Cogitare Enfermagem

USE OF EVIDENCE-BASED PRACTICE BY NURSES IN THE HOSPITAL SERVICE

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ABSTRACT
Objective: To describe the practices, attitudes and knowledge of hospital nurses about Evidence-Based Practice.
Method: Descriptive study with 124 nurses from a university hospital in Sergipe, Brazil. The Evidence-Based Practice Questionnaire was applied between January and February 2019, and data were analyzed using Shapiro-Wilk, Kruskal-Wallis and Post hoc tests.
Results: Of the total participants, 86.3% are female; the mean age is 34.5 years and the time since graduation ranged from five to ten years. The final average score for the Evidence-Based Practice Questionnaire was 115.9, indicating positive attitudes of nurses related to Evidence-Based Practice.
Conclusion: Nurses' attitudes are based on scientific results. However, the best evidence is not always used to support professional practices. Disseminating the appropriate use of research in Nursing contributes to patient safety, permanent education and quality of care.

DESCRIPTORS: Evidence-Based Nursing; Evidence-Based Clinical Practice; Comprehensive Health Care; Nursing; Hospitals.

UTILIZACIÓN DE LA PRÁCTICA BASADA EN LA EVIDENCIA POR ENFERMEROS EN EL SERVICIO HOSPITALARIO

RESUMEN:
Objetivo: Describir las prácticas, actitudes y conocimientos de enfermeros hospitalarios sobre Práctica Basada en la Evidencia. Método: Estudio descriptivo, con 124 enfermeros de hospital universitario de Sergipe, Brasil. Fue aplicado cuestionario Evidence-Based Practice Questionnaire, en enero y febrero de 2019. Datos analizados por tests de Shapiro-Wilk, Kruskal-Wallis y Post hoc. Resultados: 86,3% de participantes era de sexo femenino, media etaria de 34,5 años, tiempo de formación entre cinco y diez años. El puntaje promedio final para la escala de Práctica Basada en la Evidencia y Efectividad fue 115,9, indicando actitudes positivas de los enfermeros respecto de la Práctica Basada en la Evidencia. Conclusión: Las actitudes de los enfermeros se basaron en resultados científicos, aunque no siempre las mejores evidencias son utilizadas como respaldo de las prácticas profesionales. Difundir el adecuado uso de la investigación en Enfermería contribuye a la seguridad del paciente, la educación continua y la calidad de atención.
DESCRIPTORES: Enfermería Basada en la Evidencia; Práctica Clínica Basada en la Evidencia; Atención Integral de Salud; Enfermería; Hospitales.

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INTRODUCTION

Evidence-Based Practice (EBP) refers to the use of the results of scientific research as support for the adoption of conducts during health care. Health professionals should use scientific evidence of research with methodological rigor, high degree of internal and external validity, for application in clinical practice [1].

The transformation of both the social and cultural practice of nursing care is associated with the production of knowledge by the area. Thus, research has been increasingly recognized as essential to work processes, in the clinical, managerial and teaching fields, as it enables the renewal of knowledge and conducts [2].

In evidence-based practice, some steps must be considered by health professionals. The first step concerns the need to change attitudes, and involves collecting data on the current actions developed in the service, identifying problems and specifying possible interventions and goals to be achieved. The second step concerns identifying the best evidence to answer the questions raised. For this, it is necessary to understand the methodology of each type of research, as well as plan and implement the search in the appropriate sources [3].

In the third step, professionals are supposed to analyze the strength of the evidence found, critically assessing the validity, benefits and risks and then proceed to the subsequent step. This step includes defining the change to be implemented, identifying the necessary resources and planning care. The fifth step consists in the implementation and evaluation of the results. And, finally, the sixth step attempts to integrate the new practice to local standards, monitoring the process indicators [3].

In nursing, EBP is a safe and organized way of establishing professional conduct with a focus on identifying and solving problems, based on the best scientific evidence. It involves the steps of defining the problem, search and critical evaluation of evidence, implementation, and evaluation of results. Another aspect to be considered by nurses is the use of evidence according to their professional competence, clinical condition and patient compliance, as well as the service's availability of resources and materials [4].

