

Validation of nursing diagnoses, interventions and outcomes in a pediatric clinic

Validação de diagnósticos, resultados e intervenções de enfermagem da clínica pediátrica
Validación de diagnósticos, resultados e intervenciones de enfermería de la clínica pediátrica

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ABSTRACT

Objectives: To elaborate operational definitions for the Nomenclature nursing diagnoses, interventions and outcomes of the Pediatric Clinic at a University Hospital and carry out a validation of the content and clinical aspects of this Nomenclature.

Method: Methodological research, developed in two stages: documentary study, for the validation of content of the operational definitions of nursing diagnoses; and secondly applied research, via clinical cases, performed with children from 0 to 5 years.

Results: The 126 diagnoses were submitted to consensus validation and 55.6% were validated. Six clinical case studies were carried out, using the phases of the nursing process, based on the theory of Basic Human Needs, identifying 24.3% of the validated diagnoses and 54.5% of the nursing interventions listed in the Nomenclature. **Conclusion:** The study showed the effectiveness of using the Nomenclature in the Pediatric Clinic, in order to optimize the care and quality of health services.

Descriptors: Nursing; Nursing Processes; Child Health; Classification for Practice; Validation Studies.

RESUMO

Objetivos: Elaborar as definições operacionais dos diagnósticos da Nomenclatura de diagnósticos, resultados e intervenções de enfermagem da Clínica Pediátrica de um Hospital Escola e realizar a validação de conteúdo e clínica da referida Nomenclatura.

Método: Pesquisa metodológica, desenvolvida em duas etapas: estudo documental, para a validação de conteúdo das definições operacionais dos diagnósticos de enfermagem; e pesquisa aplicada, do tipo estudo de casos clínicos, realizada com crianças de 0 a 5 anos. **Resultados:** Os 126 diagnósticos foram submetidos à validação por consenso e 55,6% foram validados. Foram realizados seis estudos de casos clínicos, utilizando as fases do processo de enfermagem, fundamentado na teoria das Necessidades Humanas Básicas, identificando-se 24,3% dos diagnósticos validados e 54,5% das intervenções de enfermagem constantes na Nomenclatura.

Conclusão: O estudo mostrou a eficácia do uso da Nomenclatura na Clínica Pediátrica, de modo a aprimorar o cuidar e permitir a realização de uma assistência de qualidade.

Descritores: Enfermagem; Processos de Enfermagem; Saúde da Criança; Classificação da Prática; Estudos de Validação.

RESUMEN

Objetivos: Elaborar las definiciones operacionales de los diagnósticos de la Nomenclatura de diagnósticos, resultados e intervenciones de enfermería de la Clínica Pediátrica de un Hospital Escuela y realizar la validación de contenido y clínica de la referida Nomenclatura.

Método: Pesquisa metodológica, desarrollada en dos etapas: estudio documental, para la validación de contenido de las definiciones operacionales de los diagnósticos de enfermería; y pesquisa aplicada, del tipo estudio de casos clínicos, realizada con niños de 0 a 5 años. **Resultados:** Los 126 diagnósticos fueron sometidos a la validación por consenso y 55,6% fueron validados. Fueron realizados seis estudios de casos clínicos, utilizando las fases del proceso de enfermería, fundamentado en la teoría de las Necesidades Humanas Básicas, identificándose 24,3% de los diagnósticos validados y 54,5% de las intervenciones de enfermería constantes en la Nomenclatura. **Conclusión:** El estudio mostró la eficacia del uso de la Nomenclatura en la Clínica Pediátrica, de modo a mejorar, cuidar y permitir la realización de una asistencia de calidad.

Descriptor: Enfermería; Procesos de Enfermería; Salud de Niños; Clasificación de la Práctica; Estudios de Validación.

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INTRODUCTION

Hospitalization causes the child various feelings, such as anxiety, which unbalances his/her emotional state and accentuates an increasing sensation of fragility⁽¹⁾. This is a complicated and difficult process, because the child's routine and social contact are modified by transference to the hospital environment⁽²⁾. Factors such as duration of hospital stay, disease severity, symptoms and type of intervention may have repercussions on child development⁽³⁾.

