

Anxiety in children following hospitalization: a proposal for a nursing diagnosis¹

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Objective: to describe the process of developing a nursing diagnosis regarding child anxiety following hospitalization, which is to be submitted to the international classification for nursing practice, in accordance with the guidelines set out by the International Council of Nurses and the ISO standard 18104:2014. Method: this methodological study includes a conceptual analysis that bases itself on analyzing the phenomena of anxiety and hospitalization, while identifying the critical attributes of the concept and developing an operational definition. Results: all the criteria for including a new nursing concept were followed and there was no violation of the framework of the International Classification for Nursing Practice with the proposed inclusion, since the concept of anxiety already exists in this classification system and the concept of anxiety from hospitalization would be considered a species or subclass of this concept. Conclusion: this analysis of the concept of hospitalization anxiety in children allowed its meaning to be clarified and, consequently, understanding to be constructed regarding its practical applicability. This achievement contributed in terms of providing incentive to develop new proposals for nursing diagnoses to be included in the International Classification for Nursing Practice.

Descriptors: Nursing; Nursing Diagnosis; Child, Hospitalized; Anxiety; Concept Formation.

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Introduction

In a study conducted with the objective of building diagnostics statements, results and nursing interventions for children in a pediatric clinic, using the International Classification for Nursing Practice (ICNP®), 42 diagnostic concepts were developed, with the most frequent being anxiety from hospitalization in children, with 88.5%, ability to sleep and rest, with 74.2%, skin discoloration, with 68.5%, and normal child development, with 65.7%⁽¹⁾.

Identifying child anxiety by nurses following their hospitalization, as referred to in the aforementioned study, underlines the need for nursing staff to give special attention whenever hospitalized children are involved. Therefore, given the high prevalence of anxiety in the 0 to 5 year-old age group, this study was developed with a view to deepen knowledge on this topic, while placing emphasis on a proposal for a new nursing diagnosis to be included in the ICNP®, the objective of which, among other things, being to make a contribution in terms of the care provided.

Because anxiety disorders are among the most predominant psychiatric disorders during childhood and adolescence, and that these remain undiagnosed and largely undertreated,⁽²⁻³⁾ means that the necessity for professional pediatric caregivers to understand such issues is critical, since identifying child anxiety following hospitalization requires critical thinking, which in turn requires deeper theoretical and practical knowledge. These aspects, combined with the perception that there is a lack of understanding regarding this concept, especially when it is referred to as a possible consequence of hospitalization, indicate that clarifying this concept is vital. A thorough analysis is required in order to overcome this shortcoming that can then enable its understanding and be useful for the working systems that are involved in pediatric nursing.

Building understanding in nursing is known to need a structure of concepts, which makes it possible to develop research and contribute to the building of theories. Thus, studying the concept of child anxiety following hospitalization makes analyzing unusual phenomena in pediatric nursing care possible, such as anxiety and hospitalization, in addition to enabling concepts that are essential for nursing development to be continuously improved.

Based on the understanding that conceptual analysis is directly linked to the development and expansion of knowledge in nursing, its operation aims to clarify the

concepts that are useful in its practice, since these concepts may contribute to suitable care being applied in different scenarios of this profession. Another relevant fact is that there needs to be new reflection and updates in relation to conceptual analysis methodologies, since these type of studies make exchanges between nursing knowledge and knowledge from different disciplinary fields possible, which in turn enables the nature of nursing to be explained and is helpful in defining its specific field and scientific methodology⁽⁴⁾.

The consensual and suitable definition of the concept of child anxiety following hospitalization will give rise to its specific characteristics, which include attributes that are background and consequential to this concept, and will therefore provide the necessary foundation to build a nursing diagnosis. From another perspective, it can assist in relation to clinical reasoning being used, for its identification and planning and for implementing quality nursing care. With this notion in mind, exploring this concept is extremely important as doing so can provide solutions to problems regarding the terminology/words and expressions used, particularly in nursing, which are essential for proper communication and can contribute to constructing knowledge in this field⁽⁵⁾.

