Attitudes of nurses from a public teaching hospital regarding the nursing process

Atitude dos enfermeiros de um hospital público de ensino quanto ao processo de enfermagem

Actitud de los enfermeros de un hospital público de enseñanza en cuanto al proceso de enfermería

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ABSTRACT
Objective: To measure the attitudes of nurses on nursing process at a public teaching hospital. Method: A cross-sectional and analytical study conducted with nurses at a tertiary hospital. It was applied an instrument to characterize sample, as well as the Positions on the Nursing Process instrument, which measures nurses’ attitudes in relation to the nursing process. There are 20 items to be considered, in which the minimum possible value is 20 and the maximum of 140. The data were submitted to descriptive statistics and the variables of interest were analyzed by the Mann-Whitney, Student’s t-test, Chi-square test, Kruskal-Wallis, Spearman’s correlation coefficient and hierarchical multiple regression models, as appropriate.
Results: In a sample of 226 nurses, 80.5% (182) stated that they performed daily. The mean score of the instrument was 102.50 (SD = 21.76). The item “routine/creative” had a lower score (3.54), while “unimportant/important” had a higher score (5.81). Conclusion: The nurses reported being in favor and presented positive attitudes about nursing process, in addition to considering it important, but routine, as well as affirming little or no contact with research, classes or events on the subject.

DESCRIPTIONS
Nursing Process; Nursing Care; Attitude of Health Personnel; Hospitals, Teaching.
INTRODUCTION

The Nursing Process (NP) was developed as an interactive and interpersonal approach, a method of problem solving and a decision-making process, which serves as a framework for nursing care\(^1\)\(^2\). Years of study, use and refinement led nurses to consider that NP contemplates five distinct and dynamic steps which provide an efficient method of organizing thinking for decision-making and offer individualized care to the patient: 1. Data collection or research; 2. Diagnosis; 3. Planning; 4. Implementation; and 5. Nursing Assessment or Evaluation\(^1\)\(^3\).

There are several definitions of NP in the literature, but herein we bring forth the NP as a “systematic guide for developing a style of thinking that directs the necessary clinical judgments for nursing care”\(^4\).

In Brazil, some books and articles present the “Systematization of Nursing Care” (In Portuguese, *Sistematização da Assistência de Enfermagem* – SAE) as a synonym for NP. However, according to Resolution 358 of the Federal Nursing Council (COFEn – Conselho Federal de Enfermagem), SAE “organizes professional work to the method, personnel and instruments, enabling operationalization of the Nursing Process”\(^5\). This same Resolution indicates that the SAE should be applied in every health institution, public or private.

Considering the relevance of the subject to Nursing, one study\(^6\) investigated reports from the Center for Nursing Studies and Research (CEPEn) of the Brazilian Nursing Association (ABEN) and found that the NP was approached in 122 Master’s theses and 26 PhD theses from 1972 to 2007.

In contrast to this scientific development, a study carried out in two health institutions in Rondônia – Brazil, with a sample of 39 nurses. This identified that 87% of them stated that there is no NP in the work unit, and the institution does not offer conditions for its accomplishment (64%), although most of them claimed to know the NP (97%), understand its phases (90%) and wish to implement it (85%)\(^7\). This result corroborates with the reality of many Brazilian health institutions, even though NP operationalization is a means to improve the quality of nursing care, benefiting both the patient and the professional, since it qualifies Nursing as a whole and gives it visibility\(^8\).

Therefore, even with COFEn strategies, the involvement of educational institutions and advances in the development of nursing research, there is a gap between the knowledge production about the NP and its applicability in clinical practice\(^9\)\(^10\), which leads to questions about nurses’ knowledge and attitudes upon NP.

Attitude can be defined as a mental state, being it conscious or unconscious; a value, feeling or belief; or even the predisposition to a behavior or action\(^10\). The attitude here is understood as a position, a stance that leads the professional to make a decision and act in a certain way. Thus, attitudes have a fundamental role in applying concepts, since they contribute to the professional presenting or not the behaviors that are related to such concepts\(^11\). Therefore, literature points out that professionals who have more favorable attitudes towards the NP will probably be those who are most involved in its implementation\(^12\) and in the use of Nursing Classifications: a standardized language that aims to describe Nursing science, strengthening care, teaching and research\(^1\).

