization will subsidize diagnoses, goals and interventions, providing adequate treatment based on the real needs of the user.

It is stated that the research aims to study, through the integrative review, the main nursing care-related aspects of PI through NCS.

The study is relevant from the approach that NCS is a method practiced by nursing professionals, which is very useful to increase the quality of obstetric care to this target population.

**OBJECTIVE**

- To identify nursing diagnoses in women with puerperal infection.

**METHOD**

This is a bibliographical, descriptive study, type integrative literature review, of articles published between the years 2007 to 2016, in the databases LILACS, MEDLINE and SciELO Virtual Library. Six steps were followed: identification of the theme; the establishment of inclusion and exclusion criteria; the identification of pre-selected and selected studies; the categorization of the selected studies; the analysis and interpretation of the results and the presentation of the knowledge review / synthesis.

The data was collected between September and October 2017, totaling 70 articles, having as descriptors: Puerperal Infection; Nursing; Nursing Diagnostics; Nursing Process; Self-care and Morbidity and Mortality Indicators. Articles that did not approach the subject researched, abstracts, publications before 2007, dissertations, theses, letter to the editor and reviews were excluded, after exhaustive reading. Based on these criteria, 13 articles on the subject were selected, which constituted the sample of this research, through thematic analysis.
An orientation guide was drawn from NANDA diagnoses, goals (NOC) and interventions (NIC), with the understanding that the nurse provides theoretical support on care in the puerperium, emphasizing physical and psychiatric evaluation for the woman, accurate and rigorous clinical evaluation, with physical exams duly recorded in the users’ records.

It collaborates in establishing the diagnoses, interventions and goals for the organization of care, promoting greater security for those who play a care role and building the interrelation between these professionals.

A description of the selected articles on PI was organized, based on the Nursing diagnoses selected in the databases and Virtual Library SciELO, in order to contribute to the prevention of diseases, maintenance and recovery of health with regard to diagnoses, goals (NOC) and interventions (NIC), and didactically expose them in Figure 1.

### RESULTS


#### DIAGNOSTICS

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
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<tbody>
<tr>
<td>1.</td>
<td>Ineffective breastfeeding related to maternal anxiety evidenced by unsatisfactory breastfeeding process.</td>
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<tr>
<td>2.</td>
<td>Anxiety related to the change in the state of health evidenced by agitation and report of anxiety and fear.</td>
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#### GOALS (NOC)

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<tr>
<td>The user will show improvement in the maintenance of the breastfeeding process and will verbalize that she understands the contributing factors.</td>
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<tr>
<td>The user should present improvement in the control of anxiety and in coping with the problem.</td>
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#### INTERVENTIONS (NIC)

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<tr>
<td>Emotional support; Evaluate maternal feelings (fear / pain / anxiety); Guidance as to the proper position for breastfeeding the newborn; Encourage and guide not to interrupt breastfeeding.</td>
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<tr>
<td>Reassure the user with a calm and safe approach; Provide accurate information on treatment, promoting hope; Stimulate</td>
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<tr>
<th>Risk</th>
<th>Description</th>
<th>Student Action</th>
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<tr>
<td>3. (00153)</td>
<td>The client will demonstrate behaviors that aim at regaining self-esteem.</td>
<td>Stimulation of relaxation practices to promote positive self-esteem; Observe mood control; Evaluate the factors that affect the current situation; Convey confidence in the ability of the user to deal with the current situation; Assess family dynamics and support systems.</td>
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4. (00011) Intestinal constipation related to the emotional tension evidenced by the change in the intestinal pattern.

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<tr>
<td>4. (00011)</td>
<td>The user will establish the normal pattern of bowel.</td>
<td>Follow Chinese guidelines; Evaluate abdominal distension; Observe and note pain complaints in the abdominal region; Stimulate adequate intake of fiber-rich diet as prescribed; Encourage the puerpera in their physiological needs without fear of exertion; Stimulate walking.</td>
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5. (00132) Acute pain related to biological agents evidenced by verbal reporting and facial expression.

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<tr>
<td>5. (00132)</td>
<td>The puerpera should present satisfactory relief measure evidenced by verbal reports.</td>
<td>Make a comprehensive assessment of the pain; To investigate, with the puerpera, the factors that relieve / worsen the pain; Ensure that it receives analgesic care according to the medical prescription; To evaluate the effectiveness of pain control measures through verbal reporting.</td>
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6. (00007) Hyperthermia related to the infectious process evidenced by an increase in body temperature above normal parameters.

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<th>Risk</th>
<th>Description</th>
<th>Student Action</th>
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<tr>
<td>6. (00007)</td>
<td>The puerpera should have body temperature within the normal parameters;</td>
<td>Monitor vital signs for 2 / 2h; Administer antipyretic according to medical prescription; Help implement measures to reduce body temperature; Make water balance.</td>
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7. (6540) Infection related to inadequate primary defense evidenced by temperature change above 38.5 ° C.

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<tr>
<td>7. (6540)</td>
<td>The puerpera must have control of the infection.</td>
<td>Make asepsis in all aspects of care; Stimulate self-care about hygiene; Maintain care of the lesion site; Inspect appearance of the lesion as purulent drainage or staining; Administer antibiotic therapy as prescribed; Promote adequate nutritional intake according to prescription; Change dressings according to current CDC guidelines.</td>
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8. (00046) Impaired skin integrity related to injury to the epidermal and dermal tissue evidenced by invasion of pathogenic microorganisms.

