Original Article

Hospitalized school children: proposition of a data collection instrument in light of Horta's theory

Escolares hospitalizados: proposta de um instrumento para coleta de dados à luz da teoria de Horta

Escolares hospitalizados: proposición de un instrumento para recolección de datos a la luz de la teoría de Horta

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ABSTRACT

Objetivo: To build a data collection tool for hospitalized schoolchildren in light of the Theory of Basic Human Needs.
Method: Methodological research developed in a a Teaching Hospital in João Pessoa, with the participation of eight teachers and assistant nurses, from July 2014 to March 2015. Statistical analysis was used to validate the empirical indicators.
Resultados: The indicators were identified from the instrument analysis validated for children, considering the International Nursing Minimum Data Set, which resulted in version 1 of the instrument with 301 indicators. The instrument validation resulted in 288 indicators, which were later revalidated and formatted once the instrument's final version was reached.
Conclusion: The instrument has contributed to data collection in teaching hospitals and has guided the other phases of the nursing process, considering the specific needs of these children, collaborating with the nursing care, education and research.
Keywords: Nursing. Nursing process. Validation studies.

RESUMO

Objetivo: Construir um instrumento de coleta de dados para escolares hospitalizados à luz da Teoria das Necessidades Humanas Básicas.
Método: Pesquisa metodológica desenvolvida no Hospital Escola de João Pessoa, com a participação de oito enfermeiras docentes e assistenciais, no período de julho de 2014 a março de 2015. Foi utilizada a análise estatística para a validação dos indicadores empíricos.
Resultados: Os indicadores foram identificados a partir da análise de instrumentos validados para crianças, considerando o Conjunto Internacional de Dados Mínimos de Enfermagem, resultando na versão 1 do instrumento, contendo 301 indicadores. Após a validação do instrumento, obtiveram-se 288 indicadores que passaram por revalidação; em seguida, foi realizada a formatação do instrumento na versão final.
Conclusão: O instrumento tem contribuído para a coleta de dados de escolares hospitalizados e norteado as demais fases do processo de enfermagem, considerando as necessidades específicas dessas crianças, colaborando com a assistência, ensino e pesquisas de enfermagem.
Palavras-chave: Enfermagem. Processos de enfermagem. Estudos de validação.

RESUMEN

Objetivo: Construir un instrumento de recolección de datos para escolares hospitalizados a la luz de la Teoría de las Necesidades Humanas Básicas.
Método: Investigación metodológica desarrollada en un hospital Escuela de João Pessoa, con la participación de ocho profesores y auxiliares de enfermería en el periodo de julio de 2014 y marzo de 2015. Se utilizó el análisis estadístico para validar los indicadores empíricos.
Resultados: Los indicadores se identificaron a partir del análisis de los instrumentos validados para los niños, considerando el Conjunto Internacional de Datos Esenciales para Enfermería, resultando en la versión 1 del instrumento, conteniendo 301 indicadores. Después de la validación del instrumento, hubo 288 indicadores, que pasaron por la revalidación y después de que el formato del instrumento se llevó a cabo en la versión final.
Conclusión: Este instrumento ha contribuido a la recolección de datos de escolares hospitalizados y guiado las demás fases del proceso de enfermería, considerando las necesidades específicas de estos niños, apoyando la asistencia, enseñanza e investigación en enfermería.
Palabras clave: Enfermería. Procesos de enfermería. Estudios de validación.

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INTRODUCTION

The proposal to develop the systematization of nursing care in pediatric units presents some challenges for they serve a clientele that is complex in its growth and development, in age groups ranging from newborns to adolescents. Allied to child morbidity and mortality profile changes due to gradual increase in assistance and the prevention of acute diseases mainly due to perinatal diseases and preventable causes, the reduction in the incidence of preventable diseases through immunization schedules, the advance of technology and the actions of the teams in the basic health units[1], factors that contributed to the children's hospital admissions focusing on chronic and severe acute cases.

Nursing care in the children's hospitalization requires professionals to rethink their actions and base their actions on scientific knowledge, specifically in science itself, in nursing. Therefore, it is necessary to establish goals to fully meet the needs of the child/family, in the biological, emotional, psychological, social and spiritual contexts, with the intention of provided quality and visibility to their actions. Thus, it is imperative that the nursing professional have the competence and ability to provide efficient care that solves the problem presented, for which it is imperative to establish a method to guide their practice.

The method used is the nursing process, which is understood as a methodological tool that enables the identification, understanding, description, explanation and/or prediction of the person's, family's or human community's needs, favoring and organizing professional care[2]. The nursing process must be based on a theoretical model in order to be used in care practice. In Brazil, the theoretical assumptions of Horta, referring to basic human needs (BHN), have been used in various services and applied to a number of nursing clients.

The theories of BHN directs nursing care at three levels: psychobiological, psychosocial and psychospiritual[3]. Nursing care provided to children and adolescents should include not only the physical/biological care, but consider the emotional, social and spiritual needs. From the moment that the nurse is knowledgeable about the level of needs of their specific clientele, diagnoses, outcomes and interventions will result in a better resolution rate and quality in the assistance.

The application of the nursing process, the use of nursing theories in research aimed at care practice, as well as the development of a standardized language for this assistance, are increasingly discussed topics in national and international studies[4]. Associated with Resolution 358/2009 of the Conselho Federal de Enfermagem (Nursing Federal Council) on the implementation and documentation of the nursing process in health institutions, it demonstrates the contribution of nursing to health care among the population, increasing visibility and professional recognition[5-6].