Likewise, the impact of hospitalization induces diverse emotions in the family, such as sadness, impotence, fear, guilt, in addition to physical and emotional exhaustion. These events cause the family and especially the accompanying person to feeling increasingly fragile, a fact that reflects in the hospitalization process and directly affects their wellbeing⁽⁴⁾. To reduce the burden of negative feelings, the care should be focused on both the child and family. For this, the nursing team should be prepared to perform the technical procedures and also to facilitate the hospital experience. However, this form of care is a challenge for Nursing, since it is necessary to know and understand the needs of the child and his/her family and adapt the nursing process for them⁽⁵⁾.

It should be emphasized that care requires organizational methods to systematize practices. The systematization of nursing care and the nursing process are a means to guide and structure the qualification and individualize care⁽⁶⁾ for children, adolescents and their families.

Research has been carried out to create instruments for the systematization of nursing care and to operationalize the nursing process in child and adolescent care⁽⁷⁻⁹⁾. This results in the construction of a Nomenclature of nursing diagnoses, interventions and results, in order to contribute to the care actions and documentation of professional practice, thereby ensuring differentiated and quality care for hospitalized children and adolescents⁽¹⁰⁾.

However, the lack of a validated nomenclature makes it difficult to designate and identify nursing diagnoses, interventions and outcomes for Nursing professionals, especially when they have little experience in clinical practice or precision in the process of diagnostic reasoning. For nursing students, their lack of knowledge regarding care practice makes it difficult to provide an individualized, comprehensive and qualified assistance for each child.

The above gives rise to these questions: Based on the literature in the area, would it be possible to develop operational definitions of the nursing diagnoses listed in the Nomenclature of nursing diagnoses, interventions and outcomes for children hospitalized at the Pediatric Clinic of the Hospital Universitário Lauro Wanderley/Universidade Federal da Paraíba (HULW/UFPB)?; and Which statements of the Nomenclature of nursing diagnoses, interventions and outcomes can be validated clinically with children from 0 to 5 years hospitalized in the Pediatric Clinic?

As such, the purpose of this study was to elaborate the operational definitions of the nursing diagnoses contained in the Nomenclature of nursing diagnoses, interventions and

outcomes for children hospitalized at the Pediatric Clinic of the University Hospital and to carry out a validation of the Nomenclature contents.

METHOD

Ethical aspects

The project was approved by the Research Ethics Committee of the Hospital Universitário Lauro Wanderley HULW-UFPB and conformed to the ethical aspects recommended by Resolution 446/2012, which presents guidelines and norms regulating human research⁽¹¹⁾, and Resolution COFEN nº 311/2007⁽¹²⁾.

Type of study

A methodological study was performed, divided into two stages: 1) Operational definitions for nursing diagnosis statements; and 2) Clinical validation of the nursing diagnoses, interventions and outcomes.

First stage: operational definitions for nursing diagnosis statements

It is a document study, aiming to elaborate and validate operational definitions for the nursing diagnoses contained in the Nomenclature of HULW/UFPB nursing diagnoses, interventions and outcomes for the Pediatric Clinic, classified according to Horta's theory of Basic Human Needs. This stage was developed in two phases: 1) Operational definition of the statements; and 2) Validation by consensus of the definitions generated.

To elaborate the operational definition of nursing diagnoses, the following steps were used: 1) development of a preliminary definition; 2) literature review; 3) mapping the meaning of the concept; and (4) affirmation of the operational definition⁽¹³⁾. Operational definitions for nursing diagnoses, which represent the concept in the literature and in the reality of care practice, were elaborated at the HULW/UFPB Pediatric Clinic.

For the consensus validation phase of the constructed definitions, the consensus validation technique was used⁽¹⁴⁾, which consists of forming a specific group of clinical nurses, considering their knowledge and clinical experience, in order to obtain collective opinion or consensus among clinical specialists on a particular phenomenon.

The group of clinical specialists was selected based on the following criteria: to be a nurse, to have worked for at least four years in the Pediatric Clinic, and/or to develop professional activities as a teacher, researcher, author or adviser of themes in the nursing process/nursing consultation, CIPE® and child health. For this selection, an invitation letter was prepared and sent to the pre-selected participants, through electronic mail, explaining the objectives and nature of the study.

The group of specialists was made up of two nursing assistants from the University Hospital, a nursing faculty professor and a research nurse involved in the mother project of this study, which were enrolled in the research after acceptance and signing the Free and Informed Consent Term.