Thus, the objective of this article was to describe the process of developing a proposal for a nursing diagnosis regarding child anxiety following hospitalization. This proposal shall then be submitted to the International Classification for Nursing Practice (ICNP®). The proposal will be based on analysis of the concepts of anxiety and hospitalization and guidelines from the International Council of Nurses and the ISO standard 18104:2014.

Method

Walker and Avant's framework for concept analysis was the methodology employed in this study, the aim of which was to clarify the meaning of the terms anxiety and hospitalization, to identify the attributes of these concepts and to structure a nursing diagnosis⁽⁶⁾.

The concept of child anxiety following hospitalization was selected based on it being identified, as a diagnosis, in the practice of nursing care by the researcher. The frequency of this diagnosis in a pediatric clinic was what aroused the interest to conduct this study, and made it possible for the following question to be arrived at: why perform an analysis of the concept of anxiety in children following their hospitalization? The sole purpose of answering this answer was to clarify this phenomenon in the nursing field, as well as expand the understand-

ding of such, reach consensus regarding its definition and structure a nursing diagnosis according to the rules set out by the ICNP®.

A literature review was conducted, using the field of health as a foundation, in order to identify possible uses of the concept with a view to structure the literary corpus for analysis in the study. During this step, the widest possible range of applications of the concept of child anxiety following hospitalization was selected, which was designed to consider all of its uses in the field's literature. To achieve this, various uses of the concept in study from the literary corpus were analyzed, namely: theses and master's dissertations, scientific articles that had been published in the seven years previous to this study (2006 to 2013, a period selected given the increase in the number of publications in the last decade) that dealt with the subject, chapters from books and dictionaries that revolved around the different methods and approaches of the concept.

The theses and dissertations were extracted by consulting a database of theses from the *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - CAPES* (Coordination for the Improvement of Higher Education Personnel). The scientific articles were obtained by performing searches in the Virtual Health Library (VHL). In order to identify the literature indexed in the Medical Literature Analysis and Retrieval System Online (MEDLINE), the Scientific Electronic Library Online (SciELO) and the Latin American and Caribbean Health Sciences Literature (*Literatura Latino-Americana e do Caribe em Ciências da Saúde - LILACS*) databases, in Portuguese, English and Spanish, the key words anxiety, hospitalization and child were used. The chapters from the books and dictionaries were obtained by searching the collections at the *BIREME* (Latin American and Caribbean Center on Health Sciences Information) library, the Central Library at the Federal University of Paraíba and the sectoral library of the Health Sciences Center at that same institution.

A previously structured instrument was used for the data collection, which contained characterization of the literature (type of literature, year of publication, author, language, and area/discipline) and concept-specific data (definitions, backgrounds, attributes, consequences and other relevant information). It is worth noting that this same instrument was used for determining the critical, essential or defining attributes and for identifying the antecedents and consequences of the concept, since these steps happened at the same time.

The search of the indexed literature made it possible to extract 190 scientific papers in total, with 19 of

these being from the *LILACS* database and 171 from the *MEDLINE* database. Published articles that were considered for inclusion in the study were those that covered the subject from 2008 to 2012, however, due to an insufficient number of articles being extracted for this period, it was extended to eight years, i.e. from 2006 to 2013. The exclusion criterion regarding articles that were not suitable to be used in this study included articles that specified anxiety related to that given by the mother or guardian following hospitalization, or those in which the researcher could not access the piece, namely in terms of him/her finding it difficult to obtain some scientific articles for reading in full.

Given the large number of articles that were identified in the databases, only publications that were relevant to the research were selected. In order to reach this objective, while taking the aforementioned inclusion and exclusion criteria into account, the published articles were thoroughly read to identify instances of the anxiety phenomena and/or hospitalization in children. This was done in order to highlight their particularities and thus extract the characteristics of the concepts: definitions, attributes, antecedents and consequences. At the end of this process, there were 10 articles from the *LILACS* database and 9 relevant articles remaining for analysis from the *MEDLINE* database. No publications were identified from the *SciELO* database that had the proposed descriptors for this study, which is not unexpected given the absence of methodological descriptions in this databases' search function.

