

Nursing process documentation: rationale and methods of analytical study

Documentação do processo de enfermagem: justificativa e métodos de estudo analítico

Documentación del proceso de enfermería: justificativa y métodos de estudio analítico

**Diná de Almeida Lopes Monteiro da Cruz^I, Erika de Souza Guedes^I, Mariana Alvina dos Santos^{II},
Regina Márcia Cardoso de Sousa^I, Ruth Natalia Teresa Turrini^I,
Magda Maria Maia^{III}, Sandra Alves Neves Araújo^{IV}**

^I Universidade de São Paulo, School of Nursing, Postgraduate Program in Nursing in Adult Health. São Paulo, Brazil.

^{II} Universidade Federal do Mato Grosso do Sul. Três Lagoas, Mato Grosso do Sul, Brazil.

^{III} Ministério da Saúde, Hospital Infantil Darcy Vargas. São Paulo, Brazil.

^{IV} Universidade Nove de Julho, Nursing Course. São Paulo, Brazil.

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ABSTRACT

Objective: to describe the methods used to analyze the associations between variables of service, nursing and the nursing process documentation in institutions of the Department of Health of the State of São Paulo. **Method:** multilevel analytical study with data obtained in the domains of institution, units of the institution and nursing professionals who work there, using standardized instruments. The analyses had as axis the degree of completeness of the nursing process documentation in units or institutions and their association with variables of nursing personnel, of units and of institutions. **Conclusion:** This study will provide important empirical evidence on the factors involved in the nursing process documentation.

Key words: Nursing Process; Methodological Research in Nursing; Nursing Research.

RESUMO

Objetivo: descrever os métodos usados para analisar as associações entre variáveis do serviço, da enfermagem e da documentação do processo de enfermagem nas instituições da Secretaria de Estado da Saúde de São Paulo. **Método:** estudo analítico multinível, com dados obtidos nos âmbitos da instituição, dos setores da instituição e dos profissionais de enfermagem que neles atuam, por meio de instrumentos padronizados. As análises tiveram como eixo o grau de completude da documentação do processo de enfermagem nos setores ou nas instituições e suas associações com variáveis do pessoal de enfermagem, das unidades e das instituições. **Conclusão:** este estudo empírico fornecerá importantes evidências sobre os fatores envolvidos na documentação do processo de enfermagem.

Descritores: Processos de Enfermagem; Pesquisa Metodológica em Enfermagem; Pesquisa em Enfermagem.

RESUMEN

Objetivo: describir los métodos usados para analizar las asociaciones entre variables del servicio, de la enfermería y de la documentación del proceso de enfermería en las instituciones de la Secretaria de Estado de la Salud de São Paulo. **Método:** estudio analítico multi-nivel, con datos obtenidos en los ámbitos de la institución, de los sectores de la institución y de los profesionales de enfermería que en ellos actúan, por medio de instrumentos empadronados. Los análisis tuvieron como eje el grado de la documentación completa del proceso de enfermería en los sectores o en las instituciones y sus asociaciones con variables del personal de enfermería, de las unidades y de las instituciones. **Conclusión:** este estudio empírico fornecerá importantes evidencias sobre los factores envueltos en la documentación del proceso de enfermería.

Palabras clave: Procesos de Enfermería; Investigación Metodológica en Enfermería; Investigación en Enfermería.

CORRESPONDING AUTHOR

Diná de Almeida Lopes Monteiro da Cruz

E-mail: dinacruz@usp.br

INTRODUCTION

The nursing care model guided by the nursing process (NP) values the planning of actions, the interventions, the evaluation and specific goals established for each patient. In Brazil, the NP documentation in all situations in which the nursing professional care takes place began to be mandatory since 2002⁽¹⁾. Thereafter, such a requirement has mobilized health services to fulfill it and reports have been published highlighting numerous factors potentially involved with the facilitating and inhibiting factors for clinical documentation according to NP⁽²⁾.

However, empirical correlational studies testing the ability of certain factors to explain the NP documentation in health services are absent until present date. For this reason, the project "Nursing Process in Hospitals and Clinics of the Department of Health of the State of São Paulo" (SAE-SES Project) sought to advance the understanding of factors involved in its implementation through the analysis of clinical nursing documentation.

The present article discusses the rationale and methods of the SAE-SES Project. It is noteworthy that, while it is not common to publish articles with methodological details in Brazil, this practice is important for integrated research projects as provides sufficient information for the scientific community appraise the methodological quality of studies. However, this is not always possible when taking into account the usual and necessary length limitation of manuscripts in scientific journals.