The Clínica Pediátrica do Hospital Universitário Lauro Wanderley-Paraíba State (Pediatric Clinic of the University Hospital Lauro Wanderley-Paraíba) has been the scene for research development directed towards healthcare practice care for many years, where tools were developed for the implementation of the nursing process for specific age groups, children 0-5 years [7] and adolescents (12-18 years of age) [8], leaving a gap for school age children (6-12 years of age), and the development and validation of diagnostic/results/interventions for the group of pediatric patients[9-10].

The tools developed are based on Horta's theory of Basic Human Needs (BHN)[3], as it is the basis of the HULW's Nursing Assistance Systematization (SAE) project, in the development of other phases of the nursing process, help from the International Classification for Nursing Practice (ICNP®)[4]was necessary, meeting the recommendations of the International Council of Nurses.

Considering the gap involving school age children for said pediatric unit and the fact that there were no actual descriptions in other studies concerning the data collection instrument for schoolchildren, the following question was made: What does the International Council of Nurses proposes to collect nursing information to promote the visibility of nursing care and the implementation of the nursing process?

In this perspective, the *International Council of Nurses* (ICN), together with the *International Medical Informatics Association Nursing Informatics Special Interest Group* (IMIA NI-SIG) and other international standards bodies have developed the *International Nursing Project Minimum Data Set* (i-NMDS) since 2001 . This global project is focused on the coordination of data collection or information collection and analysis in nursing that is relevant to support the description, study and improvement of nursing practice and was structured from the *Nursing Minimum Data Set* (NMDS[11].]The i-NMDS has promoted the test, demonstrated its potential and is congruent to the NMDS in describing nursing practice, focusing on developing and using the ICNP® according to what is proposed by the ICN. The concepts of CIPE® can be used by i-NMDS to represent the nursing care elements: diagnosis, intervention and outcome of nursing[12].

The following question arose based on the issue that permeates the complexity of providing nursing care in the pediatric hospital unit: will the construction of a data col-

lection instrument based on the Theory of Basic Human Needs support the health care practice of nurses and provide continuity in the implementation of other phases in the nursing process aimed at providing care considering the specific needs of hospitalized school age children?

In this light, the objective of this study was to construct a data collection tool for hospitalized school aged children based on Theory of Basic Human Needs.

METHOD

This article was extracted from the thesis entitled: "Development and validation of an instrument for the implementation of the nursing process in hospitalized school age children"[13], and is inserted in the research interest Theoretical and Philosophical Foundations of Care in Nursing and Health, which belongs to the Programa de Pós-Graduação em Enfermagem da Universidade Federal da Paraíba at Universidade Federal da Paraíba (PPGENF-UFPB – Graduate Program in Nursing at the Federal University of Paraíba), linked to the Grupo de Estudos e Pesquisas em Fundamentos da Assistência de Enfermagem (GEPFAE – Group for Study and research in Fundamentals of Nursing Care) and the research project Sistematização da Assistência do Hospital Universitário Lauro Wanderley (HULW – Health Care Systematization of the University Hospital Lauro Wanderley).

The GEPFAE, through the integration of teaching, research and extension, with the collaboration of teachers and hospital nurses, aims to implement the nursing process in health care practices, aiming to build research involving the development and testing of instruments to raise data that is significant to nursing practice, identification of nursing diagnoses, as well as planning, implementation and evaluation of care.

This is a methodological research, developed at the HULW Pediatric Clinic. The research was assessed by the UFPB Comitê de Ética em Pesquisa, do Centro de Ciências da Saúde (CCS – Research Ethics Committee of the Health Sciences Center) and approved in accordance with Protocol No. 0654/13 and CAAE 24193313500005188. The ethical aspects recommended by Resolution No. 466/12 of the National Council of Health, which regulates research in humans[14] were taken into account. Nurses and teachers were asked for their permission to participate in this research by signing the consent form.

Data collection took place in the period between June 2014 and March 2015. The following inclusion criteria were established: nurses who had graduated at least five years prior; nurses who acted in the pediatrics area for at least two years; nurses who had graduate degrees and research experience; nurses who had knowledge of the nursing process and systematization of nursing care; nurses that used HULW Clinic Pediatric nursing backgrounds. The exclusion criteria were the following: nurses who were on vacation or leave during the period of data collection; nurses who did not hand back the instrument within thirty days from the date of delivery.

Eight nurses participated, between active nurses and teachers of the HULW Pediatric Clinic, all female, aged between 34 to 58 years, with experience ranging from ten to more than 25 years. As for training, one had a doctorate degree, two were doctoral students, one held a master's degree, another was obtaining the same degree, and three were experts. Of the sample, three exercised the functions of clinical nurses and teachers simultaneously, linked to the Federal University of Paraíba.

The research was conducted in three stages: 1 – Identification of Basic Human Needs empirical indicators in school children hospitalized, based on literature review, indicator validation and formatting of the tool-version 1; 2 – Validation of empirical indicators of version 1 and appearance and content and preparation of version 2 of the instrument; 3 – Formatting of the data collection instrument, final version.

Empirical indicators were considered as relevant terms to which nurses should be alert and that should be researched using the clientele, according to the basic human needs presented, so that from this clinical reasoning and nursing diagnosis judgment, to provide professional practice with a scientific basis. It can be exemplified that in the Oxygenation Need, empirical indicators that have been validated and should be the main signs and symptoms in this case to be evaluated are: vesicular murmurs, adventitious sounds, expectoration (present or absent), respiratory rate, secretion, symmetry of respiratory effort, cough, cyanosis.

