

Exploring Professional Nurses' Use of the Nursing Process at Selected Public Hospitals in Limpopo, South Africa

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Abstract

The nursing process is regarded as a systematic approach in which professional nurses use problem-solving to identify, plan and implement nursing interventions to enhance quality patient care. The steps of the nursing process include assessment, nursing diagnosis, planning, implementation and evaluation. However, nurses' effective and efficient use of the nursing process steps in public hospitals still poses a challenge due to several factors. The current study is significant to nursing practice as the nursing process remains a standard of nursing practice for hospitals to provide quality patient care. The purpose of the study was to explore professional nurses' use of the assessment and implementation steps of the nursing process at selected public hospitals in the Vhembe District, Limpopo, South Africa. A qualitative, phenomenological, descriptive, explorative and contextual research design was used. Non-probability purposive sampling was used to select professional nurses who were using the nursing process in the nursing care units until data saturation was reached with 13 participants. The data was collected using semi-structured one-on-one interviews using an interview guide, and then analysed using Tesch's open-coding method where themes and sub-themes emerged. The study found that the participants' initial assessment of patients during admission is an achievable performance, while implementation of the set nursing intervention is still a challenge on different levels. It is recommended that a problem-based

learning approach be made a compulsory practical teaching method in order to equip nurses with the knowledge of the nursing process at all nursing education institutions.

Keywords: assessment; implementation; nursing process; professional nurse; public hospital

Introduction and Background

The nursing process is an approach that provides a guideline and foundation for conducting systemic nursing actions and provides a framework that can be applied in any nursing care setting (Parahoo 2014). The concept of the nursing process has been an integral part of practice since its inception in the 1960s and it has been used for more than 30 years in countries like the United States, the United Kingdom and South Africa and has undergone reviews, refining, and revisions since its inception (Bartholomew 2010). The nursing process enables nurses to identify a client's health status, actual or potential health difficulties or needs, and then develop a plan to meet the recognised needs (Kollie, Ojewole and Nwozichi 2014).

The application of the nursing process is an essential component of professional nursing practice as professional nurses are trained to use the nursing process and are expected to implement it in the clinical area (Agyeman-Yeboah, Korsah and Okrah 2017). The nursing process is a systematic approach that enables nurses to solve problems while enhancing decision making during the provision of nursing care (Hagos et al. 2014). The nursing process approach is reality orientated and integrates nursing theory and practice in a nursing care setting (Pokorski et al. 2009). The assessment of patients on admission to hospital is one of the initial steps of the nursing process which guides nursing practice and directs nursing skills, knowledge, and attitude in relation to the effective planning and implementation of nursing actions (American Nurses Association 2009).

The nursing process includes creative, critical thinking skills and provides patient-centred care that cannot be achieved if the initial assessment has not been executed competently. The initial assessment of patients assists nurses with translating theory into practice and demonstrating the value of knowledge, skills and attitudes in providing care to individual patients with complex health care needs. Furthermore, if the nursing process is used effectively, it is a powerful scientific tool that stimulates critical thinking in nursing education and in the provision of nursing care (Bartholomew 2010).

Problem Statement

The Limpopo Department of Health (SA 2012) reviewed the use of the nursing process and it seemed that it posed a plausible challenge for professional nurses as leaders of nursing care teams at selected hospitals. However, it was not clear which step of the nursing process was problematic and which influenced the whole process. It was against this background that the study was aimed at determining professional nurses' initial assessment of patients using the nursing process at selected hospitals in Limpopo which is the step in the nursing process that influences implementation of the nursing care plan.

Objective and Significance of the Study

The objective of the study was to explore and describe professional nurses' initial assessment of patients using the step in the nursing process that influences implementation of the nursing care plan.

The findings of the study could provide nursing education institutions with information to adopt a problem-based learning approach as a compulsory practical teaching method during facilitation of students' learning on the initial step of the nursing process. The findings may provide guidance for the DoH to identify areas to include during nurses' in-service training to equip them with the relevant knowledge aimed at providing quality patient care. The assessment is the initial step that should guide the nursing process in providing quality patient care.