The main purpose of SAE-SES Project is to expand the context in which factors involved in nursing practice guided by the NP, a fundamental tool for nursing practice, have been considered because it provides references to fundamental decisions of care⁽³⁾.

The NP concept originated among educators of the United States of America in the 1950s as a tool to guide students in learning critical thinking skills necessary to the practice of nursing⁽⁴⁾. Nursing leaders began to encourage its use in nursing services by recognizing it as a useful tool for implementing ideas of integral care to the individual⁽⁴⁾.

In Brazil, the NP was introduced in the 1970s by Wanda de Aguiar Horta to operationalize the practice of nursing, conceived as the science that deals with assistance to human beings in their basic human needs⁽⁵⁾. With its use in education and health services, NP was eventually called and recognized as *Systematization of Nursing Assistance* (SNA), although it is not known the exact origin of such designation. Due to the fact that the interchangeable use of these two expressions is too disseminated, in this project the terms Nursing Process and Systematization of Nursing Assistance are used interchangeably, despite their being differentiated in the legal provisions governing the nursing process documentation in the country⁽¹⁾.

There are several NP definitions that differ with respect to the aspects they focus or in the emphasis that they attach to them. In this study, NP is defined as an instrument that provides a systematic guide to develop a style of thinking that leads to appropriate clinical decisions required for nursing care⁽⁴⁾ as well as its documentation. The NP states that nursing care must be guided by the assessment of the patient, which provides data for identification of nursing diagnoses. Diagnoses, in turn, direct the definition of outcomes to be achieved. Diagnosis and outcomes

are the basis for selecting the most appropriate interventions to the specific situation of the patient. After interventions, the outcomes should be evaluated and based on that evaluation, one returns to previous stages in the case of expected outcomes not reached or new diagnoses identified⁽³⁾.

The NP in the present adopted perspective is a tool to guide clinical decisions of nurses and, as such, refers to cognitive and intellectual aspects of nursing work. However, nursing documentation in health services, when structured according to NP, allows for the estimation of how the process is operated by nurses and, at least in part, the quality of nursing care provided. The analysis of NP documentation in health services sets up a way to study it.

Because of the many presented benefits, NP has been the subject of discussion and research as a tool for nursing care to be taught, used in clinical and nursing management and to be evaluated. Besides constituting technical, scientific, legal and ethical records, and besides providing important health records of institutions for billing revenue purposes, the NP documentation aids the audit of nursing actions and, above all, allows for estimating the quality of care provided to the client⁽⁶⁾. Health services that did not use to document the NP have already initiated projects to meet the resolution 358/2009 of COFEN⁽¹⁾. Moreover, the "implementation of the SNA" was considered an ideal to be achieved even if the indispensable prerequisites for such a goal were not known. This situation has mobilized clinical nurses, managers and researchers to take positions more or less favorable to the NP and to its implementation.

The organization of work involves an accumulation of administrative functions required by the demand of health institutions. Therefore, the analysis of the applicability of NP should consider the profile, the demands of assistance of these institutions, the characteristics and complexity of the patient and the human capital available. Thus, the purpose of SNA-SES project was to evaluate in a quantitative way the influence of aspects related to services and nursing professionals over the implementation of the NP. The study was composed by the following objectives: 1) to describe the characteristics of service units of hospitals and clinics and of nursing professionals under the context of the Department of Health of São Paulo; 2) to relate these characteristics to the documentation of the NP. Variables related to human resources, characteristics of services and indicators of care, were used to identify factors that could explain the proper documentation of the NP.

METHOD

The SNA-SES project was a descriptive exploratory multi-level study with search for data at the levels of institution, sector or unit of service and nursing professionals.

The research team conceived, developed and headed the project for funding agencies between 2008 and 2010. Within a year, from January 2011 to January 2012, data were collected in accordance to guidelines determined by the team, found in a manual that brought conceptual and operational definition of variables and instruments to standardize data collection procedures.

The team of data collectors consisting of nurses or nursing baccalaureate students received theoretical training of 12 hours, so as to allow to obtain reliable and consistent data. A large hospital in the capital of São Paulo set up the field for a pilot project, a moment for practical training of collectors of data and adjustment of instruments and collection procedures.

