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RESEARCH ARTICLE

Nurses' Practices During Implementation of the Nursing Process at a Selected Public Hospital of Limpopo Province, South Africa: A Qualitative Pilot Study Analysis

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Abstract:

Background:

The nursing process is a systemic approach to patient care and enables nurses in health care institutions to render comprehensive care aimed at achieving quality. During the implementation of the nursing process, nurses are faced with multiple traits that hinder effective implementation. The nursing process has been widely recommended as an approach that guides nurses towards quality nursing care, thus, non-adherence is associated with substandard patient care.

Objective:

The objective was to explore and describe the practices of nurses when implementing the nursing process at a selected public hospital in Limpopo province, South Africa.

Methods:

A qualitative, explorative-descriptive approach research method was used to collect data. A non-probability purposive sampling method was used to initially select 5 professional nurses to participate in the study and later on, more data was collected from 3 unit managers. Data was collected using a semi-structured interview until data saturation, and data was analyzed using the Tesch's open coding method of data analysis, where themes and sub-themes were developed. Measures to ensure trustworthiness were all adhered to the study.

Results:

The results explained the practices of nurses when implementing the nursing process and the challenges encountered during the implementation of the nursing process.

Conclusion:

The study findings indicated a need for continuous in-service training, provision of adequate resources and development of a formal training program.

Keywords: Nursing process, Nurse, Implementation, Practices, Training needs, Public hospital.

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1. INTRODUCTION AND BACKGROUND

The nursing process is regarded as a standard for nursing practice in healthcare systems in most developed countries [1]. The effective and efficient implementation of the nursing process in clinical areas brings improvements to the quality of

nursing care, the patients' health outcomes and promotes the nursing profession as a scientific discipline [2]. The nursing process is explained as a systematic and deliberate problem-solving approach that is utilized in meeting patients' health care needs. Furthermore, the nursing process is used to detect, prevent and treat both actual or potential health problems and promote wellness within an individual patient. The nursing process is grounded on the methodical problem-solving

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process, and thus creates the basis for nursing practice [3 - 5]. The nursing process is comprised of five steps, which are assessment, diagnosis, planning, implementation and evaluation and when these steps are interrelated to each other and when all the steps are implemented well, the planning and provision of quality and comprehensive nursing care are achieved [5, 6].

The assessment step is an orderly, dynamic procedure that involves the methodical collection of data, and recording of the collected data to enable retrieving of such data when needed. Both the subjective and objective data are collected from the patient and family and immediate others to summarize the overall health status of the patient. Diagnosis refers to the analysis of collected data to recognize the patient's needs or problems, and also referred to as the nursing diagnosis. The planning step entails setting priorities, establishing goals, outcomes, and defining nursing interventions. Implementation is when the plan of action is put into action by performing nursing interventions. Evaluation is checking the patients' progress in line with the set outcomes based on implemented nursing intervention and re-planning if outcomes not achieved [5, 6].

The training curricula for nurses and midwives are incorporating the nursing process as a framework for nursing care during the care of patients in health care institutions, but its effectiveness is still a challenge. In clinical practice, despite the training curricula for nurses integrating the nursing process as a framework for nursing care, nurses still find it difficult to practice nursing processes hence poor-quality of patient care [7]. The majority of nurses have theoretical knowledge on the nursing process, but they do not show the practical application in their day to day practice of caring for their patients [8]. Implementation of the nursing process inpatient care is associated with improved quality of care and motivates nurses in the building of theoretical and scientific knowledge grounded on best clinical practice. In contrast, malpractice in the implementation of the nursing process negatively affects the quality of nursing care [1]. In a study conducted in Kenya, the respondents indicated that the practice of the nursing process was a challenge due to the shortage of staff, lack of supplies and the available nurses are overworked. Furthermore, nurses indicated that much paperwork associated with the nursing process deprives nurses of time to render care to their patients [2].

