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NURSING DIAGNOSIS IN HOSPITALIZED CHILDREN USING NANDA-I: A CASE STUDY

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ABSTRACT

Objective: To identify nursing diagnoses according to the taxonomy of NANDA-I in children hospitalized in the Pediatric Clinic of a teaching hospital, based on Horta's the theory of basic human needs. **Method:** This is a case study with a quantitative approach, conducted with 37 hospitalized children, aged 0-5 years. The data collected went through a judgment process of the needs affected, resulting in the identification of nursing diagnoses, named using the taxonomy of NANDA-I. **Results:** We identified 184 diagnoses assigned to 36 concepts diagnoses, with an average of 5.1 per child. The diagnoses more frequently obtained were impaired skin integrity, risk of infection, risk of electrolyte imbalance and acute pain. **Conclusion:** We hope that this research will serve as a stimulus for further research in this area, which needs every day, trained professionals with critical thinking to perform complex activities.

Keywords: Nursing, Nursing diagnosis; Child.

INTRODUCTION



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ORIGINAL ARTICLES

Hospitalization is a reality in the lives of much of the population, because, every year, more than one million children are hospitalized for various reasons. Thus, one cannot ignore the impact that these children and their families suffer from this process, because this experience in childhood is considered to be very traumatic, potentially triggering the origin of several factors such as distress, anxiety and fear when facing an unknown and threatening situations, which may reflect on their entire adult life⁽¹⁾.

Many times in the care of hospitalized children predominates the clinical, individual, curative care, with sophisticated technology and highly interventionist. This assistance has proven to be insufficient, because it lacks the search for the integrity of the child that meets the needs of diagnosis and therapeutics, resulting of pain, crying, aggression, bad mood, among others. These factors, added to the technical activities, centered on the physiological anatomy, focusing on continued growth, development and quality of life, recreation and the implementation of mother-child relationship⁽²⁾.

Nevertheless, in a study it was found that the time of hospitalization may represent not only a period in which children present illnesses that impose limitations in many ways, but also an opportunity to systematize procedures that will benefit the development of children, as: breastfeeding, immunizations, healthy nutrition, prevention of accidents and infections, through meetings among health professionals and mothers⁽³⁾. Similarly, in another study conducted in hospitals were cited positive earnings as a period in which they find on this place, a more favorable environment of care, attention and power than the in their homes⁽⁴⁾.

Taking care of the child at the moment of its hospitalization is complex and requires sensibility, to be open to the events and changes of a pediatric unit, involving relationships and interrelationships of the families, staff and children, taking into account their particularities of human development and growth. The philosophy of care to the child joins the knowledge obtained during the personal and professional experiences. The child must remain linked to the family unit through the humanization of care, the respect for her as an individual, with its own characteristics⁽⁵⁾.

The process of caring for a child is regarded as something complex, requiring professional theoretical knowledge that justifies this care, aiming to the peculiarities and characteristics of each age, since growth and psychological, social and intellectual developments are evolving and interdependent⁽⁶⁾. To facilitate the implementation of nursing care it is used the Systematization of Nursing Care, to support the decision making about care.

According to COFEN Resolution 358/2009, the Nursing Care Systematization organizes professional work regarding the method, staff and instruments, making possible the operationalization of the nursing process, which in turn is a methodological tool that guides the nursing professional care and the documentation of professional practice. This process is organized into five steps interrelated, interdependent and recurring, where the phase of nursing diagnosis is understood as a process of interpretation and grouping of the data collected in the first stage, culminating in the decision making on the nursing diagnostics concepts, which represent more accurately the responses of the person, family, or human collectivity at a given moment of the process health and disease and which form the basis for the selection of actions or interventions with which it aims to achieve the expected results⁽⁷⁾.

For the identification of nursing diagnosis it is necessary a complex intellectual process, in which one uses cognitive skills, experience and scientific knowledge, so that the nurse can decide and interpret objective and subjective data about the patient⁽⁸⁾. It is also used in the process nursing terminologies, which has given nurses the opportunity to document, systematically, the care given to children, using the elements of practice. Among the nursing terminologies Taxonomy II of NANDA-I, provides a communication that is clear, accurate, objective and easy to understand for those who make up the nursing staff, improving the quality of the reported information, and allowing the professional the capacity for critical reflection, pointing to a practice that is more scientific and less intuitive⁽⁹⁾.