At the end of this stage, the Nomenclature of the Pediatric Clinic was reorganized according to the Basic Human Needs, specific for children from 0 to 5 years old, containing a relation of concepts of nursing diagnoses, interventions and outcomes.

Second stage of the research: clinical validation of the nursing diagnoses, interventions and results

According to the methodological guidelines of the *International Council of Nurses (ICN)*, the concepts of nursing diagnoses, interventions and outcomes must be validated clinically with clinical case studies in the respective area of practice⁽¹⁵⁾. They should be performed using the phases of the nursing process: history, nursing diagnosis, planning, intervention and evaluation. For this research, the theoretical foundation of the nursing process was the conceptual model of Horta's Basic Human Needs, as used in the institution.

The subjects of the research were children aged 0 to 5, hospitalized in the Pediatric Clinic of a University Hospital. Non-probabilistic convenience sampling was adopted, in which the criterion of two months for data collection was used. Prior to data collection, information about the study was explained to the legal guardians of the children and their permission was requested to participate in the study, together with the signing of the Free and Informed Consent Term.

The study followed the phases of the nursing process, according to Resolution 358/2009. At the data collection stage, we used the instrument elaborated previously in a survey conducted with hospitalized children aged 0 to 5 years⁽⁷⁾. In the nursing diagnosis phase, clinical judgment was based on the identification and interpretation of the data obtained from the nursing history and the observations of the researcher; for the denomination, we used the statements validated and included in the Nomenclature of the Pediatric Clinic for children 0 to 5 years old. After the nursing diagnoses were identified, the expected outcomes were determined and the nursing interventions described in the Nomenclature were selected.

The case studies were analyzed, emphasizing the most frequent nursing diagnoses, interventions and outcomes identified in the children who participated in the research.

RESULTS

Operational definitions of nursing diagnoses

The operational definitions were elaborated for the 126 nursing diagnoses/outcomes contained in the HULW/UFPB Nomenclature of nursing diagnoses, interventions and outcomes for the Pediatric Clinic. These nursing diagnoses/outcomes and their respective definitions were submitted to a group of specialists to evaluate the presence of the diagnoses in clinical practice with children from 0 to 5 years of age. The definitions were evaluated in order to clarify their meaning and identification, through empirical indicators and clinical reasoning in nursing practice.

Of the 126 nursing diagnoses/outcomes and their definitions, 56 (44.4%) were considered not applicable to children aged 0 to 5 years for the HULW/UFPB Pediatric Clinic, and 70 (55.6%) were validated.

Some diagnoses, including "Epigastric pain", "Acute pain", "Chronic pain", "Deficient knowledge about disease and treatment" "Lack knowledge about disease and treatment" and "Poor recreation activities" have not been validated because they are included in other diagnostics, for example: "Pain (specify intensity and location)", "Lack of knowledge (specify)" and "Disrupted recreation activities", respectively. The diagnoses "Excess fluid volume", "Impaired Fluid Volume" and "Uncoordinated march" were not validated because they are similar to the diagnoses "Edema", "Dehydration" and "Impaired deambulation", respectively, and because they do not present such a characteristic definition for children in the study's age group.

Other reasons for not validating the diagnoses were: diagnoses applied to children older than 5 years, for example "Dysuria" and "Depression"; are diagnoses applicable to children 0 to 5 years, but not frequent in the Pediatric Clinic of the HULW/UFPB, such as "Risk for disorganized infant behavior"; and those diagnoses not applicable to children aged 0 to 5 years hospitalized in the Pediatric Clinic studied in this work.

Clinical validation of the concepts of nursing diagnoses, interventions and outcomes

The 70 concepts of nursing diagnoses, interventions and outcomes included in the Nomenclature of Nursing Diagnoses, Interventions and Outcomes of the Pediatric Clinic, HULW/UFPB for children aged 0 to 5 years were submitted to clinical validation, through six case studies developed with children in this age group hospitalized in the Pediatric Clinic and accompanied by their legal guardians. The children who participated in the study were between 22 days and 4 years old; five males and one female.