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<tr>
<td>8. (00046)</td>
<td>The puerpera will present improvement in the healing of the cutaneous lesion.</td>
<td>Observe the skin for color, heat, texture, edema, secretion; Examine adjacent skin for phlogistic signs; Stimulate self-care related to bathing and hygiene; Use protective covers to avoid friction on the lesion.</td>
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9. (00148) Fear related to hospital procedures evidenced by apprehension report.

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<tr>
<td>9. (00148)</td>
<td>The puerpera will express a sense of security related to the current situation.</td>
<td>Listen attentively to the concerns of the puerpera; Explain the procedures according to the level of understanding and understanding of the user; Teaching to the puerpera techniques of relaxation.</td>
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</table>

9. (00148) Fear related to hospital procedures evidenced by apprehension report.

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<tr>
<td>9. (00148)</td>
<td>The puerpera will express a sense of security related to the current situation.</td>
<td>Listen attentively to the user's concerns; Explain the procedures according to the level of understanding and the ability to understand it; Teaching the mother how to relax.</td>
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Figure 2. Nursing diagnoses selected in databases and SciELO Virtual Library based on Dorothea E. Orem’s Self-Care Theory. Natal (RN), Brazil, 2018.

DIscussion

It is reported that, according to the resolution of the Federal Nursing Council (COFEN) No. 272/2002, which provides for the NCS, it should be composed of: Nursing history; physical exam; nursing diagnosis; Nursing care prescription; evolution of nursing care and nursing report. 14

It is pointed out the resolution of COFEN n ° 358/2009, which recommends that the NCS organizes the professional work regarding the personal method and instruments, making possible the operationalization of the NP. It is observed...
through this context that nurses seek to create and expand the spaces for discussions on technical and scientific improvement in the various fields of action, in the use of technologies and procedures, as well as in the way of doing, acting and thinking in Nursing.15

Based on these assumptions, it was decided to highlight the stage of the care plan called by authors as planning, defining it as the creation of goals and a plan of care intended to help the user to solve the problems diagnosed. This was followed by elaboration based on Dorothea E. Orem’s Self-Care Theory.16

Nurses are allowed to apply the Orem Theory with the follow-up of the NP, the creation of tools to guide their care practice in which both the user and the nurse work together to achieve the goal of self-care, simultaneously, the same objective. It is added that, in this way, the nurse, making use of his attributions, is the professional that not only has skills to work with the NCS, but also fundamental technical-scientific knowledge to provide a systematized care in a safe, efficient and humanized way. The need for an increase in the teaching of the clinical reasoning of the NP in the training of nurses and of continuing education in their clinical practice was also evidenced, so that the identification of the human response that the user, family or community is accurate and conducive to an adequate and quality care plan, necessary for new pedagogies to involve academics and, increasingly, evidence-based practices.17

NCS is characterized as a private work instrument of the nurse, which allows the development of actions that modify the state of life and health-illness of individuals, thus allowing results to be achieved.18

The NCS is given the possibility of autonomy to the professional, since this methodology is practiced by all staff, systematizing actions in the application of the NP, which offers theoretical support, safety in the decisions to be taken in favor of the health of the users, defining greater visibility of knowledge, attitudes and skills in practice and the nurse’s attendance.19

This thought is promoted by systematization, as an organizational process, capable of offering subsidies for the development of interdisciplinary and humanized methods of care. However, nursing care is still strongly centered on the disease and not on the human being as an active and participatory subject of the caring process.20

It is important to note in the literature that NANDA Nursing Diagnostics are being used by nurses in view of the needs presented by the users and because they offer the terms of diagnosis that are clear and easy to understand and have a standardized language recognized by the American Nurses Association (ANA).21

It is known that the nurse has, as a special concern, the need to encourage self-care actions to the individual, offering and controlling on an ongoing basis to sustain life and health, recover from illness or injury and become compatible with its effects.22

It is evident that the nurse should not only care, but also assess, observe, study and plan care in an organized and reflexive way, being the NP an essential instrument for the guidance of the team in the practice of acts that reveal the improvement of the picture of the woman with PI.23

It was highlighted in descriptive studies that the standardized and specially implemented Nursing diagnoses are being applied in certain regions of Norway, but to a large extent in the starting line, also considering that educational measures seem to enhance the nurses’ understanding on Nanda’s nursing diagnoses, assisting them in their work and positively affecting the capacity of the critical process.24

It is confirmed that researchers are aware of the occurrence of nursing diagnoses in practice, including nurses and their training with experience in diagnoses, the way care is organized, technologies, nursing documentation that, with institutional support, are the best way to success. However, it is important to provide a beneficial, effective and safe care that it is necessary for managers of health establishments to direct strategies in the system as a whole, that is, the mutual interconnection of individual components: the person, environment, processes and technologies.25

CONCLUSION

In the proposal, we searched the nursing diagnoses for users with PI, realizing how nurses’ actions in care can contribute to the treatment of infection in the immediate postpartum, seeking, with this planning, to minimize the risks which affect women affected by this complication.

The quality of nursing care in the care was increased through the Nursing diagnoses, making the team able to provide a planned attendance, an instrument of fundamental importance so that this professional can manage and improve the care in an organized, safe way, dynamic and competent.

It is possible, for the knowledge of the theoretical and practical implications inserted in the assistance, that the puerpera can feel safe during the treatment, accepting, in most cases, that the nurse, among other health professionals, provides a safe and quality assistance.

It is determined as contributions of the study to the advancement of scientific knowledge that health professionals can intensify proposals of Nursing interventions in order to reduce the real
and / or potential risks to IP users, Nursing diagnoses and the care plan, which will contribute to the care, physical and mental well-being of women.

REFERENCES