Following is a description of step 1 – Identification of related empirical indicators of hospitalized school children:

Empirical indicators were identified from literature review. Aside from relevant studies on the subject, 13 research works developed in PPGENF-UFPB that contributed to the implementation of the nursing process in HULW were identified. Of these, 05 that were directed to pediatric patients were. To further deepen and prepare the instrument for hospitalized school children, a need was felt to evaluate these studies that were already used, because they were validation studies that had already undergone judgment by *expert* nurses. To achieve this, two instruments used in the Pediatric Clinic for children 0-5 years and another for hospitalized adolescents were used. Following this reasoning, 301 indicators were selected for validation.

These instruments were evaluated according to the relevant items for the Nursing Minimum Data Set, example (service items: identification or health service number, client's unique registration number, nursing professional's unique registration number, admission date, discharge date, referal data, data on the type of payment for the service, clients' demographic items, including personal identification, date of birth, sex, race and ethnicity, residence); care items: nursing diagnosis (ND), nursing intervention (NI), nursing results (NR) and intensity of nursing care).

At this stage, in the item, nursing care empirical indicators that could direct the nurse in the identification of ND were inserted. Therefore, they were organized considering Horta's levels of basic human needs of[3]. The ND, ND and NR items were inserted in the instrument related to care planning, included in another stage of the research.

Basic human needs described by Benedet and Bub[15], Horta[3], Marques[8-9] and Garcia Cubas[16] were also analyzed, as were their indicators, in the literature review topic and reorganization needs in the study considered relevant for hospitalized school age children; as a consequence, version 1 of the instrument was structured considering the empirical indicators identified in the literature review.

In step 2: Validation of the content, appearance and instrument format, there was the validation of empirical indicators found in version 1 of the instrument with clinical nurses and teachers, with the help of an instrument to classify empirical indicators in relevant and not relevant and insert suggestions and withdrawal justifications or inclusion of empirical indicators. Empirical indicators classified as relevant were given weight "1" and not relevant – weight "0". The empirical indicators that achieved a Concordance Index (CI) greater than or equal to 0.80 were validated, and empirical indicators with a CI under 0.80 were not considered for inclusion in the Version 2 of the instrument. The inclusion of suggestions were evaluated and inserted depending on the Concordance Index and relevance to the study, according to the relevance, pertinence, representativeness, clarity, contribution, repetition of empirical indicators and the instrument presentation.

In step 3, Data collection instrument formatting, final version, after analysis of validated empirical indicators version 2 of the instrument was drawn up, and resubmitted to the research participants, so that they could reaffirm and agree to the changes made by all, so that the final version of the instrument could then be formatted.

RESULTS

Figure 1 shows the results of the research steps.

301 empirical indicators relating to the service items, items demographic and care items were presented on the instrument – Version 1, of which 288 (95.68%) reached the concordance index (CI) of 0.80 or above and 13 (4.31%) empirical indicators have not been validated, as they presented a CI below 0.80 and belonged to the item care. Of the 288 empirical indicators validated, nine are from the service items, 16 from demographic items and 263 belong to care items.

Demographic data and service data were validated in their entirety and the care data related to measurable empirical indicators (temperature, respiratory rate, heart rate, blood pressure, height, weight, blood glucose and oxygen saturation) was also validated with a CI = 1.0. Empirical indicators for care data were presented for basic human needs, according to Horta's referencial adopted in the study.

The instrument sought to contemplate the i-NMDS data in their categories and items. The service items are shown in the identification of the service through the identification of the Hospital and the Pediatric Clinic, presented by logos that are standardized by the institution, showing the nature of the institution, by means of data on the type of payment for the service, meaning a public hospital belonging to SUS – Unified Health-System.

It is known that it is necessary for the customer to have a unique registration number in order to access service, for SUS, this number is is the National Health Card number-CNS (Cartão Nacional de Saúde) and the medical record number, where individual services are registered. For the i-NMDS, the date of admission and discharge date are relevant data, but only the admission date was included in the instrument, considering its purpose the date of discharge is recorded when the patient leaves on a daily assessment tool; The unique record number of nursing professionals in Brazil, the number of the Regional Council of Nursing (COREN), which must be legible, followed by the professional's signature, located at the end of the instrument, were also contemplated. Customer referral data were considered related to information on the clinic and ward where the client is located.

The i-NMDS demographic items that should minimally be collected are: personal identification, date of birth, sex, race/ethnicity and residence. The identification is performed by recording the child's full name, age in years, date of birth, gender and race/ethnicity. Data on the residence are made by recording the full address.

In addition, information about legal guardians or responsible adults were added, such as identification, age, kinship or relationship and number of any identification document, given it is the child's right to be accompanied