Seventeen nursing diagnoses were identified, which corresponds to 24.3% of those validated, 14 of which are negative ("Diarrhea", "Dehydration", "Food intolerance", "Deficient knowledge(specify)", "Impaired physical mobility", "Impaired skin integrity", "Impaired appetite", "Ineffective breathing pattern", "Disturbed sleep pattern", "Hyperthermia", "Impaired oral hygiene", "Interrupted recreation activities", "Pain", "Edema"); and two positive diagnoses ("Preserved body hygiene" and "Preserved sleep") and a risk assessment ("Risk for infection"). Based on the diagnoses, a nursing care plan was developed for the implementation of the interventions. For each diagnosis, an expected outcome was listed.

Considering the relationship between identified nursing diagnoses and Basic Human Needs, it was observed that the largest number were at the psychobiological level, with 15 diagnoses, followed by two diagnoses at the psychosocial level, distributed according to Table 1.

For these diagnoses, 164 nursing interventions were prescribed (Chart 1). After discarding the repetitions, 113 remained, with an average of 6.6 interventions per diagnostic concept, of which 61 interventions (corresponding to 54.5%) are part of the Nomenclature of nursing diagnoses, interventions and outcomes of HULW/UFPB for The Pediatric Clinic.

Table 1 – Distribution of the Nursing Diagnoses, according to the Basic Human Needs identified in children of 0 to 5 years of age, at the Pediatric Clinic, Hospital Universitário Lauro Wanderley/Universidade Federal da Paraíba (HULW/ UFPB), João Pessoa, Paraíba, Brazil, 2016

Basic human needs	Nursing diagnosis	F	%
Psychobiological Needs			
Oxygenation	Impaired respiration	2	33.3
Hydration	Dehydration	3	50.0
	Edema	1	16.8
Nutrition	Impaired appetite	1	16.8
	Alimentary intolerance	1	16.8
Elimination	Diarrhea	2	33.3
Sleep and rest	Impaired Sleep	2	33.3
	Adequate Sleep	1	16.8
Activity and exercise Physical/mechanical corporal/ motility	Impaired physical mobility	1	16.8
Body care	Impaired oral hygiene	2	33.3
	Appropriate body hygiene	1	16.8
Physical and cutaneo-mucosal integrity	Impaired skin integrity	2	33.3
Thermoregulation	Hyperthermia	1	16.8
Immunological regulation	Risk for infection	4	66.8
Perception	Pain	1	16.8
Psychosocial necessities			
Education for health/learning	Lack of knowledge of mother / caregiver about disease and treatment	4	66.8
Recreation, leisure, creativity	Disrupted recreational activities	1	16.8

Chart 1 – Nursing interventions for the most prevalent diagnoses of the study, João Pessoa, Paraíba, Brazil, 2016

Nursing diagnosis	Nursing interventions
Risk for infection	Attempt to control the infused volume; Evaluate the performance of personal hygiene of the child; Assess the site of peripheral venous access daily; Teach protective measures to minimize the risk for infection; Install the medication to infuse in 2h; Advise on necessary care, such as the location of the puncture, to avoid infection; Monitor vital signs; Orient the team regarding care with aseptic techniques; Guide the mother about the importance of handwashing and maintaining bodily hygiene; Perform procedures using aseptic technique; Make puncture using aseptic technique and check AP* before, during and after infusion of methylprednisolone.
Lack of knowledge of mother / caregiver about disease and treatment	Assess the mother's learning ability; Clarify the mother's questions about the illness and treatment of the child; Clarify questions that arise after the technique performed; Explain the procedures to be performed; Orient the mother on care for handling and positioning of the NB** for breastfeeding; Orient the mother regarding nipple care; Orient the mother on signs indicative of convulsion; Guide the mother about the illness and treatment of the child; Employ feedback technique for guidance on diagnosis and treatment.
Dehydration	Control the volume of fluid infused; Control venous infusion; Evaluate the control of diuresis (weighing diapers); Evaluate signs and symptoms of dehydration (depressed fontanelle, decreased diuresis, dry skin); Stimulate the intake of 20 ml of liquids in the interval between each bottle; Stimulate the intake of liquids of 30 to 50 ml in the intervals between diet; Maintain peripheral venous access; Guide the mother about the importance of fluid intake; Guide the mother about maintaining breastfeeding on demand.