We chose to use different sources of data: 1) service of medical files and statistics, to obtain data on productivity of the institution and of sectors; 2) the chief nursing officer, to obtain data on quantity and quality of the nursing staff and quality indicators of nursing care; 3) the continued education service, with a view to obtaining data on historical aspects of the implementation of the nursing process; 4) nurse in service in the sector and observation of medical records, to collect data on operational characteristics of NP documentation; and 5) nurses, nursing technicians and assistants for obtaining data on characteristics of the nursing staff.

Background of the study

Study conducted in clinics and hospitals of the Department of Health of São Paulo (SES-SP). The acknowledgement that NP documentation was indispensable to improve the quality of nursing care resulted from the implementation of indicators of quality of care and institutional accreditation processes within the institutions under direct administration of the SES-SP. Since the implementation of NP involves slow, dynamic and gradual changing with regard not only to nursing personnel but also to the administrative management of the institutions, the SES-SP assigned a SNA Central Committee and structured the Building the SNA Project. This project aimed to improve the quality of health care provided by the SES-SP in units linked to the Coordinating Body of Health Services, through the Implementation of the Nursing Process and Management for Nursing Quality in all its health units⁽⁷⁾. The construction and implementation of this project are reported elsewhere⁽⁷⁾.

All clinics and hospitals of the SES/SP were eligible and were invited to participate. The adoption of the NP did not represent an inclusion criterion because this was a variable of the study. According to the Coordinating Body of Health Services, seven specialized clinics, six mental health units and 30 hospitals located in various regions of São Paulo were under its direction at the time of data collection.

The recruitment of institutions to participate in the study followed the following flow: request through a letter directed to each hospital or clinic Technical Director of Department for appropriate referrals for expression of interest of the institution to participate in the study. An answering document was sent along with the request to be completed by the Technical Director of Department with expressions of interest within 15 days. In cases where there was no return after 20 days, a telephone contact was proceeded, considering the possibility of misplacement of documents or other reasons being causing lack of return. If necessary, call procedures were redone, waiting 10 further days after the second request. Absence of response within that period was regarded as refusal to participate.

Twenty-seven hospitals joined in this study, seven ambulatory specialties and six mental health units, which provided

a fertile setting for the investigation of similarities and differences in each NP context. The basis for the analysis was the service unit or sector. Since the definition of "service unit" is variable (wing, floor, sector etc.), it was established for the present project that "service unit" within a clinic or hospital would be defined by monthly schedule of nursing service. That is, a clinic or a hospital "service unit" is the area covered by the nursing personnel that make up a monthly schedule for patient care. Thus, the total number of "units" was equivalent to the number of monthly nursing schedules intended for patient care in the hospital or clinic.

All service units where patient care is carried out and whose institution had authorized participation in the study constituted data collection sites. It was considered that each sector would present specificities in terms of serviced specialty, profile of patients and nursing professionals that could be associated with NP's operational characteristics.

Variables and instruments

Variables and instruments are described below according to the level of the variables. The institutional level refers to the hospital or clinic as a whole; the level of service units refers to variables related to a service area defined by the set of nurses organized in monthly nursing schedules to meet a given movement of patients; finally, the level of nursing professionals comprehend variables of people who worked in the service unit of an institution.

Institutional level

Besides the name, address and type of institution, data were surveyed to characterize the nursing work environment. Some variables expected to be linked to sectors were eventually collected at the level of institution due to reasons explained in the Data Collection section.

The option to collect these data comes from the well documented influence that hospital work environment exert on satisfaction and turnover of nurses⁽⁸⁻⁹⁾. In this sense, the professional setting of nursing practice is understood as the support system for nurses control the realization of nursing care and the environment in which it is provided. The NP, in turn, represents an instrument for realization of nursing care and its implementation and maintenance require a suitable workplace. The present study made use of the *Nursing Work Index - Revised* (NWI-R)⁽⁸⁾ to obtain data on work environment characteristics, as there was interest in examining the relationship between these attributes and the operationalization of the NP.

The NWI-R, translated and validated in Brazil in 2008⁽¹⁰⁾, consists of 57 items among which 15 were distributed, conceptually, in three subscales: autonomy, control over the environment, and relationships between doctors and nurses. Among these 15 items, ten were grouped to form the fourth subscale: organizational support⁽⁸⁾. Each item was answered using a Likert-type scale that goes from one to four points. The lower the score, the greater the presence of attributes favorable to professional nursing practice⁽¹⁰⁾. The scores of the subscales are obtained by averaging the scores of subjects' answers and may vary between one and four points⁽⁸⁾. In a Brazilian study

carried out in intensive care units⁽¹¹⁾, the Brazilian version of the NWI-R presented the following internal consistency (*Cronbach's alpha*): Nurse Autonomy Subscale - 0.645; Nurse Control Subscale - 0.732; Nurse-Physician Relationship Subscale - 0.702; and Organizational Support Subscale - 0.748.