Thus, the present study attempted to describe the practices, attitudes and knowledge of hospital nurses about Evidence-Based Practice.

METHOD

Observational, descriptive study, conducted in February 2019, at the University Hospital of Sergipe, Brazil, with a sample of 124 nurses from a total of 173. All nurses who have been working in the institution for at least six months and who performed their duties in medical and surgical clinics, ICU (Intensive Care Unit), pediatrics, surgical centers, transfusion sterilization centers were included in the study. Professionals who were on vacation, medical or gestational leave during the collection period, and those who did not answer all questions in the questionnaire were excluded.

The instrument for data collection used was the Evidence-Based Practice Questionnaire (EBPQ), which has already been validated internationally and in Brazil [5]. It aims to assess attitudes, knowledge and implementation for EBP, to ensure evidence-based assistance. The instrument has 24 items scored on a seven point Likert-type scale. The score is calculated by adding the values of the answers to each question, totaling 168 points, with the highest score indicating more positive attitudes towards clinical effectiveness and EBP.

The scores of the Evidence-Based Practice and Clinical Effectiveness questionnaire varied between 1-7, with 1 being the most negative answer and 7 being the most positive answer. After the values were obtained, the questionnaire was divided into three domains: domain 1 - "Evidence-Based Practice"; domain 2 - "Attitudes related to EBP" and domain 3 - "Knowledge and skills of EBP". For analysis, the absolute and relative frequency was performed for qualitative categorical variables, and mean and standard deviation (SD) for quantitative variables.

The database was organized using the Excel 365 program, with categorization of qualitative variables and measurement of quantitative variables. Statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS) 22.0. Shapiro-Wilk test was used to assess the normality of the means of domains 1, 2, 3 and total of each individual. After detection of asymmetry between the domains, Kruskal-Wallis test and Post hoc pair comparison test were used to verify whether there was a statistical difference between the groups of graduates, specialists and masters, as well as to identify in which groups there was divergence in mean values.

The study was submitted to the Ethics Committee in Research with Human Beings at Universidade Federal de Sergipe and approved under Protocol No. 2,897,833.

RESULTS

Of the 124 nurses, 107 are female (86.3%), with a general mean of 34.8 (± 5.74) years of age, training time of five to ten years (75/60.5%) and graduate students (109/ 87.9%) (Table 1).

Table 1 - Characterization of the research subjects. Aracaju, SE, Brazil, 2019

Variables	n (%)	Mean (SD)
Gender		
Male	17 (13.7)	
Female	107 (86.3)	
Age		34.8 (±5.74)
Time elapsed since graduation		
<5 years	3 (2.4)	
5-10 years	75 (60.5)	-
>10 years	45 (36.3)	
Not reported	1 (0.8)	
Educational level		
Undergraduate degree	15 (12.1)	-
Specialization	95 (76.6)	
Master's degree	14 (11.3)	

Source: Authors (2020).

The final average score for the Evidence-Based Practice and Effectiveness scale was 115.9 (± 22.94). The domain with the highest average was Domain 2 (5.4), followed by Domain 1 (4.70) and Domain 3 (4.60) (Table 2).

Table 2 - Descriptive statistics for scoring the domains of the EBPQ questionnaire Aracaju, SE, Brazil, 2019

Domains	Mean (SD)	Total Score Mean (SD)
I - Evidence-Based Nursing Practice	4.7 (±1.37)	
II - Attitudes Related to Evidence-Based Practice	5.4 (±1.15)	
III - Knowledge and skills	4.6 (±1.00)	
General	4.8 (±0.95)	115.9 (±22.94)

Source: Authors (2020).

In Domain 1 of the questionnaire (Table 3), the items that obtained the highest averages were A, B and D ($\bar{x}$ = 4.8), related to the formulation of a guiding question to boost research, search for scientific articles and integration between theory and professional practice. As for Item C, related to the frequency with which nurses critically analyze the literature, it obtained the lowest score (4.3).