To be continued

Chart 1 (concluded)

Nursing diagnosis	Nursing interventions
Diarrhea	Administer ointment (vitamins A and D) in the affected region; Assess the affected region for appearance and coloration daily; Evaluate the frequency and characteristics of feces; Evaluate the skin and mucous membranes of the genital area; Maintain the intimate hygiene of the infant/newborn; Keep skin clean and dry; Monitor the perianal skin to detect irritations and ulcers daily; Guide the mother to perform hygiene with soap and water, not with moist tissues; Provide guidance on pre and post evacuation care; Guide regarding diaper changes; Guide the hygiene of the bottles daily; Guidance on hand hygiene; Supervise skin care; Check the weight once a week.
Impaired Skin Integrity	Administer EFAs (essential fatty acids) on the sites of lesions with crusts and cicatrization; Administer prescribed ointment at the site of open lesions; Assess the affected region daily; Evaluate lesion characteristics daily; Stimulate hydration by offering 100 ml cups of water; Keep skin clean and dry; Orient the mother regarding the corporal hygiene of the child; Orient the mother on hand washing and maintenance of the child's corporal and oral hygiene; Orient the mother on the care of lesions; Guidance on care with application and removal of ointment in the perianal region; Guide the prevention of rashes and supervise skin care.
Impaired oral hygiene	Evaluate oral hygiene daily; Evaluate after each oral hygiene; Evaluate the characteristics of mouth odor; Contact the dentist for the treatment of cavities; Praise the child or the mother regarding the continuity of care with oral hygiene; Teach the child and mother the principles of good oral hygiene; Provide guidance on the need to brush teeth and oral hygiene with bicarbonate water.
Impaired Sleep	Encourage recreational activities during the day; Provide a calm and safe environment; Guide the nursing team and mother to perform nasal lavage whenever the nostrils are clogged and before bed; Orient the mother on measures to improve sleep, for example: raising the headboard; Assess the clinical picture to check for daily airway discomfort and obstruction;
Impaired breathing	Administer nebulization with saline solution at the drug nebulization intervals; Assess respiratory auscultation daily; Contact the physiotherapist to discuss child care; Raise the head of the bed; Stimulate the intake of liquids, offering glasses of 50 to 100ml; Guide the mother to keep the child clothed; Orient the mother on the child's nasal hygiene; Perform nasal lavage with 0.9% saline prior to nebulization; Check for vital signs every 6 h

Notes: *Arterial Pressure ** Newborn

DISCUSSION

One of the most frequent diagnoses in the case studies was Risk for infection, which is characterized by vulnerability to invasion and multiplication of pathogenic microorganisms, resulting from skin lesions, alteration in the pH of secretions, decreased hemoglobin, immunosuppression, leukopenia, inappropriate vaccination, malnutrition and invasive procedures.

When hospitalized, the child becomes more vulnerable to the risks of infection due to invasive procedures for therapeutic treatment⁽¹⁶⁾—e.g., peripheral venous puncture, common and complex procedure⁽¹⁷⁾— and the entry of infectious agents into the bloodstream. In newborns, the degree of risk is increased because their protection barriers are fragile, such as the skin and mucosa, as well as the immune system, which is not complete in the 0-5 years age group⁽¹⁸⁾.

In this research, the risk of infection is related to bloodstream infection, but it was not possible to specify this, since the validated diagnosis of the Nomenclature of Nursing Diagnoses, Interventions and Outcomes for the Pediatric Clinic does not have this specificity. For this reason, it is suggested that the term “specify” should be included in the diagnosis “Risk for infection”, since the child may present several risks of infection, a condition necessary to direct nursing care. For this diagnosis, the nursing interventions planned and implemented are described in Chart 1. By the end of the study, there were no signs or symptoms of infection among the children that presented this risk.

The nursing diagnosis “Lack of knowledge of mother / caregiver about disease and treatment” was one of the most constant in the case studies. This is defined as a lack of information related to something and characterized by lack of adherence to promote, recover and rehabilitate the health of

the patient, inadequate knowledge about maternity, hospitalization of the child and therapeutic treatment, inappropriate behavior such as distraction, learning difficulties, low educational level and lack of will to learn.

The lack of precise information pertinent to the health status of the child is one of the issues that distresses mothers most and raises their level of anxiety and stress⁽¹⁹⁾. Despite changes in the daily practice of nursing care in pediatric units, after insertion of the family⁽²⁰⁾ in the hospital context, assistance to mothers is still poorly conducted⁽²¹⁾.