Level of service units

The variables on documentation of NP collected by service units of the institutions were: documentation of the patient assessment, diagnoses, orders, and patient progress. Whereas the annotation is a classic practice of nursing documentation, especially when the NP is not documented in a structured manner, this was included as a variable in the data set on the NP. Frequency, location, support and the responsible for carrying out the documentation for each stage were investigated.

In addition to the data to describe the operationalization of NP at the level of service units, further data were collected: a) general characterization of the service unit; b) productivity and quality indicators; and c) quantitative of the nursing staff. Sectors were characterized according to the type of specialty (pediatrics, psychiatry, general medicine etc.); type of physical structure (surgical center, emergency room, intensive care unit, etc.); facilities available for the service (number of beds, number of offices and surgical rooms, etc.); and estimated degree of dependence of the typical patients of the unit. In terms of productivity and quality indicators, data was collected concerning movement of patients (admissions, transferences, discharges, deaths); performed procedures (consultations, childbirths, surgeries, checkups, etc.); infection rates, pressure ulcers, phlebitis and not drug compliance). The composition of the nursing staff was described in terms of number of nurses and auxiliaries by 6 hours and 12 hours on-call service shifts. The number of 6 and 12 hours on-call service shifts to be carried out per month was computed, and after this, the number of active beds in each sector/unit. Quantitative data on personnel, productivity and quality indicators were related to three alternated months previous to data collection. This strategy was adopted in order to reduce the effect of seasonality on the data obtained. For example, if the collection occurred in July 2010 at a given hospital, productivity and indicators data were collected for the months of June, April and February 2010, calculating the monthly average of values of each variable.

Level of nursing professionals

Nursing professionals responded to standardized instruments for evaluating variables related to them in order to learn the nursing workforce characteristics.

The following instruments were answered by professionals: *Positions on the Nursing Process*, *Power as Knowing Participation in Change Tool*, *Life Quality at work Index* for nurses, *Work Stress Scale* and *Maslach Burnout Index*.

Positions on the Nursing Process: the instrument refers to attitudes more favorable or less favorable to the NP. Nurses who have more favorable attitudes toward NP will probably find it easier to engage in the changes required to deploy and maintain the SNA, and those with less favorable attitudes are likely to have more difficulty. This variable is measured by means of standardized instrument positions about the Nursing Process⁽¹²⁾.

The instrument, an adaptation of the *Positions on Nursing Diagnosis*, consists of 20 pairs of adjectives and each pair consists in a favorable and a unfavorable disposition toward the concept⁽¹²⁾. Each pair is separated by seven equidistant points and the respondent must select one of them according to the proximity of its disposition with the adjectives of each pair. The total score on the instrument varies from 20 to 140 and the higher the score, the more favorable is the attitude towards NP. In the study where the instrument *Positions on the Nursing Process* was developed⁽¹²⁾, estimates of internal consistency (*Cronbach's alpha*) proved to be adequate: this was 0.95 for a total sample of 1,489 assistants and nurses; 0.96 for the subsample of 889 assistants; and 0.95 for the subsample of 600 nurses⁽¹²⁾.

Power of Knowing Participation in Change Tool. The perception of nursing as to its own power has been analyzed by several theoretical views⁽¹³⁻¹⁴⁾. There are two opposing perspectives in the study of power. In one perspective, power is addressed as element for domination over others - 'power over' something or someone; in the other, power is addressed as an element necessary to take part in the changes in living environments - 'power to' do something, to participate in the changes. From the perspective of 'power to', a study found differences of knowledge and involvement with the care, among other variables, by nurses who perceived themselves with more power or less power⁽¹³⁾. In the other perspective, the 'power over', the analysis of speeches of nurses from clinical and surgical inpatient units of identified the scientific knowledge as value and means of obtaining confidence in the process of acting and ensuring power⁽¹⁵⁾.