Table 3 - Descriptive statistics for items in Domain 1 - Evidence-Based Practice. Aracaju, SE, Brazil, 2019

Domain 1		
Items	Description	Mean (SD)
A	How often did you ask a question that can be clearly answered to fill a gap or lack of your knowledge.	4.8 (±1.60)
B	How often did you seek relevant evidence after the question was asked.	4.8 (±1.60)
C	How often did you critically evaluate all the literature found based on some established criteria.	4.3 (±1.70)
D	How often did you integrate the evidence found with your previous knowledge and experience.	4.8 (±1.65)
E	How often did you evaluate the results of your practice.	4.7 (±1.72)
F	How often did you share this knowledge with your colleagues.	4.7 (±1.71)

Source: Authors (2020).

Regarding Domain 2, item I had the highest mean score (6.4), demonstrating that

the participants had a positive perception regarding the applicability of the evidence in the professional routine, while item G, which relates workload with the use of EBP, obtained the lowest score (4.4) (Table 4).

Table 4 - Descriptive statistics for items in Domain 2 - Attitudes related to EBP. Aracaju, SE, Brazil, 2019

	Domain 2	
Items	Description	Mean (SD)
G	My workload is very high, so I don't have time to update myself on all the new evidence / New evidence is so important that I set aside some time from work to this.	4.4 (±1.79)
H	I feel uncomfortable when my practice is questioned / I openly welcome questions about my practice.	5.6 (±1.41)
I	Evidence-based practices are a waste of time / Evidence-based practices are fundamental to professional practice.	6.4 (±1.42)
J	I use tried and trusted methods instead of switching to something new/ My practice has changed due to the evidence I have found.	5.2 (±1.66)

Source: Authors (2020).

As for Domain 3, item X, which addresses the ability to review one's professional practice, showed a higher mean (5.4), while item K, which refers to the ability to perform the research, presented the lowest mean (4.2) (Table 5).

Table 5 - Descriptive statistics for items in Domain 3 - Knowledge and skills. Aracaju, SE, Brazil, 2019 (continues)

	Domain 3	
Items	Description	Mean (SD)
K	Your research skills.	4.2 (±1.29)
L	Your computer skills.	4.4 (±1.29)
M	Your skills in monitoring and reviewing practices.	4.3 (±1.21)
N	Your ability to convert your knowledge needs into a research question.	4.2 (±1.32)
O	Your knowledge of the main types and sources of existing information.	4.4 (±1.23)
P	Your ability to identify gaps in professional practice.	4.8 (±1.21)
Q	Your knowledge of how to raise evidence.	4.3 (±1.30)
R	Your ability to critically analyze the evidence in the face of established standards.	4.5 (±1.28)
S	Your ability to determine how valid the material is.	4.6 (±1.36)
T	Your ability to determine how clinically applicable the material is.	4.6 (±1.27)

U	Your ability to apply knowledge to individual cases.	4.8 (±1.26)
V	Sharing your ideas and knowledge with co-workers.	5.3 (±1.18)
W	The dissemination of new ideas about care among colleagues.	5.2 (±1.28)
X	The ability to review your own practice.	5.4 (±1.22)

Source: Authors (2020).

Analysis of questions from all domains shows that the one with the highest score was domain 1. Evidence-based practices are essential to professional practice (6.4 ± 1.42), present in Domain 2, while the items with the lowest rates were N - Your ability to convert your knowledge needs into a research question (4.2 ± 1.29) and K – Your research skills (4.2 ± 1.32), both included in Domain 3.

With the Kruskal-Wallis test of independent samples, statistical significance was obtained between the groups of graduated nurses and masters regarding domains 1 and 3, which leads to the conclusion that the higher the level of education, the better the performance regarding the practices and skills necessary for the use of evidence. This was not observed in the comparison of Domain 2 between the groups, demonstrating that attitude does not depend on the level of education.