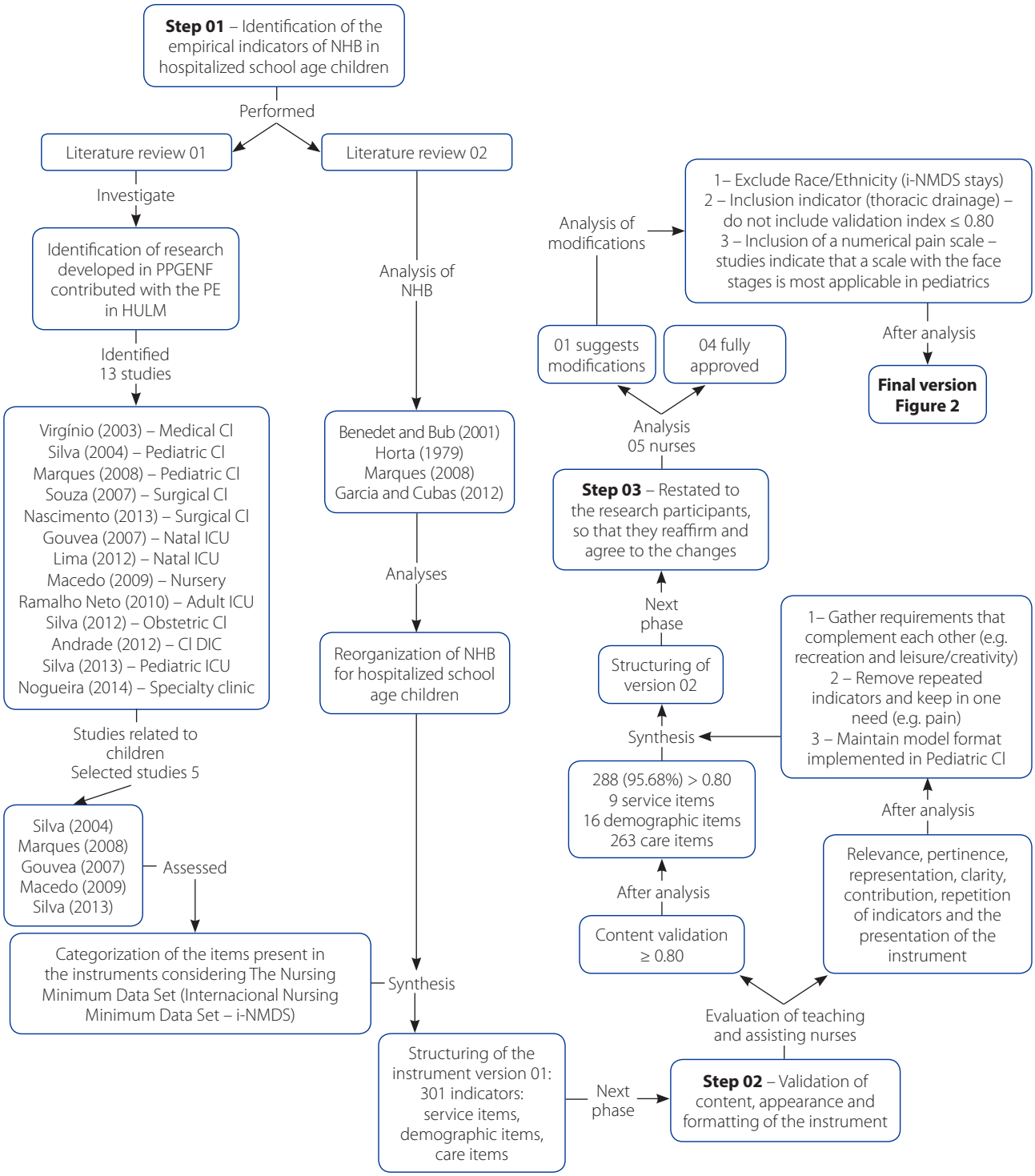
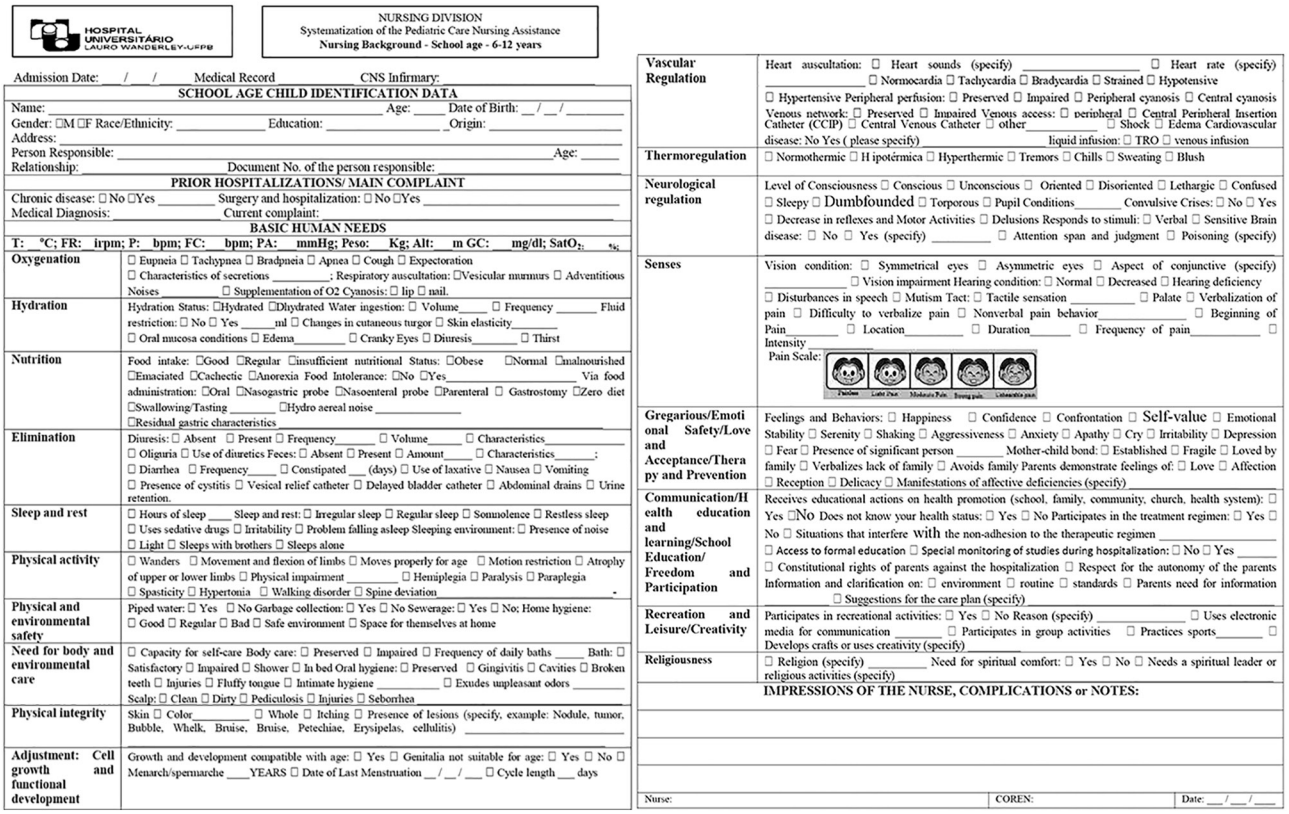