It was considered relevant to investigate nurses’ attitudes upon NP through applying a specific tool in order to obtain subsidies for developing continuing education, since NP is a relevant instrument to qualify nursing care, nurse’s attitude can interfere on its implementation, and studies on professionals’ perception about it mostly did not apply a validated tool. Thus, this study aimed to measure nurses’ attitudes about Nursing Process in a public teaching hospital, and to identify possible associations between characteristics of the sample with the achievement of the NP and the use of Nursing Classifications.

METHOD

STUDY DESIGN

A cross-sectional and analytical study.

SCENARIO

This study was developed at a public teaching, care and research hospital, administered by a public university in the state of São Paulo, Brazil. The hospital is maintained by resources from the Unified Health System (*SUS – Sistema Único de Saúde*), as well as funds from the University itself and other signed agreements. It is a hospital of high complexity with 375 beds. It provides care in 44 medical specializations, having capacity to attend about 1,000 patients per day in outpatient and emergency care, and an average of 40 daily surgeries.

DATA COLLECTION

Data collection was performed from January to February of 2017, approaching the nurses. Considering that the hospital has about 350 nurses, the sample was obtained by convenience, after the invitation of 284 subjects who met the following inclusion criteria: all nurses from the hospitalization units of different specializations, outpatient clinics, day hospital, imaging services, referenced emergency unit and the Pediatric Intensive Care Unit. Nurses who did not provide direct care to patients, those who were away on leave or had during the data collection period, and those responsible for continuing education activities were excluded.

The data collection instrument was composed of two parts. The first one had closed and open questions to collect data characterizing nurses and their experiences about the NP. The second part consisted of Positions on the Nursing Process (PNP), which uses the semantic differential to measure attitudes towards the NP. This tool uses a Likert Scale of 1 to 7, in which the number “1” represents the worst attitude, and the “7” the best attitude possible for each investigated aspect. There are 20 attitudes to be considered for the NP, in which the total minimum score may be 20 and the maximum is 140. Thus, higher scores mean more favorable...
attitudes towards the NP\textsuperscript{12}. The scores that indicate more favorable positions to the NP are ≥ 5.5, and the worst ones are ≤ 4.5\textsuperscript{15}.

The tool also has questions about degree of knowledge, contact with the NP, use of Nursing Classifications and how much the nurse considers him or herself favorable to the NP\textsuperscript{12}. Its original version is called Positions on Nursing Diagnosis\textsuperscript{14}, which was later translated and validated into Brazilian Portuguese\textsuperscript{13}. The adaptation of this scale\textsuperscript{12} consisted of replacing the concept of “nursing diagnosis” to “nursing process”.

Five questions were applied to investigate the degree of knowledge that nurses believed to have about NP and another five to measure the degree of contact with the theme in the last 3 years. The possible answers were: none, little, moderate or very much. The results were grouped into two categories to perform statistical tests: “none/little” and “moderate/very much”.

According to the data distribution, the non-parametric Mann-Whitney test or the unpaired Student t-test was applied for comparisons involving a qualitative variable with two categories and a quantitative variable\textsuperscript{15}. The non-parametric Kruskal-Wallis test\textsuperscript{15} was applied followed by Dunn’s post-test for the comparisons involving a qualitative variable with more than two categories and a quantitative variable.

The correlations between the total PNP score and the other quantitative variables were evaluated using the Spearman’s correlation coefficient\textsuperscript{19}. In this study, the correlation coefficient was classified according to Cohen’s description\textsuperscript{16}: weak correlation ranging from 0.1 to 0.29; moderate correlation of 0.30 to 0.49; strong correlation when the value is greater than or equal to 0.50. The study of the associations between the qualitative variables was done through the application of the Chi-square test\textsuperscript{11}.

Finally, hierarchical multiple regression models were constructed using generalized linear models\textsuperscript{17}, considering the total PNP score as a dependent variable. Regression coefficient estimates are presented in these models, as well as their confidence intervals and p-values. Variables with p-value less than 0.20 were included in the models in the above-mentioned correlation and comparison tests. The variables belonging to each block of variables were included at their confidence intervals and p-values. Variables with more than two categories and a quantitative variable.

The data analysis and processing

A significance level of 5% was considered for all analyzes using the Statistical Analysis System (SAS), version 9.4. The descriptive analyzes were performed using the Statistical Package for the Social Sciences (SPSS) for Windows, version 16.0.

Ethical aspects

This study was developed in accordance to Resolution 466/2012 of the National Health Council on research with human beings and approved by the Research Ethics Committee of Universidade Estadual de Campinas, under Opinions 556.816/2014, and 2.379.396/2017.