As regards the collection of theses and dissertations, 24 abstracts were identified that were based on discussion related to hospitalization anxiety in children. For the analysis, the material identified was read and data extracted referring to those relating to the study theme, in the 17 pieces. The other publications did not meet the established inclusion criterion in the corpus analysis.

For the search performed in non-indexed databases, such as in chapters of books and dictionaries, a survey was performed of data that is inherent to the concept of child hospitalization anxiety, highlighting the greater frequency of definitions for the term anxiety and isolated forms of hospitalization. This fact did not mean it was impossible to analyze the characteristics of the concept, it mainly allowed definitions of this concept to be extracted, as well as other factors that made the clarification of its meaning possible.

Regarding the source from where the data were obtained, 19 articles (representing 41% of the total), 17

dissertations (37%), five book chapters and five dictionaries (11% for both) were used, resulting in a corpus of 46 pieces for analysis. In relation to the year of publication for these pieces, most were published between 2009 and 2011, which accounted for 39% of the total, which may be related to the increased interest of researchers, from that period, to enhance their knowledge on this subject. In contrast, there was only one publication made in 2012, which may be related to a decrease in the number of publications made in this area. As regards the language, Portuguese was the most common, with it being used in 37 of the pieces (80%), since most of the analyzed material originated from Portuguese language theses, chapters of books and dictionaries. With regard to the knowledge aspect, most of the studies were in the area of nursing (56%); this is because it is nursing professionals who are closest to children who may develop anxiety in the provision and continuity of care.

Defining attributes, which are also known as critical attributes, are characteristics that act as elements for differential diagnosis, i.e., to distinguish an expression that is from the concept from one that is not⁽⁶⁾. Considering that the attributes can vary according to the context in which they are inserted, at this stage, the attributes were identified that are most often associated with the concept of child anxiety following hospitalization in the most distinct contexts in which it is inserted. In order to reach this aim, there was a cut in the analyzed reading material, which was considered necessary so as to determine the essential characteristics of those that were used with more frequency in the literature. Based on the identification of the attributes, a definition was developed regarding the concept of hospitalization anxiety and a proposal was structured for a nursing diagnosis of hospitalization anxiety in children, which was performed in accordance with the guidelines set out by the ICNP®.

Results and discussion

Due to there being no descriptor on record for anxiety from hospitalization, the concepts of anxiety and hospitalization were analyzed separately, taking the different perspectives of the same definition into account and considering the Health Sciences Descriptors (*Descritores em Ciências da Saúde - DeCS*) from the *BIREME*⁽⁷⁾. The term anxiety is therefore defined as a "feeling or emotion of fear, apprehension and impending disaster, albeit not as crippling as in conditions of anxiety disorders". However, there are additional terms found in the

library that to refer to anxiety, such as anxiety to dental treatment, performance anxiety and separation anxiety.

Based on the definitions found in the literature on the subject, anxiety can be defined as "an emotional state that involves physiological and psychological behaviors that include feelings of fear, insecurity and apprehensive anticipation, an inability to escape ideas of disasters or personal incompetence, an increased state of vigilance, tension and muscle pain, sensation of respiratory difficulty, shaking and uneasiness"⁽⁸⁾. The condition is one oriented towards the future, characterized by apprehension referring to the perception of not being able to control or predict potentially aversive events; bodily symptoms of physical tension; and diverting the focus of attention towards these potentially aversive events or affective responses that are elicited by them⁽⁹⁾.

Other responses that are considered representative of a condition of anxiety can be listed using descriptions found in the *Manual Diagnóstico e Estatístico de Transtornos Mentais* - (Diagnostic and Statistical Manual of Mental Disorders) (DSM V)⁽¹⁰⁾, such as: increased heart rate, changes in breathing and blood pressure, sweating, tremors, shortness of breath or choking, chest pain or discomfort, nausea, abdominal discomfort, dizziness, feeling faint and tingling sensations.