Figure 1 – Results of research steps

Source: Research data, 2015.

during their entire hospital stay by a guardian or other adult; the child's education and origin, because they are hospitalized school age children and information about previous hospitalizations and the main complaint, where the following information is entered: whether it is a chronic disease, if the child has undergone surgery, been hospitalized, the medical diagnosis and the current complaint for hospitalization.



HOSPITAL UNIVERSITÁRIO LAURO WANDERLEY-UFPB

NURSING DIVISION
Systematization of the Pediatric Care Nursing Assistance
Nursing Background - School age - 6-12 years

Admission Date: ___/___/___ Medical Record CNS Infirmary: _____

SCHOOL AGE CHILD IDENTIFICATION DATA

Name: _____ Age: _____ Date of Birth: __/__/_____
Gender: ☐M ☐F Race/Ethnicity: _____ Education: _____ Origin: _____
Address: _____
Person Responsible: _____ Age: _____
Relationship: _____ Document No. of the person responsible: _____

PRIOR HOSPITALIZATIONS/ MAIN COMPLAINT

Chronic disease: ☐ No ☐Yes _____ Surgery and hospitalization: ☐ No ☐Yes _____
Medical Diagnosis: _____ Current complaint: _____

BASIC HUMAN NEEDS

T: °C; FR: irpm; P: bpm; FC: bpm; PA: mmHg; Peso: Kg; Alt: m GC: mg/dl; SatO2: %;

Oxygenation	☐ Eupneia ☐ Tachypnea ☐ Bradpneia ☐ Apnea ☐ Cough ☐ Expectoration ☐ Characteristics of secretions _____: Respiratory auscultation: ☐Vesicular murmurs ☐ Adventitious Noises _____ ☐ Supplementation of O2 Cyanosis: ☐ lip ☐ nail.
Hydration	Hydration Status: ☐Hydrated ☐Dhydrated Water ingestion: ☐ Volume____ ☐ Frequency _____ Fluid restriction: ☐ No ☐ Yes _____ml ☐ Changes in cutaneous turgor ☐ Skin elasticity_____ ☐ Oral mucosa conditions ☐ Edema_____ ☐ Cranky Eyes ☐ Diuresis_____ ☐ Thirst
Nutrition	Food intake: ☐Good ☐Regular ☐insufficient nutritional Status: ☐Obese ☐Normal ☐malnourished ☐Emaciated ☐Cachectic ☐Anorexia Food Intolerance: ☐No ☐Yes_____ Via food administration: ☐Oral ☐Nasogastric probe ☐Nasoenteral probe ☐Parenteral ☐ Gastrostomy ☐Zero diet ☐Swallowing/Tasting _____ ☐Hydro aereal noise _____ ☐Residual gastric characteristics _____
Elimination	Diuresis: ☐ Absent ☐ Present ☐ Frequency_____ ☐ Volume_____ ☐ Characteristics_____ ☐ Oliguria ☐ Use of diuretics Feces: ☐ Absent ☐ Present ☐ Amount_____ ☐ Characteristics_____; ☐ Diarrhea ☐ Frequency_____ ☐ Constipated ___ (days) ☐ Use of laxative ☐ Nausea ☐ Vomiting ☐ Presence of cystitis ☐ Vesical relief catheter ☐ Delayed bladder catheter ☐ Abdominal drains ☐ Urine retention.
Sleep and rest	☐ Hours of sleep ____ Sleep and rest: ☐ Irregular sleep ☐ Regular sleep ☐ Somnolence ☐ Restless sleep ☐ Uses sedative drugs ☐ Irritability ☐ Problem falling asleep Sleeping environment: ☐ Presence of noise ☐ Light ☐ Sleeps with brothers ☐ Sleeps alone
Physical activity	☐ Wanders ☐ Movement and flexion of limbs ☐ Moves properly for age ☐ Motion restriction ☐ Atrophy of upper or lower limbs ☐ Physical impairment _____ ☐ Hemiplegia ☐ Paralysis ☐ Paraplegia ☐ Spasticity ☐ Hypertonia ☐ Walking disorder ☐ Spine deviation _____
Physical and environmental safety	Piped water: ☐ Yes ☐ No Garbage collection: ☐ Yes ☐ No Sewerage: ☐ Yes ☐ No; Home hygiene: ☐ Good ☐ Regular ☐ Bad ☐ Safe environment ☐ Space for themselves at home
Need for body and environmental care	☐ Capacity for self-care Body care: ☐ Preserved ☐ Impaired ☐ Frequency of daily baths _____ Bath: ☐ Satisfactory ☐ Impaired ☐ Shower ☐ In bed Oral hygiene: ☐ Preserved ☐ Gingivitis ☐ Cavities ☐ Broken teeth ☐ Injuries ☐ Fluffy tongue ☐ Intimate hygiene _____ ☐ Exudes unpleasant odors _____ Scalp: ☐ Clean ☐ Dirty ☐ Pediculosis ☐ Injuries ☐ Seborrhea _____
Physical integrity	Skin ☐ Color_____ ☐ Whole ☐ Itching ☐ Presence of lesions (specify, example: Nodule, tumor, Bubble, Whelk, Bruise, Bruise, Petechiae, Erysipelas, cellulitis) _____
Adjustment: Cell growth and functional development	Growth and development compatible with age: ☐ Yes ☐ Genitalia not suitable for age: ☐ Yes ☐ No ☐ Menarch/spermarche ____YEARS ☐ Date of Last Menstruation __/__/___ ☐ Cycle length ___ days