In this study, we intend to know the perception of power that nursing has in relation to the changes, assuming that such a perception may be associated with the attitudes and behaviors related to the operationalization of the NP. The power in this study was defined as knowing participation in change⁽¹⁴⁾. It involves the awareness that one has of the context in which he/she is inserted (Awareness), the perception of the way how he/she makes choices (Choices), the perception of freedom that he/she has to act intentionally (Freedom) and about his/her involvement in creating changes (Involvement)⁽¹⁴⁾. Power as intentional participation means to be aware of what the person chooses to do, feel free to do what he/she choose, intentionally do what was chosen and get involved in creating change⁽¹⁴⁾.

The perception of power was assessed by the instrument *Power as Knowing Participation in Change Tool* (PKPCT)⁽¹⁴⁾, which uses the technique of semantic differential to measure the meaning of operational indicators of power: awareness, choices, freedom to act intentionally and involvement in creating changes. The PKPCT has the same 12 pairs of adjectives applied to the four operational indicators of power, totaling 48 items that can vary from 1 to 7 points⁽¹⁴⁾. The thirteenth pair of adjectives of each subscale is the inverted repetition of a pair of adjectives to test the reliability of the answers and is not punctuated in the total score⁽¹⁴⁾. The total score of PKPCT may vary from 48 to 336 and there is no cut-off point: the higher the score, the greater the perception of power⁽¹⁶⁾. The reliability of the 48 items, verified by *Cronbach's alpha* ranged from 0.88 (first application) to 0.98 (second application) in a pre and post-test study involving 60 Brazilian nurses⁽¹⁶⁾.

Quality of Life at Work Index for Nurses - brief version. In this study, the quality of life at work is defined as the nurses' perception of satisfaction with work aspects that they consider important⁽¹⁷⁾. This variable was chosen based on the assumption that the better the quality of life at work perceived by nursing professionals, the better is also a willingness to change, as the implementation of the NP. Quality of life at work was investigated through the Quality of Life at Work Index for Nurses (QLWI)⁽¹⁷⁾. The QLWI consists of 31 items divided into four areas: institutional appreciation and acknowledgement; working conditions, safety and compensation; identity and professional image and integration with the team⁽¹⁷⁾. Measures in the QLWI are based on the degree of satisfaction and importance perceived by the nurses⁽¹⁷⁾. Each item is scored on two scales of Likert. The first scale, which measures satisfaction, can vary from one - very dissatisfied to five - very satisfied. The second scale measures the importance and can vary from one - unimportant to five - very important. The instrument features a general question on quality of life that does not enter the calculation of the total score⁽¹⁷⁾. In order to calculate the score for each domain, one should first recode the scores of satisfaction items. To do so, one must subtract the value of three from the scores attributed to each of the five levels of satisfaction and thus obtain the values -2, -1, 0, +1 and +2. Then, recoded values are multiplied by the scores assigned in order of importance. The total score is obtained by adding the values of the items of each domain and dividing by the number of answered items. In order to eliminate negative scores, the value of 10 is summed up to the values, so the score in the domain can range from 0 to 20. Higher values indicate better quality of life at work⁽¹⁷⁾. In a study of 348 nurses, the QLWI presented Cronbach's alpha of 0.94 for the total items and 0.77 to 0.92 for the domains⁽¹⁷⁾.

Work Stress Scale. Occupational stress, the subject of many investigations, can be approached from the standpoint of organizational stressors, responses of individuals to these stressors or various aspects involved in the stressor-response process⁽¹⁸⁾. From the perspective of the stressor-response, work stress can be understood as a process in which the individual evaluates work demands as stressors that exceed their coping skills and result in negative reactions⁽¹⁸⁾. Occupational stress was assessed using a brief version of Work Stress Scale composed of 13 items, the answers to which may vary from one - I totally disagree to five points - I totally agree; the higher the score, the greater the stress⁽¹⁸⁾. The instrument consists of a general measure of stress, with items addressing various stressors and emotional reactions constantly associated with them⁽¹⁸⁾. This scale showed adequate estimates of validity and reliability of 0.85 (Cronbach's alpha) in the development study⁽¹⁸⁾.

Maslach Burnout Inventory. The professional burnout of nurses seems to be involved in labor factors that contribute to patient outcome⁽¹⁹⁾. Brazilian and international studies show that members of the nursing staff are particularly susceptible to professional burnout due to own essence and context of the work they perform^(8,20). The burnout was introduced this project for being possibly associated with the results of changes in the health services as the introduction of NP. The burnout

was valued through the instrument *Maslach Burnout Inventory* (MBI) that contains 22 items divided into three domains: emotional exhaustion, lack of personal accomplishment and depersonalization. The sum of the responses of the subject determines the variation of each domain: nine to 45 points for emotional exhaustion, from five and 25 points for depersonalization and from 8 to 40 points for personal accomplishment⁽²¹⁾. In the exhaustion and depersonalization domains, the higher the score, the greater the feeling of emotional exhaustion and depersonalization perceived by nurses. Regarding the personal accomplishment domain, higher scores portray greater sense of accomplishment⁽²¹⁾.