The mother/caregiver should understand the significance of the child's illness, the procedures to be performed, the clinical progression, and behavior to help the team to improve the child's health. However, they report that many professionals are not completely available to listen and clarify their questions⁽¹⁹⁾. This is a worrying fact, because the nursing team provides direct care to the mother-child binomial.

In the case studies, the mother's lack of knowledge about the disease and treatment was also associated with other factors, such as low schooling and socioeconomic level. Only one mother had completed Higher Education, three had not completed High School, one completed Secondary School, and another had completed up to the second year of Elementary School.

For this diagnosis, nursing interventions planned and implemented are described in Chart 1. After implementation, the mothers presented improved knowledge about the child's illness and treatment and demonstrated an understanding of the disease, treatment, care, and procedures to be performed.

The nursing diagnosis "Dehydration" refers to a body fluid and electrolyte disturbance that occurs when the total elimination of fluids exceeds the total intake and presents mild, moderate and severe levels. It manifests with weight loss, tegumentary alterations, dry skin and mucous membranes, fontanelle depression, reduced response to stimuli, prolonged capillary filling, altered heart rate, signs of circulatory failure, loss of appetite, changes in eating habits, loss of lacrimation, salivation and decreased diuresis, changes in body temperature, tachypnea, hyperpnea at the most severe levels, weakness, irritability, progression to lethargy, and even unconsciousness.

For this diagnosis, the nursing interventions described in Table 2 were planned and implemented. After implementation of the interventions, all the children presented improved hydration; only one continued using oral hydration.

The diagnosis of "Diarrhea", defined as the elimination of liquid or pasty feces, accompanied by cramps, abdominal pain, increased bowel sounds, more than three bowel movements in 24 hours and intestinal urgency is one of the main causes of hospitalization in children, especially in developing countries, and is more prevalent in children under 5 years of age. In children younger than 12 months, it appears as a contributing factor in the mortality rate⁽²²⁾. Because of the developing immune system, children in this age group have less resistance to the pathogenic elements of diarrhea⁽²³⁾. Its onset may be related to the socioeconomic level of the parents, the situations of basic sanitation and housing, hygiene conditions or contaminated foods, the season of the year and is more frequent in the Northeast and North regions of Brazil⁽²⁴⁾.

The nursing interventions presented in Chart 1 were planned and implemented. After the implementation, the children with this diagnosis presented improvement; in one case, the stools remained pasty and with normal frequency for the age. In another case, the result was decreased diarrhea, from seven to four episodes, also following with pasty stools.

Also identified in the case studies was the diagnosis "Impaired skin integrity", which occurs when the epidermis and/or dermis is damaged due to perforation or friction of the skin, immobility in the bed, surgical wound, humidity, changes in the turgor and/or pigmentation of the skin, impaired circulation, pruritus, erythema and skin lesions.

It is known that the skin, especially of the newborns, is more delicate pointing to immaturity in its layers, which contributes to the risk of pathogens⁽¹⁸⁾. Diaper rash injuries are more common in children under two years of age, when they wear diapers almost all the time. It is observed that delayed diaper changes and urine contact with the skin intensify the actions of irritants, which cause alterations in the skin⁽²⁵⁾.

Nursing interventions for this diagnosis were planned and implemented, as presented in Chart 1. After the interventions were performed, the children had improved skin integrity.

The nursing diagnosis "Impaired oral hygiene" – defined as absence of oral hygiene habits, characterized by halitosis, presence of dental caries, lack of oral care, presence of canker sores and whitish plaques – was also identified in the case study.

The hospitalization process modifies the entire structure of the child, and changes in routine habits can be unfavorable to oral hygiene. The hospital environment, along with different feeding times, changes in habits and eating habits, drug insertion and discomfort caused by the disease are factors that contribute to the lack of recognition of oral hygiene as priority care⁽²⁶⁾.

In the study children, those responsible for the hygiene are their caregivers or family members. For this reason, it is fundamental that they understand the importance and care required for good hygiene⁽²⁷⁾, since at this age, the child does not have an efficient vision of self-care. Nevertheless, some children prefer to do their own oral hygiene, because they consider themselves independent.

One of the children (age four years and seven months) enrolled in the research, attempted oral hygiene without her mother's supervision. On oral cavity examination, caries and halitosis were identified. A study developed in the city of Serra Gaúcha⁽²⁷⁾, demonstrated that 50.9% of those responsible for the child did not know the value and relevance of good oral hygiene due to the lack of approximation of health professionals, and 32.7% said that children were brushing the teeth alone. It is essential that health professionals communicate appropriately with the family, since effective hygiene maintains microbiological control in the mouth region and minimizes the appearance of bacterial plaque⁽²⁸⁾.