The World Health Organization [9] recommended that the nursing profession also takes into consideration the implementation of the nursing process approach in the training of academic nursing students and to reinforce this approach in clinical nursing practice to align the professional and development roles of the nursing profession in line with other health professionals. A study conducted in the Democratic Republic of Congo on the nursing process recommended that capacity building of nurses through continuing education and training on implementation of the nursing process would increase their knowledge, reinforce and promote its implementation [10].

The South African Nursing Council's nursing manpower-population statistics [11] revealed that above 50% of the

healthcare workers in South Africa are predominantly nurses, and implies that per such statistics, about 129 015 registered nurses are attending to a population of about 52 982 000 where the implementation of the nursing process is to be applied. Based on the challenges identified above, the current study seeks to determine the practices of nurses in the implementation of the nursing process in a selected public hospital of Limpopo Province, South Africa.

2. MATERIALS AND METHODS

2.1. Study Design

A qualitative, explorative and descriptive design was used in the study. The design was used by the researcher to explore and describe the practices of nurses during the implementation of the nursing process.

2.2. Study Setting

The study was conducted at a selected public hospital in Limpopo province, South Africa. The hospital is situated in Vhembe district, about 38 kilometers from Thohoyandou town.

2.3. Population and Sampling

The study population includes all professional nurses with two years of experience and more of implementing the nursing process approach to patient care. The target population was professional nurses working in the medical, surgical and pediatric wards. Non-probability purposive homogenous sampling was used by the researcher to initially interview 5 professional nurses who share common characteristics that will help them to share their practices concerning the implementation of the nursing process. The study credibility was ensured by a further collection of more data from 3 nurse managers of the medical, surgical and paediatric wards where the professional nurses are working.

2.4. Data Collection

Data was collected using a semi-structured interview using an interview guide from five professional nurses who met the inclusion criteria. A central question was asked to all participants, "How are you practicing the nursing process in your unit?" Probing questions were used for the researcher to understand the nursing practices [12]. Field notes were taken and a voice recorder was used to record interview sessions.

2.5. Data Analysis

Data were analyzed using the Tesch's open coding method for qualitative research, as outlined by Creswell [13]. The voice recordings of the interviews were transcribed verbatim. Transcripts were coded and an independent coder was discussed with on the themes and sub-themes developed.

2.6. Measures to Ensure Trustworthiness

Transferability was ensured through the description of the research methodology and the use of a purposive sampling technique [14]. Credibility was ensured through the proper description of the methodology used, minimizing the researcher's biases and through bracketing.

3. RESULTS

Theme 1: Explanations related to nurse's practices in the implementation of the nursing process during patients' care.

The professional nurses explained the various practices included when implementing the nursing process during patient's care and this is outlined in the following sub-themes;

Sub-theme 1.1: Activities during the implementation of the nursing process. The activities include assessment, formulation of nursing diagnosis, planning, implementation, evaluation and recording of all activities done on the patient. The statement is supported by three participants with the following extracts: Participant 2 *"Ok, from admission when we admit a patient, we start by assessing where we collect history, take vital signs. After the assessment, I also diagnose the patient, I plan and implement and after implementation, I record and evaluate."*

Participant 3 *"From the assessment form, I go to the care plan and write down what I'm going to do according to the patient's needs. Ok, before that, I formulate a nursing diagnosis, implement and evaluate."*

This was confirmed by participant 6, who said *"Yes, yes, because when, like when you assess, you take the history and then you assess, plan and implement then evaluate."*

Sub-theme 1.2: Recording of implemented activities viewed as important

The findings revealed that recording is an important aspect of the implementation of the nursing process. In nursing practice, it is believed that "what is not documented has not been done". The data was obtained from three participants and shown in the following extracts:

Participant 1 said, *"There is a form where you record the nutritional status, weight, height, immunization status, psychosocial status, and value belief patterns and you must always complete all columns, record everything and sign at the end."*

Participant 4 said *"To be honest, sometimes it is difficult to record everything, but we try our best to record, others do not see the importance of recording. There are some gaps in the patients' file, but it is very important to record."*