In this study we used five categories of response (never, rarely, sometimes, often, always), what differs from the original instrument with seven categories of response. The choice of 5 categories stems from the observation that the Brazilian sample had difficulties in discriminating between response categories of the original instrument⁽²²⁾. A study evaluated of MBI's psychometric properties reported in empirical studies identified Cronbach's alpha 0.71 to 0.88 for the domains⁽²³⁾.

Data collection

The Department of Health of the State of São Paulo has an integrated data system managed by the Hospital Information Center (HIC) which is responsible for capturing assistance and administrative data from units under direct administration of SES/SP. Tests to check the feasibility of collecting productivity data of services directly from the information system were unsuccessful, especially because the records were stored according to medical specialties and, because they are consolidated in this structure, it was not possible to unravel them by service sectors per institution, a crop needed for the present study. As for human resources, information requests per institution in the administration of SES/SP were unsuccessful. For these reasons, all data were collected locally by paid research assistants, who received training for the study and were supervised in person by at least one researcher responsible for managing the collection and the quality of obtained material. Undergraduate nursing students or nurses with experience in NP could act as research assistants.

Estimates of time and number of teams needed for data collection were based on the location of the eligible institutions and in the prediction of number of sectors in each institution since such data were inexistent until then. Clinics and hospitals of the Coordination Body of Health Services/SES of São Paulo were grouped into five regions according to the location in the state of São Paulo. The *Region 1* reunited institutions based in the capital; *Region 2* was composed by the institutions in municipalities around the capital; *Region 3* reunited the municipalities of Itu, Sorocaba and Botucatu; *Region 4*, Ribeirão Preto, Américo Brasiliense, Santa Rita do Passaquatro and Casa Branca; and *Region 5* represented the institutions in the municipalities of Presidente Prudente, Mirandópolis, Promissão, Lins, and Assis.

Data collection was scheduled in each institution whose Technical Director authorized participation, and telephone

contact was made with the nursing Chief of Executive Officer, explaining the purpose of the study and data collection procedures. Collection instruments were previously sent by e-mail, with the expectation that the data to be provided by information services (movement of patients and productivity) of each institution were available on the day of data collection. However, the lack of standardized definitions of variables and the lack of standardization in methodology of collection and storage of data among institutions, as well as variations in the units of analysis in which data were consolidated, demanded that the person responsible for collection made contact with the information sector of each institution. Data on many expected variables were consolidated to the institution, which prevented them to be recovered by sector/unit. For this reason, many of the analyses expected at level of sector could only be performed at level of institution.

Researchers asked for the nursing schedule and counted the numbers of professionals in each category, identifying those who were on vacation and on leave. The expedient of the Nursing Chief Officer provided data on indicators of quality of nursing care and every service unit was visited. The nurse on duty was interviewed and provided data on the NP's operational characteristics, through answers to closed and open questions, and indicated the medical chart of a typical inpatient at the time of collection to be evaluated. The medical chart indicated was observed for variables previously defined on the documentation of the NP. Nurses in direct care and also nurses in management positions were asked to respond to the questionnaire *Nursing Work Index - Revised* (NWI-R) in order to obtain data on characteristics of the work environment. The nursing professionals who were on duty on the day of collection were informed about the objectives of the study and were asked to respond to questionnaires Positions on the Nursing Process, Power of Knowing Participation in Change Tool, Quality of Life at Work Index for Nurses, Work Stress Scale and the Maslach Burnout Index.

The dynamics of data collection proved to be flexible enough to ensure the quality of data and cause the least impact on the nursing routine of the institution.

Ethical aspects

After submission of the project to the Ethics Committee of the School of Nursing of the University of São Paulo, authorization was obtained from Coordinating Body of Health Services - SES/SP to proceed. Potential participants were informed about the study and its procedures and those who agreed to participate signed the Informed Consent form specific for each type of participation.

Data analysis

It was decided to build separate databases for information of the institution, of sectors and of nursing professionals, keeping at every level those corresponding to the next higher level, so that they could be integrated into any of the three levels. A preliminary analysis to test the consistency of data was performed identifying outliers or typing errors. The design of this

database contains information at the institutional level (hospital or clinics), at the level of service unit of each hospital or clinic, and at the level of nursing personnel (nurses and auxiliary nurses).