For this diagnosis, the nursing interventions presented in Chart 1 were planned and implemented. After these procedures, the children presented improved oral hygiene, with no halitosis and their mothers reported knowledge about hygiene care.

Another diagnosis identified was "Impaired Sleep", defined as interruptions limiting the quantity and quality of sleep due

to external and/or internal factors, such as not feeling rested on awakening, difficulty in falling asleep, unfavorable environment, bad night's sleep sensation, indisposition for everyday activities and nightmares.

The hospital environment compromises the child's regular sleep pattern due to hospital noise, lighting, discomfort, anxiety, among other factors⁽²⁹⁾. Nursing care and procedures performed with the child during sleep time are other factors that can impair the quality of sleep by causing difficulty in falling asleep and irritating the child.

For this diagnosis, the nursing interventions listed in Chart 1 were planned and implemented. After the nursing interventions were performed, the children's sleep improved and one of the mothers reported that the child showed greater disposition during the day.

Also found in the case studies was the nursing diagnosis "Impaired breathing", an inhale or exhale process that provides inadequate ventilation and results in decreased ventilation per minute, and altered respiratory rate and respiratory depth, nostril fluttering, difficulty in breastfeeding and swallowing. Nasal obstruction, a characteristic found in the study children, makes it difficult for air to enter and/or exit normally through the airways, which then occurs orally and modifies all respiratory mechanics.

Children under five are very vulnerable to developing respiratory problems, as this system is still in the process of development. As a result, respiratory problems are considered frequent in childhood and increase morbidity and mortality in this age group⁽³⁰⁾.

For this diagnosis, the nursing interventions presented in Chart 1 were planned and implemented. After the nursing interventions were performed, the children's breathing improved.

Study limitations

The limitations of the research refer to the fact that valid nursing diagnoses and interventions apply to the reality of children hospitalized at the HULW/UFPB Pediatric Clinic. However, the development of case studies in other care settings is recommended in order to identify the applicability of the Nomenclature to other realities of care for hospitalized children

Contribution to Nursing, health or public policy

The case studies bring considerable contributions to Nursing, as they collaborate to improve the nursing process in children from 0 to 5 years, giving visibility to the stages of the nursing process. The validation of the Nomenclature of nursing diagnoses, interventions and outcomes of the Pediatric Clinic for children from 0 to 5 years of age supports the application of CIPE® in care practice. This contributes to the use

of a standardized language with definitions of related nursing diagnosis statements related to nursing practice and facilitates the process of professional nurses' diagnostic reasoning, because the concepts are evaluated considering the reality of care. Consequently, the study also collaborates with documentation of nursing practice in child care, since it proposes a standardized, comprehensible and useful language.

FINAL CONSIDERATIONS

The objectives proposed in the research were achieved. At the first moment, the operational definitions for the nursing diagnosis statements contained in the Nomenclature were elaborated. When carrying out the consensus type validation process, it was verified that 55.6% of the nursing diagnoses present in the nomenclature were validated for children from 0 to 5 years. In the second moment, the clinical validation of the Nomenclature was done, through six case studies that followed the phases of the nursing process, and it was identified that 24.3% of the diagnoses were validated and applicable to nursing practice. The study also revealed that 54.5% of the nursing interventions used in the case studies are part of the interventions present in the Nomenclature of HULW/UFPB nursing diagnoses, interventions and outcomes for the Pediatric Clinic. Therefore, they can be used in practice to contribute to effective, safe and quality care for the child.

The case studies for the validation of nursing diagnoses/outcomes and their definitions, based on Basic Human Needs Theory, have contributed to improve the nursing process applied to children aged 0 to 5 years in the Pediatric Clinic and to assist the planning of nursing care in a precise, clear and easy manner, thereby individualizing care. With these cases, it was also possible to address nursing problems according to the basic needs of each child, to list the diagnoses in order to understand their meaning, to elaborate the planning of the interventions, to implement such interventions according to the daily needs of each binomial and in the perspective of promoting efficient and effective care, to evaluate the binomial and to verify if the expected outcomes have been achieved.

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