Vascular Regulation	Heart auscultation: ☐ Heart sounds (specify) _____ ☐ Heart rate (specify) _____ ☐ Normocardia ☐ Tachycardia ☐ Bradycardia ☐ Strained ☐ Hypotensive ☐ Hypertensive Peripheral perfusion: ☐ Preserved ☐ Impaired ☐ Peripheral cyanosis ☐ Central cyanosis Venous network: ☐ Preserved ☐ Impaired Venous access: ☐ peripheral ☐ Central Peripheral Insertion Catheter (CCIP) ☐ Central Venous Catheter ☐ other_____ ☐ Shock ☐ Edema Cardiovascular disease: No Yes (please specify) _____ liquid infusion: ☐ TRO ☐ venous infusion
Thermoregulation	☐ Normothermic ☐ H ipotérmica ☐ Hyperthermic ☐ Tremors ☐ Chills ☐ Sweating ☐ Blush
Neurological regulation	Level of Consciousness ☐ Conscious ☐ Unconscious ☐ Oriented ☐ Disoriented ☐ Lethargic ☐ Confused ☐ Sleepy ☐ Dumbfounded ☐ Torporous ☐ Pupil Conditions_____ Convulsive Crises: ☐ No ☐ Yes ☐ Decrease in reflexes and Motor Activities ☐ Delusions Responds to stimuli: ☐ Verbal ☐ Sensitive Brain disease: ☐ No ☐ Yes (specify) _____ ☐ Attention span and judgment ☐ Poisoning (specify) _____
Senses	Vision condition: ☐ Symmetrical eyes ☐ Asymmetric eyes ☐ Aspect of conjunctive (specify) _____ ☐ Vision impairment Hearing condition: ☐ Normal ☐ Decreased ☐ Hearing deficiency ☐ Disturbances in speech ☐ Mutism Tact: ☐ Tactile sensation _____ ☐ Palate ☐ Verbalization of pain ☐ Difficulty to verbalize pain ☐ Nonverbal pain behavior_____ ☐ Beginning of Pain_____ ☐ Location_____ ☐ Duration_____ ☐ Frequency of pain_____ ☐ Intensity_____ Pain Scale:
Gregarious/Emotional Safety/Love and Acceptance/Therapy and Prevention	Feelings and Behaviors: ☐ Happiness ☐ Confidence ☐ Confrontation ☐ Self-value ☐ Emotional Stability ☐ Serenity ☐ Shaking ☐ Aggressiveness ☐ Anxiety ☐ Apathy ☐ Cry ☐ Irritability ☐ Depression ☐ Fear ☐ Presence of significant person _____ Mother-child bond: ☐ Established ☐ Fragile ☐ Loved by family ☐ Verbalizes lack of family ☐ Avoids family Parents demonstrate feelings of: ☐ Love ☐ Affection ☐ Reception ☐ Delicacy ☐ Manifestations of affective deficiencies (specify) _____
Communication/Health education and learning/School Education/ Freedom and Participation	Receives educational actions on health promotion (school, family, community, church, health system): ☐ Yes ☐No Does not know your health status: ☐ Yes ☐ No Participates in the treatment regimen: ☐ Yes ☐ No ☐ Situations that interfere with the non-adhesion to the therapeutic regimen _____ ☐ Access to formal education ☐ Special monitoring of studies during hospitalization: ☐ No ☐ Yes _____ ☐ Constitutional rights of parents against the hospitalization ☐ Respect for the autonomy of the parents Information and clarification on: ☐ environment ☐ routine ☐ standards ☐ Parents need for information ☐ Suggestions for the care plan (specify) _____
Recreation and Leisure/Creativity	Participates in recreational activities: ☐ Yes ☐ No Reason (specify) _____ ☐ Uses electronic media for communication _____ ☐ Participates in group activities ☐ Practices sports_____ ☐ Develops crafts or uses creativity (specify) _____
Religiousness	☐ Religion (specify) _____ Need for spiritual comfort: ☐ Yes ☐ No ☐ Needs a spiritual leader or religious activities (specify) _____

IMPRESSIONS OF THE NURSE, COMPLICATIONS or NOTES:

Nurse: COREN: Date: __/__/___

Figure 2 – Instrument collection of nursing data for hospitalized school age children final version. João Pessoa, PB, 2015

Source: Research data, 2015.Fonte: Dados da pesquisa, 2015.

Of the empirical indicators that were not validated, three belonged to the need for oxygenation: arterial blood gases, chest drainage and oxygen saturation, which received CI 0.37; 0.62; 0.75, respectively. But the oxygen saturation indicator found itself repeated in measurable data that has been validated, remaining, therefore, in the instrument.