Results

The sample consisted of 226 nurses. Of these, 87.6% (198) were female, ranging in age from 25 to 68 years, 67.7% (153) studied at a private university, and were graduated from 2 to 42 years ago. Working time at the institution varied from less than 1 year to 36 years, while the time in the unit was less than 1 year to 30 years. In addition, 67.3% (152) of the nurses reported that they were working in the unit of their preference; 70.4% (159) had a specialization degree, and of these only 28.3% (64) worked in the area of this degree. Prior to the survey, 21.2% (48) of the participants had a managerial or supervisory role, and 40.7% (92) had already served as nursing technicians. The number of nurses’ simultaneous jobs ranged from one to five.

Average satisfaction with the work setting was 5.56 (SD = 1.30), and the average satisfaction with the career was 6.08 (1.35). Regarding the complexity of the nursing care performed, 4.4% (10) assigned a minimum level of complexity, 27.4% (62) intermediate, 31.9% (72) semi-intensive, and 36.3% (82) considered that they perform intensive care.

In relation to the NP, 80.5% (182) of the nurses reported doing it daily. The frequency of performing NP ranged from none to 20 patients per day, with a mean of 4.95 patients (SD = 3.45). In terms of being in favor of the NP, 43.36% (98) attributed the maximum value to the general statement, which ranged from 1 (nothing) to 7 (very much). The mean score for this statement was 5.93 (SD = 1.26).

Considering the NP performance, 85.4% (193) of the nurses reported using nursing classifications. Of these, 83.2% (188) used the NANDA International (NANDA-I) Nursing Diagnoses Classification\textsuperscript{18} 20.8% (47) of NIC\textsuperscript{19}, 19.5% (44) of NOC\textsuperscript{20}, 1.8% (4) the International Classification for Nursing Practice (ICNP)\textsuperscript{21}, 0.4% (1) the International Classification for Nursing Practice in Collective Health (CIPESC – Classificação Internacional das Práticas de Enfermagem em Saúde Coletiva)\textsuperscript{22}, and 1.8% (4) reported using “another” nursing classification.

Among nurses who do not use Nursing classifications, there were justifications for that: 1.8% (4) of the nurses mentioned that they do not know classifications; 14.6% (33) do not consider them useful; 3.1% (7) believe nurses do not have time for their use; 2.2% (5) consider them difficult to use; 3.5% (8) stated that the content of the classifications.
According to comparison tests, there is evidence of difference on mean of the total PNP score mean among nurses who selected “none/little” and those who selected “moderate/very much” for: nursing diagnosis use (p = 0.0006); readings on NP (p = 0.0025); participation in classes/courses (p = 0.0018); participation in events (p = 0.0132); use of NP in clinical practice (0.0237); research development (p <0.0001) and use of NOC (p = 0.0430).

Regarding the data regression, statistically significant differences were observed between groups that performed nursing diagnosis (β = 17.05, p = 0.003) and developed research (β = 10.62, p = 0.0025), presenting responses of “moderate/very much” in relation to the group that declared “none/little” contact with these activities, regarding the higher means of the final PNP score. Higher career satisfaction (β = 3.91, p <0.0001) is also statistically related to higher averages of the aforementioned score.

DISCUSSION

The nurses in the studied sample declared themselves in favor of NP and demonstrated positive attitudes, according to PNP results. Previous studies with this tool obtained similar results for the mean score, which was 114.34. A research developed at the Surgical Center obtained a lower mean score than the present study (89.55), but with nurses who were also favorable to NP.

Considering the degree of contact of the nurses with the NP, it can be seen that the items referring to the research, classes, events and study presented low averages, indicating that nurses have little contact with NP by these means. Consequently, it can be understood that there is a lack of updating in relation to this theme. On the other hand, the majority of nurses reported moderate knowledge regarding NP and its phases. Literature has shown that even though nurses affirm such knowledge, it is still incipient. When questioned, they do not know how to correctly describe the NP phases and/or its sequence, and do not consider this care methodology as a priority.