Research Method and Design

A qualitative, phenomenological, exploratory and descriptive research design was used to explore professional nurses' use of the nursing process at selected public hospitals in the Vhembe District of Limpopo, South Africa. This was achieved by providing the participants with an opportunity to explain their experiences with regard to the assessment of patients and implementation of the nursing care plan. Descriptive phenomenology afforded the participants an opportunity to describe their lived experiences and to attach meaning to these experiences with regard to the initial assessment and implementation steps of the nursing process.

Sample and Sampling

The sample for the study was purposively selected to include professional nurses from the medical and surgical wards in the selected public hospitals, believed to have knowledge about the assessment and implementation steps of the nursing process. Non-

probability purposive sampling was used to collect data until data saturation was reached with 13 professional nurses.

Setting

The study was conducted at the Louis Trichardt Memorial, Tshilidzini and Donald Fraser hospitals, located in the Vhembe District of Limpopo, South Africa.

Data Collection

The researchers collected the data by conducting semi-structured interview sessions and reviewing patient records. The data was collected over a period of two months and the central question which was put to all the participants was: “Could you kindly describe how you perform the assessment and implementation steps of the nursing process during patient care?” The interview guide, which listed the questions which were to be covered during the interview session, was used. These questions assisted the researchers to probe the phenomenon being studied more deeply and to elicit more information which was important for the study. Field notes were written to capture the non-verbal cues and a voice recorder was used record all interview sessions conducted.

Data Analysis

Data was collected through one-on-one semi structured interviews and was analysed using the Tesch’s open coding method for qualitative research as outlined by (Creswell 2014). The researchers read through the interview transcriptions and wrote ideas to get a sense of the interviews conducted as a whole. A list of all topics and similar topics were clustered together and were arranged in major and unique topics. The list was compared with the original data. Abbreviations of topics as codes were made and codes were written next to the appropriate segment of the text. The themes and sub-themes were developed from the interviews that were transcribed verbatim and are presented in Table 1.

Trustworthiness

The four criteria to ensure trustworthiness as outlined by De Vos et al. (2011), namely, credibility, transferability, dependability and confirmability, were used to establish the truth value of the study. Credibility was ensured through prolonged engagement with the participants over a period of two months and the interview sessions lasted for approximately 45 minutes to an hour. Transferability was ensured through a purposive selection of the study participants using predetermined inclusion and exclusion criteria. Audiotapes and field notes were kept as part of the audit trail.

Ethical Considerations

The researchers obtained ethical clearance from the Medunsa Research Ethics Committee (MREC/HS/265/2014: PG). Permission to undertake the research was obtained from the Limpopo Provincial Ethical Research Committee, the Vhembe District office, and the Chief Executive Officers and nursing management of the relevant hospitals. The participants were briefed and given information prior to the data collection process so as to allow them to make an informed voluntarily decision whether or not to participate in the study. Informed written consent was obtained from the participants after all possible information on the goal of the investigation and procedures were explained, including the credibility of the researchers. The researchers explained the purpose and use of audio recording and note-taking during the interview sessions.

Presentation and Discussion of the Research Findings

The themes and sub-themes of assessment of patients and implementation of the nursing process by professional nurses at selected public hospitals in Limpopo are shown in Table 1.

Table 1: Themes and sub-themes

Themes	Sub-themes
1. Initial assessment during admission is an achievable performance	1.1 Initial assessment leads to a nursing diagnosis 1.2 Ability to formulate a nursing diagnosis 1.3 Nursing interventions are simple to implement 1.4 Nursing care plans: realistic versus non-realistic
2. Implementation of the set nursing interventions	2.1 Set goals are difficult to carry out owing to lack of resources 2.2 Lack of training leads to poor implementation 2.3 Knowledge versus lack of knowledge during implementation 2.4 The nursing process is a useful tool to implement quality care 2.5 Importance of recording and documentation

The study results revealed that initial assessment as the first step of the nursing process can be achieved even though the competence of the professional nurse who is doing the assessment is important. Although initial assessment was outlined as an achievable act, the participants indicated that setting goals to implement the nursing interventions based

on the initial assessment is difficult based on several reasons that are reflected in the discussion of findings.