This study aimed to identify nursing diagnoses according to Taxonomy II of NANDA-I in children 0 to 5 years hospitalized in the Pediatric Clinic of a teaching hospital, based on Horta's theoretical model of basic human needs.

METHODOLOGY

This is a case study with a quantitative approach for data analysis, conducted in a university hospital, a place that stands out for its performance in education and assistance, which provides a field of practice in the professionalization of students in courses of medicine, nursing, physiotherapy, nutrition, pharmacy, dentistry, social work, psychology, physical education, media, among others.

The research was initiated after the project was approved by the Ethics Committee in Research of University Hospital Lauro Wanderley, Federal University of Paraiba, meeting and respecting the

provisions of Resolution No. 196/96, of the National Health Council, which deals with researches with humans 10, being filed under the number 376/10.

The sample included 37 children hospitalized in the Pediatric Clinic, who were aged between 0-5 years, considered the age of the highest prevalence in the institution and for which there was already an instrument to collect validated data, called "History of Nursing for Children 0-5 years", which was developed based on Horta's Theory of Basic Human Needs⁽⁶⁾.

Data collection occurred from July to October 2010. Initially, we approached the mother, father or escort the child 0-5 years, explained the importance of the research and delivered a term of informed consent for signature of the person responsible. After authorization of the parent/guardian we applied the instrument mentioned above for the data collection and a physical examination of the child was conducted.

The data collected went through a process of analysis per child, which resulted in individual frames containing the affected needs, the empirical indicators identified for each need and nursing diagnoses, which were made using the process of clinical reasoning and Taxonomy II of NANDA-I. After the identification of nursing diagnoses, they were classified according to Basic Human Needs⁽¹¹⁾. Then the most frequent nursing diagnoses were analyzed with regard to the defining characteristics or risk factors that presented relevance to the sample of children 0-5 years. Data were analyzed using descriptive statistics.

RESULTS

The results of the study allow the characterization of the sample, the identification of nursing diagnoses, which were classified according to human needs and their frequency, and the defining characteristics or risk factors of relevance of the most frequent nursing diagnoses were analyzed.

The characterization of the sample we took into account the child's age, its origin and the accompanying's education, considered it as the child's mother or caretaker. The data show that 22 (59.46%) children were in the period of lactation, 13 (35.14%) in Pre-school and 2 (5.41%) in neonatal period. With respect to the origin of hospitalized children, the data show that the place with the highest number of origin was the city of João Pessoa with 32 (86.49%), 4 (10.81%) from other municipalities in the state of Paraíba and 1 (2.70%) was not provided. There was a greater amount of hospitalization of children coming from the municipality of João Pessoa, in which many of them came from their homes,

of Family Health Programs (FHP) and Basic Health Units (BHU). The data related to the education of parents or accompanying the child, show that 14 (37.8%) had incomplete primary level, 10 (27.0%) finished high school, 6 (16.2%) did not report the schooling, 4 (10.8%) had incomplete secondary education, 2 (5.4%) had completed elementary school and 1 (2.7%) without schooling.

With regard to nursing diagnoses in children 0-5 years, we identified 184 nursing diagnoses distributed in 36 diagnosis concepts, with an average of 5.1 diagnoses per child, classified into fifteen basic human needs, as shown in Table 1.

Table 1: Distribution of nursing diagnoses identified in children aged 0-5 years, hospitalized in a Pediatric Clinic of a university hospital, for basic human need. João Pessoa-PB, 2010.