Participant 7 said, *"Nurses know it is important to record in nursing practice, but some, I do not know what happens, maybe they forgot to record."*

Sub-theme 1.3: Existence versus lack of knowledge related to the formulation of the nursing diagnosis marked

Nurses indicated they have difficulty in the formulation of the nursing diagnosis after the initial assessment as they do not know how to formulate the nursing diagnosis. This was confirmed by three participants as follows:

Participant 1 verbalized that *"Yes, some professional nurses have problems with the nursing diagnosis, some are not knowing how to formulate the nursing diagnosis. Most problems are with nursing diagnosis."*

Participant 3 *"I don't know, but there are many things, but the formulation of the nursing diagnosis is a problem to most nurses."*

Participant 6 confirms that *"Can't think of others, ok knowledge gap. Not all nurses are having knowledge of the nursing process."*

Theme 2: Marked challenges amongst nurses related to the implementation of the nursing process

The study findings revealed that nurses encounter a variety of challenges when implementing the nursing process approach in inpatient care in public hospitals. The challenges were identified were clustered together into the following four sub-themes.

Sub-theme 2.1: Difficulty in recording emanates from the workload and ignorance. The 3 nurses verbalized that there are incomplete recordings in-patient' files and they relate this to more workload and some nurses being ignorant of the importance of recording. This data was obtained from five participants, as shown by the following quotes.

Participant 1 confirmed, *"Sometimes we do not complete these forms because of shortage, but sometimes people just ignore."*

Participant 2 quoted, *"OK, I mean sometimes you can fail to record everything in the file when there is too much workload in the ward and you are short-staffed."*

Participant 4 *"People do not complete all those forms due to shortage of staff and some professional nurses do not even sign, especially if it was done by junior staff."*

Participant 5 *"Mostly with the care plan, people forgot to record in the forms, some files are not completed, there are some gaps in the patients' files."*

Furthermore, participant 7 confirmed that *"Nurses know it is important to record in nursing practice, but some, I do not know what happens, maybe they forgot or they could not go back and record because of being so overworked."*

Sub-theme 2.2: Lack of in-service training on the nursing process leads to poor implementation

Nurses are not updated on the nursing process to improve their practical implementation of the nursing process in public hospitals during patient care. There are no in-service training sessions for nurses in the hospital and this data was obtained from four participants, as reflected in the following quotes.

Participant 2 confirmed by saying, *"I can't remember in-service on the nursing process, mm, it's long, there is no training about that, but the management complains we are not doing it well."*

Participant 3 *"You mean training, eish, I don't want to report my hospital, but, eish, there is no in-service training on the nursing process."*

Participant 7 *"I think they must do some in-service for the nurses in order to improve this challenge."*

Participant 8 also added that *"The suggestion would be the workshops and in-service training because these are not consistently done. Any form of in-service that can be done would be appreciated."*

Sub-theme 2.3: Nursing process viewed as an unreasonable long process.

Nurses indicated that there are many nursing process forms to complete for one patient and that completing all those forms is time-consuming and this data was obtained from three participants.

Participant 2 “*Hmmm, (starring up), the challenges we experience are that the care plan is too long to finish, especially when one has many patients to admit in the ward.*”

Participant 3 “*(Laughing), ok nursing process is a problem, it's long, this thing has been a problem.*”

Participant 7 also confirmed that “*But we have a challenge with the nursing process booklet that we're using which is long and having too much work.*”

Sub-theme 2.4: Lack of resources affects the implementation of the nursing process.

Resources include both material and human resources. At least four participants indicated a shortage of staff and materials such as stationery and equipment needed for implementation of the nursing process.