A study performed with a view to clinically validate the nursing diagnosis of anxiety corroborate such features in patients with chronic heart failure, which evidenced the following characteristics as defining aspects of this diagnosis, namely the affective areas (irritability, apprehension, worry and uncertainty), the cognitive areas (confusion and difficulty concentrating), the behavioral areas (agitation, insomnia and nervousness), the physiological areas (increased stress), the parasympathetic areas (fatigue and tingling of the extremities) and the sympathetic areas (palpitation, breathing difficulties and anorexia)⁽¹¹⁾.

However, in some cases an individual may show anxiety and/or fear that is disproportionately elevated relative to the situation or in situations to which such individual's fear or anxiety are not capable of adapting. The individual often continues in this state and thereby lose the ability to function, which is a condition that characterizes Anxiety Disorders (AD)⁽⁹⁾. Therefore, pathological anxiety occurs when the limits of normality are exceeded and there is interference in the individual's physical, psychological and social well-being. This individual may occasionally be confused with feelings of fear and generate a feeling of constant threat to him/herself⁽¹²⁾.

Based on the aforementioned, given that its definition favors the concept's understanding, in order that there is an proper judgment of anxiety, clinical professionals and academics have to have instruments available that are suitable for evaluating anxiety, both for measuring the symptoms, and for screening and diagnosing AD. It is worth noting that when it is previously diagnosed, evaluated and properly treated, the better the prognosis and the lesser the damage is for children with AD. Proper diagnosis of AD improves the prognosis, by providing further information about its course, prevalence and treatment possibilities⁽¹³⁾.

AD are therefore recognized as a public health problem, which have harmful effects on human development, at all stages of life. In Brazil, there is no record of there being any review studies that focus on AD prevention at the universal level. These studies would be important not only in order to understand a way to prevent nationally this highly prevalent problem, but also to expand knowledge regarding the use of evidence-based interventions and verify the existence of possible gaps in national action to be filled on the subject⁽¹⁴⁾.

Given the high prevalence of anxiety disorders in childhood and their significant social consequences, there is clearly a necessity to study the etiology of anxiety disorders⁽¹⁵⁾. It is vital that nurses' understand the risk and management factors of anxiety disorders, which is fundamental in order to develop effective prevention and intervention strategies.

Nursing staff are faced with the most varied situations of anxiety when caring for children who have been hospitalized. It is therefore important that the family play an active role in the care process, working with the health team to reduce the levels of anxiety that result from hospitalization and, consequently, to prevent anxiety disorders that are triggered by this process.

Based on this idea, it should be emphasized that pediatric care must value and recognize the family as an integral part of the multidisciplinary health team; this is because every single hospitalization experience is different for every child, which modifies the family dynamics and those of all its members. Thus, it is the nurse's responsibility to acquire specific knowledge about child development and to provide holistic care that is customized to each child, while involving the family in the entire process of treatment and cure⁽¹⁶⁾.

During the process of pediatric nursing there are many events that can be described by children or their guardians regarding some kind of anxiety. However, the term 'anxiety' can refer to a wide variety of events, both

in relation to internal aspects of the child, and the behavioral processes that they produce. Therefore, it is still necessary that nursing professionals possess knowledge on how to identify this diagnosis, since there is a close relationship between the peculiarities of this with emotional and characteristic aspects that are also identified in other health care situations.

The term hospitalization is included as a descriptor in the *BIREME*, with its definition written as "Being in a hospital or being placed in a hospital"⁽⁷⁾, without confusing this with patient admission or readmission, with these instances being listed as different descriptors at this library.