Needs	Nursing diagnoses	F	%
oxygenation	1. 1. Impaired gas exchange	8	4,3
	2. Ineffective breathing pattern	5	2,7
	3. Impaired spontaneous ventilation	2	1,1
	4. Risk of suffocation	2	1,1
Nutrition	1. Imbalanced nutrition: less than body requirements	8	4,3
	2. breastfeeding interrupted	1	0,5
Hydration	1. Risk of electrolyte imbalance	17	9,2
	2. Fluid volume deficient	4	2,1
	3. Risk of volume of liquids deficient	2	1,2
Elimination	1. Risk of dysfunctional gastrointestinal motility	8	4,3
	2. Dysfunctional gastrointestinal motility	6	3,3
	3. Diarrhea	1	0,5
	4. Risk of constipation	1	0,5
	5. Impaired urinary elimination	1	0,5
Sleep and Rest	1. Insomnia	4	2,2
Physical exercise	1. Impaired physical mobility	6	3,3
Physical Integrity	1. Impaired skin integrity	28	15,2
	2. Neonatal jaundice	1	0,5
Thermal Regulation	1. Ineffective thermoregulation	4	2,2
	2. Hyperthermia	2	1,1
	3. hypothermia	2	1,1
Regulação Neurológica	1. Baby disorganized behavior	1	0,5
	2. Risk of unorganized behavior of the baby	1	0,5
	3. Risk of acute confusion	1	0,5
Immune Regulation	1. Risk of infection	25	13,6
Regulation of Growth	1. Delay in growth and development	7	3,8
Vascular Regulation	1. Decreased cardiac output	2	1,1
	2. Shock Hazard	1	0,5
	3. Risk of bleeding	1	0,5
Perception	1. Acute pain	13	7,1
Security	1. Fear	5	2,7
	2. Impaired parenting	3	1,6
	3. Anxiety	1	0,5
	4. Ineffective role performance (Mother)	1	0,5
Communication and Recreation	1. Recreation activity deficient	8	4,3
	2. Impaired verbal communication	1	0,5
Total		184	100,0

DISCUSSION

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Basic human needs are states of tension, conscious or unconscious, resulting from homeodynamic imbalances of vital phenomena. When in dynamic equilibrium states, these necessities do not manifest themselves, but are latent and emerge with greater or lesser extent depending on the installed imbalance⁽¹¹⁾. In the study were identified nursing diagnoses on the needs of Oxygenation, Nutrition, Hydration, Elimination, Sleep and Rest, Exercise, physical integrity, temperature control, Neurological Regulation, Immune Regulation, Regulation of growth, vascular regulation, Perception, Security, Communications and Recreation . But the nursing diagnoses with higher frequency were classified on the needs of physical integrity, immune regulation, hydration and Perception, which will be discussed in this article.

In the need of physical integrity nursing diagnosis: impaired skin integrity 28 (15.2%) was the most frequent. This diagnosis is conceptualized as the epidermis and/or dermis⁹. The defining characteristics for this diagnosis, by the study, were pruritic lesions, tracheostomy injury, damage to the palate (post surgery), mucosa of the lips parched, ganglionic lesions, petechiae, lesions of the gastrostomy and pustules. This diagnosis was the most frequent of the study, and when we analyze we can see that many of the defining characteristics that were identified are related to surgical procedures and also some symptoms of the disease that the child presented.

With respect to the integrity of the skin, all children in each age group, fear bodily injury by mutilation, bodily invasion, change in their image, disability or death. It is important that the nursing staff recognize the importance of the procedure and assess child's comprehension⁽¹²⁾.

In order for some factors do not interfere with the child's skin integrity, certain precautions should be made to prevent injuries such as: moving the child in the bed (when in bed), to prevent the appearance of wounds throughout the body, evaluate and suggest a nutritional treatment plan that aid in the recovery of the losses of substances that facilitate lesion, and perform procedures on body parts with less risk of abrasion.

In need of Immune Regulation it was identified the nursing diagnosis Infection Risk 25 (13.6%), this being the second most frequent in the study. The diagnosis of Infection Risk as a concept has the increased risk of being invaded by disease-causing organisms 9. Risk factors identified for this diagnosis were allergies (drug, dust, certain types of diapers, hair, perfume) and incomplete vaccination schedule according to age.

In childhood, with the period of high susceptibility to diseases, immunization is one of the most important prevention strategies in the society nowadays¹². Despite the many vaccines currently available, that may be provided to individuals of any age; the main recommended schedule begins during the period of latency, and is completed during early childhood⁽¹³⁾.

Also during the period of child's hospitalization, many actions carried out by family members, are important for preventing future infections. In this period the family is instructed on the importance of simple hand washing, and on the risk of hospital infection; it learns the meaning and interprets it, playing it through action that is observed through behavior, becoming a participant in the control of hospital infection⁽¹⁴⁾.