Participant 1 said, “*There is a column for the evaluation, but mostly due to workload and shortage of nurses, we do not write the evaluation part.*”

Participant 2 stated that “*Yes I think the government must create more posts because we are short-staffed and there is too much work.*”

Participant 4 “*Also, a shortage of stationery is a problem, ok, also equipment like blood pressure machine is a problem we are running short of equipment in the wards. You want to give medication you find it is not in stock.*”

Participant 6 “*There is a serious shortage of both human and material resources in the ward. We run wards with very few nurses, there are no equipment like enough pulse oximeters, wall oxygen cylinder port.*”

4. DISCUSSION

The findings of the study revealed that nurses start implementing the nursing process on admission. The study is supported by Queiroz *et al.* [15], who indicated that nurses are overloaded with many organizational activities, which affect their professional practice inpatient care. Furthermore, Mahmoud and Bayoumy [16] alluded that a disproportionate number of tasks assigned to nurses and the performance of other organizational and technical activities disadvantage the implementation of the nursing process. Formulation of nursing diagnosis is another challenge faced by nurses in the accomplishment of the nursing process activities [8, 17].

Secondly, a poor recording was identified among nurses during patient care. In nursing practice, documentation is important; hence it is believed that what is not recorded has not been done, Taiye [18]. Even though the recording is essential and constitutes 50% of nurses' time in each shift when using the nursing process, nurses do not document their nursing actions fully. The findings agree with that of a study conducted

by Okaisu *et al.* [19] in Uganda reveal that as such lack of documentation may make it suspicious that they did not do their duty. Another study conducted by Genctuc *et al.* [20] indicated that recording was only done on observations where they notice abnormalities (Table 1).

Table 1. Themes and sub-themes reflecting the practices of nurses during the implementation of the nursing process.

Main Themes	Sub-themes
1. Explanations related to nurses practices in the implementation of the nursing process during patients' care	1.1 Activities involved during the implementation of the nursing process outlined 1.2 Documentation of implemented activities viewed as important 1.3 Existence versus lack of knowledge related to the formulation of the nursing diagnosis marked
2. Marked challenges amongst nurses related to the implementation of the nursing process	2.1 Difficulty in recording emanating from the workload and ignorance 2.2 Lack of in-service training on the nursing the process leads to poor implementation 2.3 Nursing process viewed as an unreasonable long process 2.4 Lack of resources affect the implementation of the nursing process

Thirdly, the study found that there is a lack of knowledge in the formulation of nursing the diagnosis. The nursing diagnosis is supposed to be formulated following the assessment of a patient. Lack of knowledge and skill in the formulation of the nursing diagnosis is another factor inhibiting nurses from effectively using these nursing diagnoses when implementing the nursing process approach to patient care [21]. A study conducted by Ojewole, Ambari and Samole [22] also indicated that the importance of the nursing diagnose phase was not considered by nurses, as shown by the inadequate recording of the nursing process. Similarly, Taskin Yilmaz *et al.* [23], affirm that nurses have challenges in properly formulating nursing diagnoses after assessing and classifying the patient problems. The study conducted by Mahmoud and Bayoumy [16] in Egypt, however, disagrees with the sub-finding that nurses lack knowledge as the study found that the majority of nurses (94.6%) responded that they had good knowledge of the nursing process and have confidence in the ability effectively implementing inpatient care.

Furthermore, the study also identified challenges of poor recording due to increased workload and ignorance. The findings are in agreement with that of Shihundla, Lebeso and Mputle [24], where increased workload and multiple records were identified as having an impact on the quality of documentation of patient information in health care facilities. The findings of this study are congruent with that of Aseratie, Murugan and Molla; Mutshatshi, Mothiba and Mamogobo [25, 26], which discovered that poor recording is associated with work overload and mismatch between staffing and workload.

The study further concluded that extra workload leads to inadequate nursing practices, which include poor recording practices. Mwangi, Meng'anyi and Mbugua [2] alluded that management needs to employ more nurses to reduce workload.

