



Original Article

Nurses' Knowledge Regarding Nursing Process and Barriers in its Application

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ABSTRACT

Nursing process increases patients' satisfaction and enhances the quality of care provided to patients according to their needs. **Objective:** To determine the level of knowledge of nurses regarding nursing process and barriers in its application. **Methods:** The current study used cross-sectional study design for this research project. A self-administered questionnaire to be used to record responses of 80 nurses working in three different teachings hospitals in Peshawar through convenient sampling technique. Frequencies and percentages mean and standard deviation were analyzed through SPSS-20.0 as descriptive statistics. The study was approved by institutional review board while informed consent was taken from each participant. **Results:** Eighty staff nurses (N=80) completed the survey, where female were in majority (72.5%) In knowledge section, 70% participants answered it as a five-step process which is correct. Of the total, 73.75% answered true by considering the assessment as the data collection part of the nursing process. Moreover, 68.75% participants have a satisfactory knowledge who answered correctly to consider the goals as a part of Planning. 82.50% replied they have access to equipment's for provision of nursing care while 17.50% has no access to equipment were the barriers in the implementation of nursing process. **Conclusions:** The study concluded that nursing process is a tool that are implemented for quality care, and most of the participants of the study have knowledge about the nursing process, while lack of facilities for smooth implementation of nursing process was barrier faced by the respondents.

INTRODUCTION

The Nursing Process represents the quality of care which provided by nurses to the patients according to their needs. It consists of planning of nursing actions, performing those actions, recording them and evaluating patient's condition upon the bases of care delivery. The nursing profession requires a systematic high level of critical thinking with actions which is linked to nursing process; a tool for problem solving [1]. It is an important element both in professional nursing practice and nursing education curriculum [2]. Nursing process is a tool for systematic thinking which helps to assess and identify patients need,

help to select appropriate interventions and evaluate the situation either the same care action should keep continued or need some new action plane [3]. The nursing process has been used by nurses to provide quality care by systematizing their thoughts and actions and delegate them effective and efficiently to the nursing team. It is a useful problem-solving method which identifies the actual and potential needs of the patients. It is included both physical and mental health [4]. The patient's individual physiological, psychological, sociological, and spiritual requirements are the subject of the nursing assessment. A

patient's successful evaluation begins with this first step. This process necessitates the collection of both subjective and objective data. Using an age- or condition-appropriate pain scale, vital signs like temperature, respiratory rate, heart rate, blood pressure, and pain level are taken as part of the assessment. By allowing the formation of a nursing diagnosis, the assessment identifies the patient's current and future care requirements. The nurse helps to prioritize interventions and care by recognizing both normal and abnormal patient physiology [5, 6]. The purpose of the initial nursing assessment is to determine the parameters of the assessment and the responsibilities necessary to plan and provide the patient with appropriate, individualized care [7-9]. To provide care to patient the nurses are responsible for their care by assessment, investigation of problems, and to take required steps for the patient like other health professionals [10]. Therefore, nursing process needs both physical resources and materials for each organization to enables its implementation with the aim to enhance health outcome of the patients [11]. There is a need to integrate the nursing process into clinical care in every hospital, healthcare facility, and in the community at large. However, none of the procedures are actually carried out in a systematic manner because it is always thought to be difficult and time-consuming. The nursing process enables nurses to priorities the requirements of specific patients and treats them as such, rather than based on a medical diagnosis [12]. The nursing process always takes the perspective of the patient, guarantees high-quality, personalized care, and encourages patients to get involved at all stages of the procedure. Similar to doctors, nurses also benefit from increased job satisfaction and professional advancement. The nursing process establishes the parameters of nursing practice and adds to the profession's autonomy [13, 14]. Every day, there is a growing need for high-quality nursing care. The nursing process, which is the most important tool for putting nursing knowledge into practice, will be the solution to this demand. The study was conducted with the aim to determine the level of knowledge of nurses regarding nursing process and barriers in its application.

METHODS

The current study design was Cross-sectional, Descriptive, which was conducted three tertiary care hospitals of Peshawar (North-west general Hospital, Rehman medical institute, and Hayatabad medical complex). The study was conducted from June 2022 to August 2022. The study population was nurses working in these three Tertiary Care Hospitals of Peshawar, so considering all the nurses as population using 95% confidence level, having 5% margin of error, and 80% prevalence the total sample size was 88, so due to incomplete data of the 8 respondents the sample