Descriptive analyses of the involved variables are in progress. For inferential or explanatory analyses in which the NP documentation is the dependent variable in the level of service unit, this will be considered dichotomous (complete or incomplete) by applying the following rule: complete if documentation of the patient/user assessment, nursing diagnosis, nursing prescription and patient progress notes exist; incomplete if documentation of one or more phases of the NP is lacking. In the case of analyses in which NP is the dependent variable on the institutional level, this will be treated as continuous and calculated as the proportion of completeness of the NP documentation by dividing the total number of documented phases in all sectors/units per four times the number of service units of the institution. The result must then be multiplied by 100. The multiplication of the total number of sectors/units by four aims to obtain the maximum possible number of documented phases in the institution as a whole (assessment, diagnosis, prescription and progress notes).

FINAL CONSIDERATIONS

The results of this study will be used for analysis from the scientific and political point of view; scientific because it will provide empirical evidence about the variables involved in documentation of the nursing process. This evidence may confirm or refute the qualitative assessments on the relations between personnel variables and implementation of NP, besides broaden the analytical perspective to larger variables such as organizational environment. However, it is important to be aware of the fact the NP documentation is only an extrapolation of its implementation in services. The idea that the NP is an instrument that provides a systematic guide for the development of a style of thinking that directs clinical decisions required for nursing care⁽⁶⁾ makes it intangible in its own nature; thus the evaluation of NP documentation provides only indirect measure of the degree of NP implementation in health services.

From the political point of view, the results of this study can inform professional inspection bodies and accreditation services on the requirements or quality standards guided by the NP documentation. The identification of variables that explain the degree of NP's documentation can guide the definition of strategies and policies to promote the necessary conditions for good documentation.

The implementation and documentation of the NP in all patient-nurse care encounters is an ideal that has challenged the profession and discipline of nursing. However, the existence of a good documentation of the PE does not guarantee the best possible health outcomes for patients/users who receive nursing care. For research, the challenge that remains is to answer the question: what is the impact of the implementation of NP in health outcomes of patients?