The need for hydration has the empirical indicators rapid weight gain (CI = 0.62) and electrolyte replacement substances (CI = 0.75) excluding from need. In the elimination need, the indicator volume diuresis 24h__ml (CI = 0.75) is excluded. The need for sexuality only had the indicator sexual education (CI = 0.62), and was ruled out for the final version. In the need for physical activity, only the indicator exercises regularly not been validated (CI = 0.75). The need for physical safety and environment, empirical indicators type of housing; number of rooms and number of people living in the home were excluded, because their CI = 0.75. In the need for vascular regulation, the cardiac heart rate indicator reached CI = 0.75, but due to its relevance in the evaluation of the cardiac physical examination, it remained for a second evaluation in version 2, in which it was considered validated. In the need for physical integrity, the indicator venous infusions (CI = 0.75) was not validated, but it is found included in need for hydration. The validated empirical indicators are presented in the final version-instrument according to Figure 2.

DISCUSSION

For the identification of empirical indicators, research was conducted with validation studies conducted in HULW, resulting from research linked to PPGENF/UFPB, which developed instruments for the implementation of the nursing process applied to the pediatric clientele. Validated empirical indicators were analyzed, portraying the scientific vocabulary and place of the institution and that are included in the service as part of the implementation of the nursing process in the Intermediate Neonatal Care Unit in the Neonatal Intensive Care Unit in the Pediatric Intensive Care Unit and Pediatric Clinic[7-8], pursuant to COFEN Resolution 358/2009.

The development of a scientific and local vocabulary contributed to the nurses of the Pediatric Clinic/HULW recognizing their own language used in professional practice

and standardizing terms, which has allowed for the systematic documentation of nursing activities.

In addition to the contribution in the identification of empirical indicators, the instruments used in the Pediatric Clinic/HULW served as a model for formatting and presentation. The contents were analyzed from a descriptive and comparative study[17] to support the development of the instrument for hospitalized school age children, where the *International Nursing Minimum Data Set-i-NMDS*[12] were compared with the data contained in the nursing background.

Once the instruments were applied in the HULW Pediatric Clinic, it was identified that the elements proposed by the i-NMDS, which should minimally be collected to generate information relevant to the clientele assisted by the nursing staff were not actually considered because they were not designed with this foundation. Of the evaluated elements belonging to the i-NMDS proposal, the instrument for hospitalized adolescents contemplated twelve and the instrument for children between zero and five presented seven[17].

Considering the data recommended by the i-NMDS in service items and demographic data items, it is emphasized that the inclusion of such data in the instrument has facilitated the child's admission process, therefore, the nurse, most often, is the family's first contact with the service and the search for information upon admission has contributed to the inclusion of the child in the hospital's electronic registration, which reduces the rate of financial losses per day of hospitalization.

internal discussions have been developed regarding the release of a module for the registration of the nursing process and the integration of existing modules in the current system. The technological maturity of public health services and the integration of systems when present, is still an obstacle. Sometimes, the absence of requirements by managers and policies toward the cost of management, may result in lack of interest of cost management in public hospitals[18].

Items of nursing care is the data that contribute to list the diagnoses, interventions, outcomes, and intensity of nursing care. In the data collection phase of this research, the empirical indicators that identify the basic human needs were considered. These items have contributed to the initial nursing care provided, for it allows the nurse to identify the affected needs with a specific focus, easing the process of diagnostic reasoning and therefore the name of the nursing diagnoses, structured in a naming validated for care to hospitalized children[10].

It is emphasized that this research has contributed to the use of standardized language in nursing in the HULW Clinical Pediatric to plan assistance, documenting activities, identifying and measuring the results of practice. Moreover, it has collaborated with the development of knowledge in the care of school-age children, which aims to cooperate with the development of nursing.

This is one of the research developed by PPGENF-UFPB that hosts the Center of the International Classification for Nursing Practice (CIPE®) in Brazil, whose mission is to support the continuous development of CIPE®; promote their use in clinical practice, education and research in nursing; and contribute to the International Council of Nurses and other research centers for the CIPE® classification system to become a world reference terminology, strengthening nursing in health care, education and research[19]. The development of several studies point to the importance of using CIPE® for the improvement of professional practice[20]. CIPE® Brazil Center has done its part by adding the terminology to practical assistance from its applicability to the development of subgroups and research for specific clients.

CONCLUSION

Given the above, it is stated that the goal was achieved. The data collection tool for hospitalized school age children has directed the care, teaching and research for this clientele with regard to obtaining data that is relevant to the implementation of the remaining phases of the nursing process. The study has some limitations, as it was conducted in a teaching hospital in which the organizational structure differs from other pediatric services and therefore, can not be used in another institution, also considering the specificity of the clientele. It is suggested that other pediatric services be included for similar research development, given that the methodological steps of the research can be replicated.

The preparation of diagnoses, results and nursing interventions from the data collected with the instrument has promoted an organized nursing care, based on scientific knowledge, taking into account the real needs of hospitalized school age children, as well as being an accessible registry, making nursing assistance provided to these children visible and facilitating communication and standardization of data that should be collected as priority.

It is therefore expected that this research will contribute to the implementation of the nursing process based on scientific knowledge, and also enables concerns for improvement through the development of other research projects, publications, participation in scientific events, institutional incentives for continuing education always thinking about the customer's needs. It is believed that the

instrument allows new questions about the countless possibilities to identify empirical indicators, that lead to the development of different diagnoses, outcomes and nursing interventions (actions), as this will depend on the individual and collective commitment of nurses to meet the needs presented by each assisted client.