Theme 1: Initial Assessment during Admission Is an Achievable Performance

All 13 professional nurses interviewed verbalised that they had started with the initial assessment of a patient upon admission since that was important in formulating a nursing diagnosis. They indicated that it was possible to complete the nursing process because nurses worked as a team during admission of a patient, therefore, they assisted one another. In all the records that were critiqued, the assessment phase was completed for all the patients during admission which confirmed the existence of teamwork amongst nurses during admission.

Sub-theme 1.1: Initial Assessment Leads to a Nursing Diagnosis

The nursing process requires a proper initial assessment of a patient in order to arrive at a nursing diagnosis. The participants indicated that assessment is the first crucial step of the nursing process when they collect both subjective and objective data from a patient and their relatives. The study revealed that during the assessment phase, the nurses systematically gathered comprehensive, relevant, reliable, and complete information from the patient and other reliable sources. This was done in order to identify the patient's health problems and formulate a nursing diagnosis properly. This finding was confirmed by a participant who said:

We are having assessment as a first step where we assess patients, during assessment is [sic] we collect subjective and objective data and after assessment then we are supposed to formulate a nursing diagnosis and then plan for what you have identified.

This finding is consistent with the findings of a study conducted in KwaZulu-Natal by McIntosh and Stellenberg (2009) who reported that the assessment phase refers to collecting subjective and objective data on which the nursing diagnosis is based. Morolong and Chabeli (2009) in their study concluded that nurses have little knowledge to competently make a nursing diagnosis and to plan, and lack the skills to implement the nursing process.

Sub-theme 1.2: Ability to Formulate a Nursing Diagnosis

The formulation of a nursing diagnosis is an essential aspect of proper planning of patient care, however, the study findings showed that there are some difficulties amongst professional nurses with regard to the formulation of a nursing diagnosis after assessment. This point of view was supported by a participant who indicated:

A nurse could write all the steps of the nursing process but when it comes to formulating the diagnosis, they don't know what to write. The formulation of nursing diagnosis, it's

like nurses are unable to formulate the nursing diagnosis correctly. Actually they do not have knowledge.

Another participant with the same opinion indicated that:

Hmmm when we admit a patient, you find we have challenges of nursing diagnosis. The time when we were at school, we learned other nursing diagnosis and here *vha ri nga dzisystems dza parts ya body ya muthu* [they teach us to write [a] nursing diagnosis using systems of parts of the body] but when in practice we are unable to correlate theory into practice.

The implementation of all stages of the nursing process is, however, difficult when the nursing diagnosis must be formulated from a patient's history that includes subjective and objective data. Another study by Opore et al. (2017) indicated that nurses had lower scores in the formulation of a nursing diagnosis. The study findings concur with the findings of Halverson et al. (2011) who discovered that nurses have neutral to slightly negative opinions of formulating a nursing diagnosis.

Sub-theme 1.3: Nursing Interventions Are Simple to Implement

The findings revealed that nurses viewed the implementation of the nursing intervention as simple. The simplicity of implementation of the nursing care plan was confirmed by the participant who indicated that:

Okay, my experience on the implementation of the care plan from what I have been taught, I don't have [a] problem, and you can even refer to the files that I have written but at times we do not complete recording because we are having shortage of staff, and if I can say for the whole nurses, the only problem that I see is the auxiliary nurses and staff nurses who are not taught in training [sic] how to do [the] nursing process.

The study findings concurred with the findings of the study conducted by Afolayan et al. (2013) who indicated that the nursing process is simple because it has standardised the language of nursing and assists with improving the patients' response to care through improved nurse-patient relationships and maximum utilisation of available resources for patient care. In contrast, Momoh and Chukwu (2010) indicated that the findings of their study conducted at the Federal Medical Centre in Owerri, Nigeria, showed that nurses have poor knowledge of the nursing process and lack the skills to write a nursing care plan.