Since skills and knowledge are necessary to organize and use the NP, it is imperative that nurses base their practice on the scientific literature in order to qualify the planning and development of nursing activities, in addition to acquiring scientific support for the work done. The shortage of knowledge about the NP has been indicated as the main reason for poor commitment on its application in some institutions, what is a relevant factor that hinders its implementation in health services. It should be emphasized that contact with the NP through clinical practice may have been more frequently pointed out by the nurses of the present study due to the presence of specific forms for NP registers in most of the units. From these forms, those used to nursing diagnoses are based on the NANDA-I Nursing Diagnoses Classification, which may also have influenced the higher percentage of nurses who reported using this classification in their clinical practice to the detriment of other classifications investigated. In addition, this classification was the first to be introduced into the institution. Institutional policies to promote using of

Table 1 – Mean score of the Positions on the Nursing Process tool items – Campinas, SP, Brazil. 2018.

<table>
<thead>
<tr>
<th>PNP items</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Important/Important</td>
<td>5.81</td>
<td>1.43</td>
</tr>
<tr>
<td>Negative/Positive</td>
<td>5.71</td>
<td>1.40</td>
</tr>
<tr>
<td>Not significant/Significant</td>
<td>5.68</td>
<td>1.45</td>
</tr>
<tr>
<td>Unacceptable/Acceptable</td>
<td>5.65</td>
<td>1.26</td>
</tr>
<tr>
<td>Invalid/Valid</td>
<td>5.64</td>
<td>1.47</td>
</tr>
<tr>
<td>Irrelevant/Relevant</td>
<td>5.62</td>
<td>1.44</td>
</tr>
<tr>
<td>Bad/Good</td>
<td>5.60</td>
<td>1.35</td>
</tr>
<tr>
<td>Worthless/Valuable</td>
<td>5.58</td>
<td>1.49</td>
</tr>
<tr>
<td>Negligible/Significant</td>
<td>5.58</td>
<td>1.49</td>
</tr>
<tr>
<td>Foolish/Intelligent</td>
<td>5.51</td>
<td>1.48</td>
</tr>
<tr>
<td>Inconvenient/Convenient</td>
<td>5.19</td>
<td>1.43</td>
</tr>
<tr>
<td>Difficult/Facilitating</td>
<td>5.01</td>
<td>1.62</td>
</tr>
<tr>
<td>Not rewarding/Rewarding</td>
<td>4.86</td>
<td>1.81</td>
</tr>
<tr>
<td>Uncomfortable/Comfortable</td>
<td>4.83</td>
<td>1.52</td>
</tr>
<tr>
<td>Ambiguous/Clear</td>
<td>4.75</td>
<td>1.58</td>
</tr>
<tr>
<td>Unpleasant/Pleasant</td>
<td>4.70</td>
<td>1.59</td>
</tr>
<tr>
<td>Not realistic/Realistic</td>
<td>4.47</td>
<td>1.71</td>
</tr>
<tr>
<td>Weak/Strong</td>
<td>4.44</td>
<td>1.63</td>
</tr>
<tr>
<td>Hard/Easy</td>
<td>4.35</td>
<td>1.62</td>
</tr>
<tr>
<td>Routine/Creative</td>
<td>3.54</td>
<td>1.90</td>
</tr>
</tbody>
</table>

SD = Standard-deviation. Note: (n=226).
NP and other external factors are also pointed out as factors that influence the use of nursing diagnoses and contribute to forming positive attitudes(27).

The presence of specific forms is highlighted in the literature as being of great relevance for implementing NP, for standardizing and supporting nursing actions(28), as well as facilitating the performance of the nurse’s role(29), what corroborates with the high number of nurses in the sample who stated performing NP in clinical practice. On the other hand, as an activity related to clinical reasoning, when the professional comes into contact with each patient, it is relevant to note that an expressive number of nurses has not recognized NP development in their professional practice. This finding also corroborates the issue of the nurse’s limited knowledge on the subject, as identified in other studies(27-29).

The statistical tests show that among nurses who answered “none/little” about the nursing diagnosis use and those who selected “moderate/very much”, nurses in the second group showed on average 17.05 points more in the PNP score than the first. This same relation occurs with nurses who reported doing research on NP in a “moderate/very much” way, which increases the PNP score by 10.62 points on average in relation to those who perform none/little research. Therefore, nurses’ attitudes in this sample were more positive in relation to NP among those who acknowledged implementing the diagnostic phase and those who had involvement with research, which may be further stimulated by the institution.

It was also found that as the professional/career satisfaction score increased, the total PNP score increased by an average of 3.98. Thus, it can be considered that commitment of providing quality care in order to meet patients' needs is related to nurses’ satisfaction and motivation. Work satisfaction is also indicated as a contributor to high productivity and low absenteeism rate(30).