DISCUSSION

The final average of the EBPQ score by the participants demonstrated that nurses have more positive attitudes regarding clinical effectiveness and evidence-based practice than negative, reaching more than 60% of the total questionnaire score (168). A study carried out in Brazil[5] with 158 nurses obtained similar results, with an average final score of 129.15 for the group composed of nurses with master's or doctorate degrees, and 111.24 for the group of nurses at the Public Hospital who had an undergraduate degree.

The domains with the highest score means were those related to practices and attitudes (1 and 2), and these results corroborate others found in the literature[5-7]. However, a study with 338 nurses carried out in Portugal showed divergent results: the subscales that presented the highest and favorable values for EBP were, as follows: "Attitudes" (5.98 ± 0.97), followed by "Knowledge/skills and competences" (5.07 ± 0.90) and "Practices" (4.43 ± 1.38)[8].

It should be noted that the items related to knowledge and skills obtained the lowest scores, showing the difficulty faced by nurses to carry out the research. This reveals that although professionals seek scientific evidence to support their care actions, there is no guarantee that they are the most appropriate, since the choice of the best evidence depends on the quality of the search strategy carried out. One of the main obstacles to the use of knowledge produced in nursing is the understanding of research results [9].

EBP is characterized by the use of the best and most current research results available, as well as by the skills and competences of professionals who, in the performance of their routine activities, use more than just the skills considered "traditional". In EBP, the professional must be able to identify the guiding questions for decision making, seeking relevant scientific answers and the critical evaluation of the information collected. Therefore, the researcher must use methodological rigor in the search strategy, as well as evaluate the study design, its internal and external validity[8,10].

One of the results obtained by this study was that nurses with a higher level of specialization had a better performance in the use of EBP. Other studies conducted in hospital settings have found similar results [11-15].

It is worth mentioning two important aspects that influence adherence to the effective use of EBP in the work process by nurses. The first corresponds to internal or inherent factors of the professional, which concern the importance and need to adopt research as an update tool for care, as well as the skills and abilities necessary for the classification, search and choice of the best evidence and use of information and communication technologies in health. As for the external aspects, they are related to the recognition and interest of the organizational environment in motivating the use of EBP in the routine of health services, promoting, for example, the implementation of training mechanisms [15].

However, there are factors that hinder the implementation of EBP by nursing, such as the lack of research in the area, mainly studies with level of evidence 1, and the lack of incentive and research culture in hospital settings. It should be noted that many Brazilian hospitals have a rigid structure and centralization of power, which result in competition, individualism and difficulty in performing teamwork [9].

For the incorporation of EBP in the nurses' care practice, the environment, the characteristics of the professionals and the various strategies that will enable innovation should be considered. In this regard, it is suggested that the following criteria be observed: persuade health professionals to unleash their full potential of engagement and creativity, participation and support from different organizational levels, planning of actions, evaluation of results and decision on their maintenance [1,7-8].

This study had some limitations, namely: some doubts arose regarding the interpretation of questions by the participants, and so the researchers had to make clarifications at the time of data collection. However, efforts were made to control a possible influence of researchers in the responses, by completing the validated questionnaire without interference. Moreover, the results were obtained through the application of an instrument with closed-ended questions and the actual implementation of the attitudes could not be observed in practice.

CONCLUSION

Although nurses consider EBP to be fundamental for nursing care, and their attitudes are based on results of scientific research in their field, it is difficult for them to complete the necessary steps to investigate the best evidence.

Research has still been little applied in the practical field of nurses. For the incorporation of EBP in the care practice of health professionals, the environment and the work process must be considered. EBP in hospital nursing provides greater reliability for professionals' interventions, hence improving the quality of care. Thus, the development of actions that ensure better training of nurses has been one of the greatest challenges faced by health services.

Among the strategies for the dissemination of this scientific tool, it is worth mentioning theoretical-methodological workshops for nursing leaders and a permanent education directed by mentors, who are able to encourage and transmit confidence to the participants. Furthermore, the inclusion of this topic in the curriculum of undergraduate and graduate nursing courses is also a strategy that facilies the adoption of EBP, as it crosses the barrier between research and care.

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