Sub-theme 1.4: Nursing Care Plans: Realistic versus Non-Realistic

The participants revealed that in their experience the implementation of the nursing care plan was realistic. A participant confirmed the non-realistic implementation of the nursing care plan by saying:

The problem is that when we admit, there is that space where you are supposed to write the time frame and expected outcome for pain. I can say pain to be relieved in 45 minutes and indicate that I will give Panado and evaluate after 45 minutes. We fail to go back and evaluate after that time frame. We are failing to evaluate the time frame for the pain we have identified because of the shortage of staff and time.

Inadequate theoretical and practical knowledge of the nursing process steps negatively affect effective implementation during patient care (Julie et al. 2017). A study conducted by Mahmoud and Bayoumy (2014) showed that the majority of nurses (94.6%) possess good knowledge and have the confidence to apply the nursing process in patient care. On the contrary, McIntosh and Stellenberg (2009) found that nursing prescriptions are not showing any initiation and resolution of problems in the nursing care plan on a daily basis. Furthermore, they indicated that the nursing care plans are not congruent with the assessment, nursing diagnosis, and planning phases.

Theme 2: Implementation of the Set Nursing Interventions

Professional nurses revealed that after planning the nursing intervention that's where they implement what was planned. The following sub-themes emerged from this theme: Set goals are difficult to carry out owing to a lack of resources, lack of training leads to poor implementation, knowledge versus lack of knowledge during implementation, nursing process is a useful tool to implement quality care and the importance of recording and documentation.

Sub-theme 2.1: Set Goals Are Difficult to Carry Out Owing to a Lack of Resources

The study found that nurses were able to set goals for care during the planning phase but the achievement of those goals was challenging owing to a lack of resources. Resources included the general infrastructure of a ward, shortage of equipment and supplies, and manpower which impacted patient care negatively. A participant confirmed that observation by saying:

Ja, sometimes you find that with the nursing process you identify the problem but some of the intervention cannot be done like you say open the windows, you find that windows are high up there and you can't open them. There is no equipment to implement what we have planned like a shortage of medicines, equipment like backrest for patients with difficulty in breathing and this makes [the] implementation phase very difficult.

The response implies that nurses experience challenges in carrying out the planned interventions in order to achieve the set goals. The study conducted by Mwangi, Meng'anyi and Mbugua (2019) revealed that the practice of following the nursing process was a challenge as a result of inadequate resources which included manpower shortage, lack of equipment and supplies. Similarly, in their study, Awase, Bezuidenhout and Ross (2013) revealed that the physical ward infrastructure was

unfavourable and not conducive to the provision of quality nursing care. The ward environment lacked material resources that caused delays in the application of the nursing process.

Sub-theme 2.2: Lack of Training Leads to Poor Implementation

During the interviews, the participants expressed a concern that there was no in-service training on how to implement the nursing process at the hospitals which contributed to poor implementation. That experience was endorsed by the following excerpt from a participant:

We are not in-serviced [sic] so that we can get the same information on how to implement the nursing process.

Another participant indicated that:

There should be in-service training conducted for staff on how to implement the process during provision of care to patients. People have to be taught so that they have knowledge of the nursing process so that they know exactly what is wanted on it.

It is believed that the provision of in-service educational programmes in the workplace equips the professional nurse practitioner with the knowledge and skills to execute his/her job-related performance in the workplace. Miskir and Emishaw (2018) concluded that the stimulation of nursing staff through continuous training may ultimately improve the level of nursing process implementation.

Holloway, Arcus and Orsbon (2017) allude that nursing service is dynamic, and thus requires firm and effective development of the nursing workforce through continuing professional training and development. The findings of a study conducted in Iran and Sweden also indicated that training increases motivation amongst nurses and also improves the nursing care practice (Ebrahimpour and Pelarak 2016).

Sub-theme 2.3: Knowledge versus Lack of Knowledge during Implementation

The majority of the participants verbalised that they lacked the knowledge to implement the nursing process. Six of the 13 professional nurses interviewed held post-basic qualifications and they demonstrated they were knowledgeable about the implementation of the nursing process compared to the other seven who held a basic general nursing diploma and showed a lack of knowledge during the implementation of the process. This perception was echoed by a participant who indicated that:

Yes, I think the correct implementation of the nursing process depends [on] how and where one was trained because as nurses we display different understanding and if there is no uniformity of how it must be implemented.