A literature review(29) pointed out that the work overload at units ends up making the implementation of the NP impractical. The excess of activities to be fulfilled, together with the lack of incentive of the institutions and few professionals lead the NP not being carried out(23). Thus, when nurses consider NP as a compulsory method of working in all nursing services (according to COFEn), but are faced with a work context in which they are responsible for performing multiple tasks which do not favor applying such method, it can make them to develop a bureaucratic perception of NP performance(24-25). Thus, nurses may not fully apply NP and see it as routine which does not demand creativity or instigate their curiosity. In other studies, the average score of the routine/creative item was also highlighted among the lowest scores obtained(31-32).

In contrast, despite the difficulties mentioned in the literature, nurses of the present study considered that NP is important, presenting a high average score for this item by PNP. However, as pointed out in an earlier study(31), it is necessary to evaluate through other investigations whether the importance attributed to the NP comes from evaluating the work and reflection of the nurses themselves, or a response shaped by what is established as desired, whether by the education of these professionals or by the current nursing legislation(12). It is considered that the responses may also be influenced by the work context of the studied sample, since the study was conducted at a public teaching hospital where there is a greater requirement of scientific basis in the performed activities.

The results indicate that nurses are favorable to NP, and more than 80% of them reported using it in their practice. These factors positively contribute to training academics, since they enable the opportunity of being inspired by the observed model in this scenario(25) and to practice NP. Theoretical-practical activities have a great influence in learning NP and in the future professional life, thus the health service in which the students experience their learning can lead them to reproduce a certain model(25).

Although some consulted studies specifically approached the attitude of nurses towards nursing diagnosis, international studies suggest that professionals who receive specific instructions about this have more positive attitudes and tend to use it in their clinical practice(11,33). Thus, implementing programs which instrumentalize nurses on nursing diagnoses considering clinical performance, research and teaching, can lead to a change in attitude and increase its use(11). Such considerations can be extrapolated to NP in general, therefore it is recommended that professionals be educated to develop more positive attitudes towards the NP, and consequently to use it in a deliberate and qualified way in clinical practice.

As mentioned above, statistical tests showed that nurses who stated “moderate/very much” responses regarding the use of diagnoses, readings about NP, participation in classes/courses, participation in events and using NP in clinical practice were those that had more positive attitudes towards the NP, and consequently to use it in a deliberate and qualified way in clinical practice.

This study had a limitation of not including more investigation on knowledge about NP after applying the PNP. It is considered that it would be relevant to conduct a qualitative study with the nurses who presented the lowest PNP scores and those who presented the highest, in order to study individual aspects that could guide institutional strategies to involve nurses with NP implementation in a more effective manner.

The changes in nursing care considering the implementation of the NP do not exclusively depend on the nurse’s attitudes, but require relevant involvement of professional committees, educational institutions and managers, along with articulation of work processes and institutional policies(30).
CONCLUSION

The nurses in the studied sample declared themselves in favor of the NP. According to the average scores of each PNP item, they tend to regard NP as routine but significant, positive and important.

The nurses mostly reported using nursing classifications, with the NANDA-I Nursing Diagnoses Classification being used the most. The use of the nursing diagnosis and the conduct of research on NP, both with “moderate” to “very much” responses, were identified as factors related to more positive attitudes, considering the PNP scores. In addition, statistical tests have identified that the more satisfied the professional is with their career, the more positive attitudes they have towards NP.

When investigating the level of contact with NP through reading, classes/courses, events, use in clinical practice and research development, most nurses reported performing NP in their daily activities as the most frequent form of contact. Regarding to knowledge itself, professionals mostly stated that they recognize (from moderate to very much) every step of the NP and its totality.

The little contact with the NP through research, classes and events and the moderate contact with the reading were data that attracted attention because the sample was compound of nurses who work at a teaching hospital. Considering the complexity and importance of the NP in nursing practice, it is relevant that measures be implemented for constant updating of professionals regarding this care method, aiming at better scientific basis and consequent improvement in patient care.

The lack of involvement with continuing education and research limits the nurse’s role as a protagonist for the enrichment and strengthening of NP in clinical practice.

It is imperative that nurses recognize the potential of NP for qualifying nursing care, considering that it offers subsidies for evaluating provided care, the direction of care and cost control. Educational institutions and health services play a fundamental role in this nurse empowerment process.


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