In the need of hydration it was identified the third most frequent diagnosis in the study: Risk of electrolyte imbalance 17 (9.2%), which, according to Taxonomy of NANDA-I⁹, is defined as the risk of change in serum electrolyte levels, capable of compromising health. The risk factors of this diagnosis in the survey included water imbalance, electrolyte losses (vomiting, diarrhea).

The maintenance of an almost constant volume and a stable composition of the solutes of body fluids is essential for the homeostasis of the organism. The body needs water daily, which varies individually and is influenced by a number of factors such as environmental conditions, and the need for garments that interfere with thermoregulation, for example⁽¹⁵⁾.

Dehydration is the clinical condition of the consequent decrease in body fluid, balanced with less water, especially of electrolyte. When dehydration is presented severely, it jeopardizes the integrity of tissues and organs, for it can cause irreversible damage to cells by osmotic acute disorders, intoxication (by sodium, urea, acids and other substances), and circulatory disorders (hypoxia, ischemia, thrombosis) or alter vital functions such as circulation, oxygenation, heart activity, among other

In the need of Perception was identified the nursing diagnoses of Acute Pain 13 (7.1%). This diagnosis has as a concept, according to the NANDA-I⁽⁹⁾, the unpleasant sensory and emotional experience arising from actual or potential tissue damage or described in terms of such damage (International Association for the Study of Pain); start fast or slow, mild to severe, with early termination or predictable and lasting less than six months. The defining characteristics found in the survey were non-verbal behavior of pain, pain at the surgical site, one verbalizes pain (head, abdominal chest, postprandial fullness).

Some characteristics of children's responses to pain, according to the development: in the young infant is given the generalized body's response of stiffness or shaking, possibly with local retraction and reflex of the stimulated area, loud crying, facial expression of pain and shows no association between the stimulus that approaches and the subsequent pain; in older infants it has located a body response to deliberate retraction of the stimulated area, loud crying, facial expression of pain and/or anger and physical endurance, especially by pushing the stimulus away after it is applied, and the young child is characterized by loud crying, verbal expressions (Ai, Ui), agitation of arms and legs, trying to push the stimulus away before it is applied, he does not help, needs physical restraint, asks for the procedure to be finished, clings to parents, nurse, or other person who is important to her⁽¹²⁾. Thus, it is necessary the use of systems of objective methods of pain assessment by means of routine use, at the bedside of rating scales of the painful phenomenon designed for a specific target audience, considering that they are the patients who are unable to verbalize the pain they feel⁽¹⁶⁾.

Upon completion of the study, it is clear that, from the defining characteristics and risk factors detailed and targeted to the four most common diagnoses in the study reinforce that NANDA-I⁽⁸⁾ describes the characteristics of individuals, families and communities subject to observation and verification, which function as statements or inferences which are grouped as manifestations of an existing disease or health condition welfare, or a nursing diagnosis.

FINAL CONSIDERATIONS

The nursing professional, specifically nurses, should be well prepared, trained, have an empirical theoretical knowledge so that at the time of execution of their activities, using their critical thinking, they may have effective results, always giving priority to health and wellness the child.

The completion of the study showed the importance of the second stage of the nursing process, which is the nursing diagnosis, by identifying the signs and symptoms of hospitalized children aged 0-5 years, the language standard of nursing, using Taxonomy II of NANDA-I, which is a classification system used worldwide, and provides continuity of care by preventing errors, repetitions and waste of time.

It is believed that, using a diagnostics based on a theoretical model, following an international classification system, nursing care is provided for a continuity of the implementation of remaining steps of the nursing process, thus providing autonomy for nurses to perform their actions, promoting

maintaining and improving the health of the child which results in a qualified and humanized care to the child, but also documents the professional practice for continuity of care, so that people involved in treatment have access to the assistance plan. It is hoped, therefore, that this research will serve as a stimulus for further researches in this area, which needs, every day, interested professionals, skilled, and critical thinking skills to perform complex activities.

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Note: This article is the summary of the dissertation Bezerra PAPL. Nursing diagnosis in hospitalized children using the Taxonomy II of NANDA-I, presented in the Graduate Program in Nursing at the Federal University of Paraíba, Brazil.

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