Considering children's greater susceptibility to illness, it should be noted that there are many risk factors mentioned in the literature that are associated with child hospitalization in the early stages of their lives, such as: being male; low socioeconomic status; high number of children under 5 years of age living in the same household; exposure to smoke, cold and humidity; malnutrition; early weaning; having a young mother; low education level of the mother; and high number of people living in the same household. There are other risk factors that are associated with the point of interest; these are referring to the child's health conditions at birth, such as being underweight and having a low Apgar score⁽¹⁷⁾.

One study, which evaluated the risk factors present when children are hospitalized, pointed to prematurity, severe asphyxia and the presence of congenital anomalies, suggesting children to be a population at risk for problems at birth. The results did show that there are other factors associated with the risk of hospitalization for children during their second year of life, such as: lack of exclusive breastfeeding up to the sixth month of life, maternal morbidity reported in the previous year and a hospitalization event in the first year of life⁽¹⁸⁾.

In the midst of a pathological condition that requires hospitalization, it is understood that children and their family are affected, due to family life being distant and having to stay in hospitals. Hospitalization tends to be a traumatic and exhaustive experience, which is a fact related to including the child and his/her companion in a situation that is different from their routine, the experience is also traumatic as a result of the lack of knowledge regarding the child's health, treatment and how long recovery will take.

These aspects mean that reflecting on the quality of health promotion practices and disease prevention is a matter of great importance, since hospitalizations are

very expensive for health systems and tend to be even more expensive when it is young people and children under 5 years of age whom are hospitalized. It is therefore vital that there be investment in primary health actions with a view to reduce the necessity of hospital cases, and thus improve the quality of care offered to this vulnerable population⁽¹⁹⁾.

The process of hospitalization can mean that there are consequences suffered for child development, these include feelings of anguish, apprehension, fear, impulsiveness, agitation, dread, sadness and anxiety. It is known that the longer the length of time spent hospitalized, the greater the chances there is of characteristics appearing that can negatively affect the normal course of development, the result of which being the need for special attention by health professionals in order to reduce the levels of stress to which these children are subjected, which can mitigate the negative consequences suffered following hospitalization and contribute to the recovery process⁽¹⁾.

The data collected during this study allowed the phenomena that surrounds the concept of anxiety in children following hospitalization to be discussed, which is made possible through theoretical analysis of its attributes, and which helped the concept's meaning to be understood and consolidated.

The attributes, which make up the essential characteristics of the concept, allowed the conceptual definition of child anxiety following hospitalization to be constructed, namely: a multidimensional phenomenon, characterized by biological and psychological aspects, triggered by a stressful and threatening process of being inserted in a hospital environment, where the child stays away from their normal family and social environment and goes to live with strangers, whilst being subjected to invasive and painful procedures, in addition to their recreational activities being partially interrupted.

Structuring the anxiety diagnosis of hospitalization in children

Based on guidelines from the International Council of Nurses (ICN), participation in the incorporation of terms and concepts for the ICNP® classification system is open to academics and clinical professionals in the field of nursing and health communities. The objective of this is to achieve a clinically relevant classification that is valid and useful in the practice of nursing, which produces data that is sensitive to cultural variation and local circumstances. For this incorporation to happen,

it is necessary to take the criteria, presented by ICN, for including a new nursing concept into consideration: The concept must 1) be within the nursing domain; 2) be usable and useful in professional practice; 3) not be redundant with other ICNP® concepts; 4) be supported by scientific evidence found in literature or validation studies; and 5) have a definition⁽²⁰⁾.

In the ICNP®, in order to formulate definitions of terms, the method of definition by class and difference was used, which defines a concept, while specifying the main class of objects to which it belongs, and defines the characteristics that distinguish it from all other members of the class. This definition method also implies placing the terms in ascending order – class as a superior term and species as an inferior, subordinate term. When the terms are placed in superior and subordinate positions, it creates a hierarchical relationship between the concepts.

The results of this study show that all the criteria for inclusion of a new concept of nursing were obeyed and the proposal for a new concept with its definition does not violate the ICNP® structure, since the concept of anxiety (class) already exists in this classification system and the concept of anxiety following hospitalization would be considered a species or subclass of this concept.