Another challenge identified is that there is no in-service training on the nursing process, leading to poor implementation. From the findings of the study conducted by Abdelkader and Othman [5], the study recommended that nurses and nurse educators should keep abreast of the latest knowledge on the nursing process both theoretically and practically. This is consistent with findings of the study conducted by Miskirand Emishaw [27], which indicated that factors impeding nursing process implementation include lack of preparedness and knowledge and absence of in-service training related to the nursing process. The study further recommends stimulating nurses with continuous training to improve the level of nursing process implementation and that formal training is regarded as the only key to proper implementation of the nursing process.

Another finding indicated that the nursing process is said to be too long with many forms and is time-consuming. Agyeman-Yeboah and Korsah [28] agree that another contributory factor preventing the nurses from using the nursing process is that it is alleged that it is time-consuming. A study conducted by Okaisu *et al.* [19] also indicated that the records to be completed are lengthy and require more time leading to incomplete recording and recommend the use of computer technology to document patient care to improve the speed and quality of the recording.

Lastly, resources were viewed as another challenge in the implementation of the nursing process. Thuvaraka *et al.* [4] alluded that lack of resources affects the implementation of the nursing process and unavailability of material resources for recording are the most common obstacles for the application of the nursing process in hospitals. Baraki *et al.* [1] alluded that the shortage of material supply to use the nursing process affects the implementation of the nursing process. Results agree with Agyeman-Yeboah *et al.* [28] indicated that the shortage of equipment and instruments in the hospital affects nursing process implementation. Mangare *et al.* and Abebe and Korsah [7, 29] alluded that inadequate material resources, equipment, and supplies were amongst major factors affecting the implementation of the nursing process in the hospitals.

5. STRENGTHS AND LIMITATIONS OF THE STUDY

The study was conducted in a selected public hospital in Limpopo Province and the sample size was small, therefore, these results are limited to this hospital and may not be generalized to hospitals in other Provinces in South Africa. Other researchers may explore the effectiveness of the findings to assist them in their specific situations.

6. IMPLICATIONS OF THE FINDINGS

The study findings confirm that the implementation of the nursing process in hospitals is still a challenge and thus, nurses need establishment and continuous support from management for the nursing process coordination [26]. Professional nurses as leaders of patient care must know the implementation of the nursing process and the Department of Health must ensure

there is a programme to in-service nurses on the implementation of the nursing process to improve the quality of patient care in public hospitals.

CONCLUSION

The implementation of the nursing process starts when a patient enters the ward and the initial assessment is done effectively. The formulation of the nursing diagnosis is also done but has challenges as nurses reflected that they lack knowledge and skill to formulate a nursing diagnosis and this affects all other steps of the nursing process and the quality of care. Nurses know the importance of documentation, but recording appears incomplete due to a variety of factors that include the shortage of human and material resources, ignorance and lack of time. Poor implementation of the nursing process is associated with the non-availability of the in-service training programme to empower nurses in the nursing process. Nurses suggested that continuous in-service training and development of a formal training program in the hospital on the nursing process may improve the implementation of the nursing process.

AUTHORS' CONTRIBUTION

Takalani E Mutshatshi conceptualized the research idea and initial drafting of the manuscript, Tebogo M Mothiba supervised the Doctor of Philosophy in Nursing and reviewed the manuscript. N.R.M co-supervised the study and reviewed the manuscript and all authors approved the manuscript to be published in TOPHJ.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Ethical clearance for approval of the study was obtained from the Turfloop Research Ethics Committee with the study clearance certificate number (TREC/264/2017: PG). Permission to collect data was obtained from the Limpopo Provincial Department of Health Research Committee and management of the hospital.

HUMAN AND ANIMAL RIGHTS

No animals were used in this research. All human research procedures followed were in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national), and with the Helsinki Declaration of 1975, as revised in 2013.

CONSENT FOR PUBLICATION

All respondents gave consent and participation was voluntary. Confidentiality and anonymity were ensured by not writing the names of the participants in the data collection interviews and in the final research report.

AVAILABILITY OF DATA AND MATERIALS

The data that support the findings of this study are available from the corresponding author, [T.E.M], upon reasonable request.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest, financial or otherwise.

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