REFERENCES

1. Brasil. Conselho Federal de Enfermagem. Resolução COFEN-358/2009. 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. Referência [Internet]. 2009[cited 2015 Jun 17]; Available from: http://www.cofen.gov.br/resolucofen3582009_4384.html
2. Maria MA, Boxs FAA, Grassi MFO. Systematization of nursing care in urgency and emergency services: feasibility of implementation. *Rev Bras Enferm* [Internet]. 2012[cited 2015 Jul 17];65(2):297-303. Available from: <http://www.scielo.br/pdf/reben/v65n2/v65n2a15.pdf>
3. Cruz DALM. Processo de enfermagem e classificações. In: Gaidzinski RR, Soares AVM, Lima AFC, et al. Diagnóstico de enfermagem na prática clínica. Porto Alegre: Artmed; 2008. p. 25-37.
4. Kenney JW. Relevance of theory-based nursing practice. In: Christensen PJ, Kenney JW, editors. *Nursing process: application of conceptual models*. 4th ed. Saint Louis: Mosby; 1995. p. 3-23.
5. Horta WA. *Processo de enfermagem*. São Paulo: EPU; 1979.
6. Peres HHC, Cruz DALM, Lima AFC, Gaidzinski RR, Ortiz DC, Trindade MM, et al. Development of electronic systems of nursing clinical documentation structured by diagnosis, outcomes and interventions. *Rev Esc Enferm USP* [Internet]. 2009[cited 2015 Jun 17];43(Spe 2):1149-55. Available from: http://www.scielo.br/pdf/reeusp/v43nspe2/en_a02v43s2.pdf
7. Bersusa AAS. Qualificando para a assistência de enfermagem: projeto "Tecendo a SAE". *Boletim do Instituto de Saúde* [Internet]. 2009[cited 2015 May 12];48:61-6. Available from: <http://periodicos.ses.sp.bvs.br/pdf/bis/n48/a11n48.pdf>
8. Aiken LH, Patrician PA. Measuring organizational traits of hospitals: the Revised Nursing Work Index. *Nurs Res* [Internet]. 2000[cited 2015 May 12];49(3):146-53. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/10882319>
9. Bruyneel L, Van den Heede K, Diya L, Aiken L, Sermeus W. Predictive validity of the International Hospital Outcomes Study questionnaire: an RN4CAST pilot study. *J Nurs Scholarsh* [Internet]. 2009[cited 2015 May 12];41(2):202-10. Available from: <http://onlinelibrary.wiley.com/doi/10.1111/j.1547-5069.2009.01272.x/epdf>
10. Gasparino RC, B. GE. Translation and cross-cultural adaptation of the "Nursing Work Index-Revised" into Brazilian Portuguese. *Acta Paul Enf* [Internet]. 2009[cited 2015 Jun 17];22(3):281-7. Available from: <http://www.scielo.br/pdf/ape/v22n3/a07v22n3.pdf>
11. Balsanelli AP, Cunha ICKO. The work environment in public and private intensive care units. *Acta Paul Enf* [Internet]. 2013[cited 2015 Jun 17];26(6):561-8. Available from: <http://www.scielo.br/pdf/ape/v26n6/09.pdf>
12. Guedes ES, Turrini RNT, Sousa RMC, Baltar VTB, Cruz DALM. Attitudes of nursing staff related to the nursing process. *Rev Esc Enferm USP* [Internet]. 2012[cited 2015 Jun 17];46(Esp):130-7. Available from: http://www.scielo.br/pdf/reeusp/v46nspe/en_19.pdf
13. Raatikainen R. Power or the lack of it in nursing care. *J Adv Nurs* [Internet]. 1994[cited 2015 May 12];19(3):424-32. Available from: <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2648.1994.tb01103.x/epdf>
14. Barrett EA. Power as knowing participatin in change: what's new and what's next. *J Nurs Sci Q* [Internet]. 2010[cited 2015 May 12];23(1):47-53. Available from: <http://nsq.sagepub.com/content/23/1/47.full.pdf+html>
15. Domingues T, Chaves EC. Knowledge scientific as value in the nurse's acting. *Rev Esc Enferm USP* [Internet]. 2005[cited 2015 Jun 17];39(Esp.):580-8. Available from: <http://www.scielo.br/pdf/reeusp/v39nspe/v39nspea10.pdf>
16. Cruz DALM, Pimenta CAM, Pedrosa MFV, Lima AFC, Gaidzinski RR. Nurses' perception of power regarding their clinical role. *Rev Latino-Am Enf* [Internet]. 2009 [cited 2015 Jun 17];17(2):234-9. Available from: <http://www.scielo.br/pdf/rlae/v17n2/15.pdf>
17. Kimura M, Carandina DM. [Development and validation of a short form instrument for the evaluation of quality of working life of nurses in hospitals]. *Rev Esc Enferm USP* [Internet]. 2009[cited 2015 Jun 17];43(Spe):1044-53. Available from: <http://www.scielo.br/pdf/reeusp/v43nspe/a08v43ns.pdf> Portuguese.
18. Paschoal T, Tamayo A. validação da escala de estresse no trabalho. *Est Psicol*. [Internet]. 2004[cited 2015 Jun 17];9(1):45-52. Available from: www.scielo.br/pdf/epsic/v9n1/22380.pdf
19. Laschinger HKS, Leiter MP. The impact of nursing work environments on patient safety outcomes: the mediating role of burnout engagement. *J Nurs Admin* [Internet]. 2006[cited 2015 Jun 17];36(5):259-67. Available from: <http://journals.lww.com/jonajournal/toc/2006/05000.pdf>
20. Moreira DS, Magnano RF, Sakae TM, Magajewski FRL. [Prevalence of burnout syndrome in nursing staff in a large hospital in south of Brazil]. *Cad Saúde Pública* [Internet]. 2009[cited 2015 Jun 17];25(7):1559-68. Available from: <http://www.scielo.br/pdf/csp/v25n7/14.pdf> Portuguese.
21. Maslach C, Jackson SE. *Maslach Burnout Inventory*. Palo Alto, CA: Consulting Psychologist Press; 1986.
22. Tamayo RM. *Relação entre a síndrome de burnout e os valores organizacionais no pessoal de enfermagem de dois hospitais públicos*. [Dissertação]. Brasília: Universidade de Brasília; 1997.
23. Aguayo R, Vargas C, de la Fuente EI, Lozano LM. A meta-analytic reliability generalization study of the Maslach Burnout Inventory. *Int J Clin Health Psychol* [Internet]. 2011[cited 2015 May 12];11(2):343-61. Available from: <http://www.redalyc.org/articulo.oa?id=33716996009>