A participant confirmed this by saying:

Yes, according to my experience people do not have enough knowledge. That is the reason the implementation part is very difficult. There is a gap in knowledge where people need to be in-serviced [sic] so that implementation can be proper.

The study findings agree with the findings of a study conducted by Mwangi, Meng'anyi and Mbugua (2019) who indicated that there is a knowledge gap in relation to utilisation of the nursing process as most of the files had incomplete nursing care plans and this indicated compromised inpatient care. Furthermore, the study findings are congruent with those of the study conducted in Northern Ethiopia by Hagos et al. (2014) which showed that the majority (90%) of the study participants were poorly knowledgeable about the nursing process. Thus, the educational status shows a significant relationship between the knowledge of nurses and the implementation of the nursing process.

Sub-theme 2.4: The Nursing Process Is a Useful Tool to Implement Quality Care

The participants viewed the nursing process as a suitable instrument to guide the provision of quality patient care despite challenges during its implementation. Some of the participants verbalised that implementation of the nursing process improved the standard of nursing. One participant expressed that by saying:

The nursing process improves nursing care and sensitivity to patient outcomes; that's my positive experience. Other experiences are patient is assessed physically, psychologically, and socially because you have two-way communication with [a] patient and then involving the patient, the family is highly recommended. The nursing process also improves the quality of care rendered to patients by nurses.

This sub-theme implies that the nursing process is essential in the provision of quality patient care. The finding is supported by the finding of a study conducted in Nigeria by Aiyedun, Chukwu and Musa (2014) that identifies the nursing process as the only tool that is appropriate for assessing and evaluating of quality patient care. The study further indicates that nursing practice has transformed into scientific evidence based profession where quality care can be measured by a standardised tool. The nursing process is also used in clinical practice worldwide to deliver quality, individualised care to patients. Equally, the absence of its application reduces the quality of care (Mahmoud and Bayoumy 2014).

Sub-theme 2.5: The Importance of Recording and Documentation

The participants verbalised that poor recording of patient records was problematic and that was confirmed in the evaluation of the patient records. The study revealed that the patient records were incomplete despite the fact that the nurses were aware of the

importance of recording and documentation. This issue was expressed by a participant who indicated:

Recording is important; if you did not record you did not do anything. It's a legal document. Yes, even in the court of law it can help.

Another participant with the same opinion said:

Yes, we also do record. The recording is important because it covers the patient and even the hospital. You record everything; treatment and everything. Whatever happens to the patient, you record; whatever I do to the patients, I must record in the patient file.

This finding concurs with those of Chelagat et al. (2013) who explain that documentation also represents a source of evidence for each health care provider's accountability in the delivery of care, therefore, professional nurses are expected to document the care given to patient at all times. The findings further imply that documentation acts as a formal legal document that provides details of a patient's health care management. Gasper (2011) is also of the opinion that while nurses are increasingly being made aware of the role of clinical records in health care litigation, nurses are being urged to ensure that their notes are "meticulous" from a legal perspective because an activity that is not documented is considered as not done.

Recommendations

The study recommends the introduction of a problem-based learning approach as a compulsory practical teaching method or tool in nursing education institutions in order to facilitate students' learning and to equip them with the relevant knowledge of the nursing process while still in training. Regulatory guidelines should be provided for standardising, maintaining and monitoring the nursing process during nursing practice. The nursing process documents need to be standardised at all public hospitals, especially the nursing care plan, to enhance problem-solving and decision-making skills to simplify and make the nursing process more practicable.

Limitations of the Study

The study findings cannot be generalised to a wider range of public hospitals in other areas as the study was conducted at hospitals in the Vhembe District only.

Conclusion

The study findings have made it evident that professional nurses have minimal skills as displayed during their assessment of the patients. The results further pointed out that implementation of planned nursing interventions is not completely carried out; therefore, professional nurses need to be trained how to assess and implement all the nursing process steps.

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