REFERENCES

1. Araújo JP, Silva RMM, Collet N, Neves ET, Toso BRGO, Viera CS. História da saúde da criança: conquistas, políticas e perspectivas. Rev Bras Enferm. 2014 nov-dez [cited 2015 fev 23];67(6):1000-7. Available at: http://www.scielo.br/pdf/reben/v67n6/0034-7167-reben-67-06-1000.pdf.
2. Garcia TR, Nóbrega MML. Processo de Enfermagem: da teoria à prática assistencial e de pesquisa. Esc Anna Nery. 2009 jan-mar [cited 2015 fev 23];3(1):188-93. Available at: http://www.scielo.br/pdf/ean/v13n1/v13n1a26.pdf.
3. Horta WA. Processo de enfermagem. Rio de Janeiro: Guanabara Koogan; 2011.
4. Garcia TR, Bartz CC, Coenen AM. CIPE® uma linguagem padronizada para a prática profissional. In: Garcia TR, organizador. Classificação Internacional para a Prática de Enfermagem CIPE®: versão 2015. Porto Alegre: Artmed; 2015. Cap. 2.
5. Conselho Federal de Enfermagem (BR). Resolução no 358, de 15 de outubro de 2009 [Internet]. Dispõe sobre a Sistematização da Assistência de Enfermagem e a implementação do Processo de Enfermagem em ambientes, públicos ou privados, em que ocorre o cuidado profissional de Enfermagem, e dá outras providências. Brasília; 2009 [cited 2014 mar 13]. Available at: http://www.cofen.gov.br/resoluo-cofen-3582009_4384.html.
6. Conselho Federal de Enfermagem (BR). Resolução no 429, de 30 de maio de 2012. Dispõe sobre o registro das ações profissionais no prontuário do paciente, e em outros documentos próprios da Enfermagem, independentemente do meio de suporte- tradicional ou eletrônico. Diário Oficial da União [da] República Federativa do Brasil. 2012 jun 8;149(110 Seção 1):288-9.
7. Silva KL, Nóbrega MML. Construção e validação de um instrumento de coleta de dados para crianças de 0-5 anos. OBJN. 2006 [cited 2013 mai 15];5(3):[7 telas]. Available at: http://www.objnursing.uff.br/index.php/nursing/rt/printerFriendly/704/160.
8. Marques DKA, Nóbrega MML. Instrumento de sistematização da assistência de enfermagem para adolescentes hospitalizados. REME Rev Min Enferm. 2009 jul/set [cited 2014 fev 21];13(3):372-80. Available at: http://www.reme.org.br/artigo/detalhes/202.
9. Marques DKA, Nóbrega MML, Silva KL. Construção e validação de afirmativas de diagnósticos de enfermagem para adolescentes hospitalizados. Rev Eletr Enf. 2012 jul/set [cited 2013 mai 15];14(3):626-33. Available at: https://www.fen.ufg.br/fen_revista/v14/n3/pdf/v14n3a20.pdf.
10. Nóbrega MML. Diagnósticos, resultados e intervenções de enfermagem para clientes hospitalizados nas unidades clínicas do HULW/UFPB utilizando a CIPE®. João Pessoa: Ideia; 2011.
11. Werley HH, Lang NM, Identification of the nursing minimum data set. New York: Springer; 1988.
12. Center for Nursing Informatics. University of Minnesota (US). i-NMDS (International Nursing Minimum Data Set). 2013 [cited 2015 May 15]. Avaliable from: https://www.nursing.umn.edu/sites/nursing.umn.edu/files/i-nmds.pdf
13. Marques D K A. Construção e validação de um instrumento para a implementação do processo de enfermagem em escolares hospitalizados [Tese]. João Pessoa (PB): Centro de Ciências da Saúde, Universidade Federal da Paraíba; 2015.
14. Ministério da Saúde (BR), Conselho Nacional de Saúde. Resolução nº 466, de 12 de dezembro de 2012. Diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. Diário Oficial da União [da] República Federativa do Brasil. 2013 jun 13;150(112 Seção 1):59-62.
15. Benedet AS, Bub MBC. Manual de diagnóstico de enfermagem: uma abordagem baseada na teoria das necessidades humanas básicas e na classificação diagnóstica da NANDA. 2. ed. Florianópolis: Bernúncia; 2001.
16. Garcia TR, Cubas MR. Diagnósticos, intervenções e resultados de enfermagem: subsídios para a sistematização da prática profissional. Rio de Janeiro: Elservier; 2012.
17. Marques DKA, Souza GLL, Silva AB, Silva AF, Nóbrega MML. Conjunto Internacional de Dados Mínimos de Enfermagem: estudo comparativo com instrumentos de uma clínica pediátrica. Rev Bras Enferm. 2014 jul-ago [cited 2014 jan 15];67(4):588-93. Available at: http://www.scielo.br/pdf/reben/v67n4/0034-7167-reben-67-04-0588.pdf.
18. Oliveira WT, Haddad MCL, Vannuchi MTO, Rodrigues AVD, Pissinati PSC. Capacitação de enfermeiros de um hospital universitário público na gestão de custo. Rev Enferm UFSM. 2014 nov [cited 2016 nov 06];4(3):566-74. Available at: https://periodicos.ufsm.br/reufsm/article/view/12938.
19. Garcia TR, Nóbrega MML. A terminologia CIPE® e a participação do Centro CIPE® brasileiro em seu desenvolvimento e disseminação. Rev Bras Enferm. 2013 [cited 2014 ago 23];66(esp):142-50. Available at: http://www.scielo.br/pdf/reben/v66nspe/v66nspea18.pdf.
20. Souza Neto VL, Andrade LL, Agra G, Costa MML. Profile of nursing diagnoses of hospitalized patients in an infectious disease unit. Rev Gaúcha Enferm. 2015 set [cited 2015 Oct 23];36(3):79-85. Available from: http://www.scielo.br/pdf/rgenf/v36n3/1983-1447-rgenf-36-03-00079.pdf.

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