

Observed Utilization of the Nursing Process among Nurses in Selected Public Health Care Facilities in Kenya

Bernard W. Mbithi*, Catherine S. Mwenda, Jane Karonjo

School of Nursing, Mount Kenya University, Thika, Kenya

Abstract Nursing process is a systematic rational method which the nurse utilizes to plan and provide individualized care to clients. However despite efforts by various health care facilities to promote the nurses' practice on nursing process, its utilization is still poor. Therefore, this study was undertaken to determine the utilization of nursing process among nurses in selected health care facilities in Kenya. This study was conducted among 249 nurses from five selected health care facilities in Kenya. The nurses were observed as they provided nursing care to patients, with observation checklists being used to enter the collected data. The study results showed that only about 29% (71) of the respondents were able to carry out their procedures and document according to the steps of nursing process. In conclusion utilization of nursing process among the respondents was poor. This is a situation which called for further measures to be instituted to promote utilization of the nursing process in the provision of nursing care.

Keywords Nursing process, Utilization, Nursing care, Health care facilities, Kenya

1. Introduction

Nursing process is a systematic rational method which the nurse utilizes to plan and provide individualized care to clients [1]. Nursing process and standardized nursing terminologies are essential elements to the structuring of nursing documentation in daily nursing information management [2]. The process is divided into five distinct steps which emphasize on the essential activities that must be taken to address client's nursing diagnoses and manage any collaborative problems or complications [3]. The five steps include assessment, nursing diagnosis, planning, implementation and evaluation [4]. These steps are aimed at achieving the ultimate goal of nursing where the nurse strives to promote, maintain, rehabilitate or assist clients to achieve a peaceful death and to enable the family or the community to manage their own health care to the best of their ability [5]. Assessment is the initial step of the process in which case the nurse elicits as much information as possible from the client through verbal communication, physical examination, performing diagnostic tests and also from significant others [6]. The acquired data is validated, documented and used to derive the appropriate nursing diagnoses, forming the second step of the nursing process.

Nursing diagnosis is a clinical judgment about an individual, family or community's responses to actual and potential health problems/life processes, that nurses can legally identify and for which they can prescribe the primary interventions for treatment and prevention [7]. Planning of the nursing care interventions forms the third step of nursing process, whereby the nurse organizes the nursing diagnoses according to priorities and makes a nursing care plan. In the care plan, the nurse develops expected care outcomes and nursing interventions [8]. Implementation of the nursing care plan forms the fourth step of nursing process, whereby the nursing care interventions are implemented to alleviate the client's [8]. Once the nursing care interventions have been implemented, the nurse evaluates their effectiveness (the fifth step of nursing process) to ensure that the expected outcomes have been achieved. However, if the goals of the interventions are not realized, the nurse carries out further assessment on the client, hence repeating the process again [1]. Utilization of the various steps of nursing process results in the formation of a strong nurse – patient relationship. This will promote the patient's compliance to the treatment regime, hence good care outcome [9]. However, despite these universal benefits of the nursing process, its utilization has remained minimal in most of the health care facilities in Kenya.

Poor utilization of the nursing process may lead to poor quality of patient care and vice-versa. However, nurses' ability to utilize nursing process may be affected by many factors as demonstrated by various studies identified in the literature. For example, a cross-sectional retrospective study carried out to review 302 records for adult patients admitted

* Corresponding author:

bwmbithi@yahoo.co.uk (Bernard W. Mbithi)

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to surgical, clinical and intensive care unit in a hospital in Porto Alegres showed that deficiency in data collection for nursing records and absence of the nursing diagnosis step were the major findings in this study. Data collection and formulation of nursing diagnoses form part of the steps of the nursing process. Therefore, their absence showed that there was poor utilization of the nursing process among the study participants [10]. Similarly, a systematic review to assess 36 articles on the outcomes of nursing diagnoses showed that there were deficits in reporting of signs/symptoms and aetiology, demonstrating that utilization of the nursing process was poor [11]. Similarly, a study involving 200 nurses showed that all respondents never followed the scientific ways of applying nursing process while providing care to patients. These findings correspond to those realized in a study to evaluate utilization of nursing process among nurses in a Psychiatric hospital in Port Harcourt (Nigeria) whereby the nurses' practice on nursing process was found to be poor [9]. Likewise, a review of 68 medical records at Brazilian teaching hospital showed that all the steps of nursing process were not documented [12]. These findings were in concurrence with those of a study on professional nurses' perception of the nursing process at the University of Calabar Teaching Hospital, Nigeria which showed that 62.7% of the respondents were constantly using the NANDA diagnostic system, with 25.4% using it occasionally while 11.9% never used it at all [13]. Another study on evaluation of the implementation of nursing process among nurse clinicians established that a total of 57.1% of the respondents said that they used the nursing process in patients care in their hospitals while 25.8% of them said that they never used the strategy [14]. Contrary to these findings, results of a cross-sectional study on the analysis of the nursing records used at public and private centers in the health area Gipuzkoa (Basque Country) showed that nursing process was being utilized to provide nursing care to patients in 98% of all the centers included in the study. This showed that there was good utilization of the nursing process among nurses in the health care facilities [15]. Participants in a study on the barriers and facilitators for execution of nursing process from nurses' perspective in two hospitals at Najran region, Saudi Arabia identified some phases of nursing process where they faced difficulties while implementing the nursing process. Majority of the respondents (63.5%) identified data collection as the most difficult phase followed by formulation of nursing diagnoses (56.8%), evaluation (48.6%) and lastly planning phase (42.3%) [16]. Contrary to these findings, a descriptive retrospective study carried out to review 338 patient documents in three randomly selected governmental hospitals in Amhara regional state (Ethiopia) established that over 78% of the patient profiles had documentations in regard to nursing process. This showed that the respondents had good knowledge on the nursing process [17]. Similarly, the finding of a study on nurses' perception of nursing diagnosis showed that all the respondents interacted with nursing diagnoses in their daily practice through the use of standardized nursing care plans.