For developing the nursing diagnosis statement for child anxiety following hospitalization, based on the concept of hospitalization anxiety, the guidelines contained in the ICNP®, in line with ISO 18104 were taken into account: integration of a nursing reference terminology model that emphasizes the obligation to include a term from the focus axis, which is an area that is relevant to nursing, and a term of the judgment axis, which is an opinion or clinical determination that is related to the focus of the practice of nursing, and may include additional terms wherever necessary, from the focus, judgment or other axes.

Using the ISO reference terminology model for nursing diagnoses, the diagnosis would be built in accordance with Figure 1:

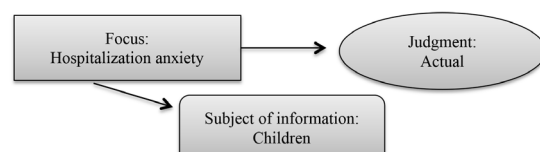


Figure 1 - Schematic representing the construction of the nursing diagnosis of child anxiety following hospitalization, according to ISO reference 18104. João Pessoa, PB, Brazil, 2014

The defining or critical attributes of the concept constitute its definition within the ICNP®, which would be as follows: hospitalization anxiety: anxiety with the following specific characteristics: sympathetic stimulation (superficial vasoconstriction, pupil dilation)/tachycardia; tremors; changes in appetite; dyspnoea; insomnia; fear/distress; hyperactivity/impulsiveness/agitation; insecurity/powerlessness; feeling of guilt, bodily harm or aggression; apprehension; feeling of abandonment/loneliness; tension; nervousness; preoccupation; irritability; sadness; crying; and lack of concentration.

Given that the theoretical survey of the listed data used only literature as a reference, it is worth highlighting the importance of empirically testing the data as a way to bring the knowledge extracted in the theory together with practice. In this design, synthesizing the elements of the concept, the final product of this study, can serve as a guiding instrument for measuring anxiety of hospitalization in children in a health care context. Complementing this knowledge with empirical data is required so as to support the use of the concepts in the formulation of theories as foundations to guide the profession's activities, both in its practice, research or teaching.

Conclusion

Analyzing the concept of anxiety from hospitalization allowed essential characteristics of the phenomenon (attributes) to be surveyed, which enabled the structuring of a conceptual definition in order to expand the meaning of this concept. The objectives that were proposed for the research are considered to have been achieved, since the presented theoretical analysis obeyed the methodological principles as listed by the Walker and Avant model, which highlights the need for progressive study of concepts, given the dynamic quality modifying their ideas and words, as well as the relevance of making a contribution to the understanding of the phenomenon in its practical applicability.

As regards the aspects surrounding child hospitalization, it is known that the anxiety triggered by this is characterized by a series of stress and threatening factors that make the child psychologically imbalanced; these in turn tend to result in negative consequences for his/her development. As for the conceptual definition, it was possible to identify the appearance of anxiety as being a result of the child's entry into unfamiliar surroundings, where the child stays away from their normal family and social environment and goes to live with

strangers, whilst being subjected to invasive and painful procedures, in addition to their recreational activities being partially interrupted.

The results from the conceptual analysis allowed a proposal for a nursing diagnosis to be developed, which met the criteria for including a new nursing concept in the ICNP®. It is necessary that this concept be tested in practical nursing, which is a way to bring the knowledge found during the concept's analysis together with professional practice.

It is hoped that this study will play a role in clarifying of the concept of anxiety in hospitalized children in such a way that its component interfaces can be easily identified in child health care and, consequently, promote quality in the process of developing pediatric care. The need to continue this study at a point that deserves highlighting, with such study possessing the scope to clinically assess the data collected in this theoretical analysis, while meeting the criteria set out by the ICN and including a new nursing diagnosis in the ICNP®. Effectively, should this be achieved, it is hoped that a contribution will be made to the understanding of the concept's meaning and its applicability in various areas of pediatric nursing, as well as knowledge be added to the profession as a science.

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