size that was consider for statistical analysis was 80 using convenient sampling technique. Nurses who education is diploma and graduation and working on clinical site, supervisor and head nurse/team lead was the inclusion criteria, while nurses who work on director or manager post or having less than one-year experiences was excluded from the study. To initiate the process of data collection, the study was approved by institutional review board, and then permission for data collection from all the three studies setting was granted. As a primary investigator I visited these hospitals in morning, evening and night shifts to have the data collected. For data collection a pre-test questionnaire was used that contain two parts: Part A Contains: Demographic variables included details about the Age, Gender, Education Level, Professional experience of participants. Part B Contains: It had 12 items with a different response option about the knowledge regarding the nursing process and perceived barriers faced by the nurses while applying the nursing process. Frequencies and percentages were calculated for categorical variables, while mean and standard deviation was calculated for continuous variables as descriptive statistics through SPSS-20. The study was approved by institutional review board, for each participant, proper information was given regarding the aim and objectives of the study and their informed consents were taken. Then the self-administered questionnaires were given to them for filling. We made sure that their inputs are kept confidential and anonymous. They were assured that their participation is voluntary and they could withdraw from the study anytime.

RESULTS

In the present study the total number of students was n=80. The Table 1 shows that the number of female respondents was higher (72.5%) compare to male participant (27.5%). The majority of participants was single (60%), graduate (47.5%) in education, diploma nurses (78.8%) in professional education, and private sector nurses (63.8%) among institutional status. The first question from the participant was asked that who the founder of the nursing process concept was. Majority of the participants (68.75%) answer that Florence nightingale, which was wrong. Only 25% answer correctly that Lydia Hall was the founder who gave the concept of nursing process.

Table 1: Demographic Data of the Participants

Categories		Frequency (%) n=80
Gender	Male	22 (27.5%)
	Female	58 (72.5%)
Marital status	Married	32 (40%)
	Single	48 (60%)
Education	Matric	20 (25%)
	Intermediate	22 (27.5%)

	Graduation and above	38 (47.5%)
Professional education	4 years BSN	17 (21.2%)
	Diploma in nursing	63 (78.8%)
Institutional status	Public sector	29 (36.2%)
	Private sector	51 (63.8%)
Nursing school	Government nursing school	40 (50%)
	Private nursing school	40 (50%)
Working unit/ Wards	Surgical	21 (26.2%)
	ICU/CCU/NICU	22 (27.5%)
	Medical	37 (46.2%)
Current position	Supervisor	6 (7.5%)
	Head nurse / Team leader	17 (21.2%)
	Charge nurse	57 (71.2%)
What is nursing process?	Critical thinking technique	8 (10%)
	Systematic problem-solving method	30 (37.5%)
	Help nurses to develop patient care	39 (48.8%)
	Others	3 (3.8%)

Table 2 demonstrates the knowledge of the participant regarding operationalize nursing process. 93.7% answer that intervention play important role in nursing process, 90% were assured regarding the application of nursing process, 67.5% respond positively that we document as we implement nursing process, 82.5% answer that they utilize the equipment required for nursing process, 75% answered that they apply steps in a timely manner, 78.7% answered that their organization support nursing process, and 83.7% responded that Hugh number affect the implementation of nursing process.

Table 2: Knowledge about Nursing Process

Question	Yes	No
Intervention is an important part of nursing process?	93.7%	6.3%
Do you have any confidence to apply nursing process?	90%	10%
Do you document when apply nursing intervention?	67.5%	32.5%
Do you access to equipment's required for nursing care?	82.5%	17.5%
Are you managing your time to apply all the steps of nursing process?	75%	25%
Does your institution support in applying nursing process?	78.7%	21.3%
Does the maximum number of patients affect the application of nursing process?	83.7%	16.3%

Another question was asked where the majority of the participant (75%) learn nursing process during their college training, followed by learn in clinical setup (17.5%), while (6.25%) answer that they learn in seminar and only 1.25% answered that they learn from other sources. As shown in Table 3, three items were asked to identify the knowledge of the responded regarding the steps of nursing process. 1st question was regarding that data collection belong to what step, majority of the nurses (73.75%) answer that it belongs to assessment. In next item it was asked that problem identification belong to which step, majority of the nurses (45%) answer correctly. In last item it was asked about the step that contain short- and long-term goal, majority of the

nurses answer correctly (68.75%).

Table 3: Knowledge of nurses regarding the steps of nursing process

Variable	Assessment	Diagnosis	Planning	Intervention	Evaluation
Data collection is considered in which step of nursing process?	73.75%	20%	0	6.25%	0
Patient problem is identified in which step of the nursing process?	42.50%	45%	0	5%	7.5%
Short term and long-term goals are the part of which step in nursing process?	15%	8.75%	68.75%	0	7.5%

DISCUSSION

Research by various scientists in nursing community has proved that the systematic approach of nursing process enhances clients' satisfaction and the quality of care provided. Indeed, nursing process ensures that every patient gets the best care through application of the best practices in an integrated way [15]. To implement nursing process in this holistic approach, one needs to understand the importance and introduction of this concept [4]. When asked about the definition and basic concept of nursing process, only 37.75% respondents in our study agreed that the systematic problem-solving method. Broad majority of the participants answered that it helps in patients care but didn't agree to the point that it is a systematic approach. They also got their answer wrong about the pioneer of nursing process. Only 25% of our study participants knew that it was Lydia Hall who introduced the concept of nursing process back in 1955. Although, the nursing profession is an established systematic high level of critical thinking; a tool for problem solving, many in our study participants don't utilize this process to improve their level of critical thinking [1]. According to 66.25% participants they were not applying nursing process due to several reasons. 15.00% were not applying due to no proper format, 13.75% have time constraints, while 5.00% replied they have no supervision to documentation. If the nursing process is not properly considered and applied, patients may not get the quality care they need. Researchers have argued that the understanding and application is not only important to maximize patients benefit, it is also important to improve the outcome of nursing education [2, 12]. Quality nursing care is provided by Nursing process is a tool for systematic thinking which helps to assess and identify patients need, help to select appropriate interventions and evaluate the situation either the same care action should keep continued or need some new action plane [3]. In the current study very few (6.25%) in our respondents have

known about the six processes. Many (23.75%) had misconception as NP having four steps. Majority participants (70%) answered it as a five-step process which is satisfactory. It is encouraging that 75.00% participants were able to manage their time to follow steps of nursing process and 25.00% are unable to do. It is much better than a study done elsewhere which establishes the fact that knowledge about the nursing process and its performance varies from place to place. In a study it was stated that among 200 participants 90.5% reported that they have only heard about nursing process and 61% are unable to follow N.P. Response of our study participants with regards to carrying out the right steps of nursing process is much significant than the study quoted here [4]. There could be many factors influencing nurses' adherence to the practice of nursing process. Personal interest and discipline as well as organizational environment have a role to play in the practice of nursing process [16]. A study conducted in Ethiopia reveals that 90% of the respondents had poor knowledge about nursing process [3], while a study in north Ethiopia report that 88.7% of the respondents were knowledgeable [17]. Other studies report that in Psychiatric hospital the most (92%) of the respondent's possessed good knowledge [18]. Another study illustrates that half of the nurses working in critical care didn't learn about nursing process before posing [19]. Our study shows that 78.75% participants replied that their organization supports them in application of nursing process which shows a positive result. 21.25% responded that organization has no contribution in application of nursing process. This trend in organizational support shows a similar trend in the practice of nursing process. Better knowledge leads to improved practices. A study reported that insufficient knowledge affects 24.0% to fully carryout the nursing process. That study shows that learning of nursing process should continue from nursing colleges to entire professional journey i.e. on training and on-site learning of the nursing process [20]. This is not the case in our study participants. Majority of our study participants learnt nursing process from their training institute (75%) while 17% learnt from their clinical setups. Only 6.25% had learnt from seminar/workshop which is much less and can be improved through organization training sessions on site in forms of seminars and workshops for on job nurses. Also, if frequent exposures are not provided for onsite learning and continued on job training, professionals' attitude to nursing process declines with time [17]. Accessibility to equipment has very important role in provision of quality and standardized nursing care. Among our study participants 82.50% replied they have access to equipment's for provision of nursing care while 17.50% has no access to equipment. Resource barriers were reported by 67.6%

nurses in another study [15]. Very economical resources like stationaries, linens and record maintenance arrangements can have a very significant effect on provision of quality care, through affecting the smooth implementation of the nursing process [15]. Nurses who have sufficient knowledge regarding nursing process practice put more impact on the health of nurses compare to those nurses who have not satisfactory knowledge [21]. High number of patients affects the ability of nurses to apply nursing process. In our study, we came to conclusion that 83.75% participants had faced workload as barriers to implementation of nursing process. A similar trend is shown by another study which shows that the highest perceived barriers with regards to implementation of NP was work load, which was reported by 81.1% of the study participants [15]. 27.50% participants in our study replied that they are attending more than 20 patients per shift, while 17.50% reported; attending 10-20 patients per shift. This number understandably affects their capacity to fully follow implementing all the steps of NP. Similarly, our study participants also hinted towards lack of time and administrative difficulties as reason for poor implementation of nursing process. Similar reports are made in another study, which showed that 68.2% nurses face lack of time as a barrier in implementation of NP while 62.8% reported about administrative barriers when it comes to implementation of NP [15].

CONCLUSIONS

Based on the findings, the study established that the majority of the nurse's knowledge regarding the founder of the nursing process was average. Regarding the steps of the nursing process, the knowledge was satisfactory, while the majority of the participants didn't know the number and sequence of steps involved in the nursing process. The study also concluded that departmental workload, lack of facilities, and required physical resources are barriers to the implementation of the nursing process.

Authors Contribution

Conceptualization: ZJ

Methodology: GS

Formal Analysis: AS

Writing-review and editing: ZJ, GS, NB, JI, AS

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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