They said they formulated some of the nursing diagnoses while others were pre-formed. This meant that not all the nurses formulated nursing diagnoses by themselves [18]. In adequacy in the utilization of nursing process was also established in a study conducted on the factors influencing implementation of the nursing process in Naivasha District Hospital, whereby the respondents who utilized some of the components of nursing process ranged from 15.7% to 30.1% [19].

1.1. Study Question

What is the observed utilization of nursing process among the nurses in the selected health care facilities?

1.2. Study Objective

To establish the observed utilization of nursing process among the nurses in the selected public health care facilities.

2. Materials and Methods

Cross-sectional study design was utilized to collect data from five selected public health care facilities. Cross-sectional studies are conducted at one time point at a time or over a short period [20]. Cross-sectional studies enable generation of many findings which may be used to create new theories. The study design may also be utilized to prove or disapprove various study assumptions. The data generated in these study designs may be useful in different types of research. However, the design may be used to analyze respondents' behavior for a long time [21].

To collect information regarding the respondents' socio-demographic characteristics a structured questionnaire was used. Observation checklists were used to record the information gathered from 249 nurses who were observed as they provided nursing care to patients. The checklists were formulated using the standard contents of the nursing care plan. The content included patient assessment data, formulation of nursing diagnosis and formulation of the expected patient care outcomes. Also included in the content were developed nursing care interventions, their scientific rationales, implementation and evaluation. The nurses were observed as they provided nursing care to patients. The information they documented in the patients' files was then recorded against each of the contents of the checklist as either fully performed, partially performed or not at all. To draw inferences on the respondents' observed utilization of nursing process, fully and partially performed were collapsed to read "fully-partially" while the other observed performance remained as "not at all". The collected information was validated and analyzed using STATA software version 14.4.

Descriptive statistics on the respondents' socio-demographic characteristics such as frequencies and percentages were computed. Descriptive statistics were also computed to determine the frequency of each of the observed practice in line with the contents of the checklist.

2.1. Inclusion Criteria

All the nurses who had worked for more than three months after qualifying from the training school were included in the study.

2.2. Exclusion Criteria

Nurses on internship or those on orientation were excluded from the study.

3. Ethical Considerations

Authority to collect data was obtained from the relevant authorities while the respondents signed an informed consent before participating in the study.

4. Study Results

Table 1. Respondents' Socio-demographic Characteristics

Characteristics	Frequency	Percentage
Gender		
Females	184	73.9
Males	65	26.1
Total	249	100
Respondents' years of experience		
Below one	12	4.8
1-3	44	17.7
4-6	43	17.3
Above 6	150	60.2
Total	249	100
Professional qualifications		
Masters degree	3	1.2
Bachelor's degree	47	18.9
Diploma	183	73.5
Certificate	16	6.4
Respondents' areas of deployment		
Medical wards	54	21.7
Surgical wards	62	24.9
Paediatric wards	38	15.3
Maternity wards	75	30.1
Gynaecology wards	20	8.0
Total	249	100

Table 1 illustrates the respondents' socio-demographic characteristics which included gender, years of experience, professional qualifications and their areas of deployment. Most [73.9% (184)] of the respondents were females, while males were 65, comprising 26.1% of the study population. Majority [73.5% (183)] of the respondents were diploma holders, 18.9% (47) were holders of Bachelor of Science in nursing, 6.4% (16) were certificate holders while 1.2% (three) of them had attained masters degree in nursing. About 60.2% (150) of the respondents had a working experience of more

than six years, 17.7% (44) had a working experience between one to three years, 17.3% (43) had worked for four to six years, while 4.8% (12) of the respondents had worked for less than one year. In terms of deployment in the respective work places, 30.1% (75) of the respondents were working in the maternity units, 24.9% (62) were working in the surgical wards while 54 (21.7%) were deployed in the medical wards. Among the respondents, 15.3% (three) of them were deployed in the paediatric wards, while eight percent (20) were working in the gynaecology wards.

Table 2. Documentation on the Respondents' Performance

Content documented	Fully		Partially		Not at all	
	No	%	No	%	No	%
Assessment data	24	10	222	89	3	1
Nursing diagnoses	10	4	61	24.5	178	71.5
Expected outcomes	18	7	52	21	179	72
Nursing interventions	30	12	41	16.5	178	71.5
Scientific rationale	23	9	47	19	179	72
Implementation	64	25.7	6	2.3	179	72
Evaluation	4	2	28	11	217	87

Table 2 shows the respondents' documented performances on the nursing process. Out of the 249 respondents observed, only 10% (24) of them were able to perform and fully document the patient assessment data. About 89% (222) of them partially assessed and documented the patient data while one percent (three) of them neither performed any assessment nor documented any patient data. After the nurse performs patient health assessment and makes the necessary observations, he/ she is supposed to formulate nursing diagnoses in order of priority. As illustrated in table 2, only four percent (10) of the respondents fully formulated the nursing diagnoses while 24.5% (61) of them partially formulated the nursing diagnoses. Most [71.5% (178)] of the respondents never formulated any nursing diagnosis at all. Following the formulation of nursing diagnoses, nurses are supposed to develop patient care expected outcomes appropriate to each of the nursing diagnoses. Among the 249 respondents observed, only seven percent (18) of them fully documented the expected patient care out comes, while 21% (52) of them partially documented the expected out comes. However, most [72% (179)] of them did not document any expected out comes at all. Nursing care interventions are developed from the expected patient care outcomes and documented in the nursing care plan accordingly. However, only 12% (30) of the respondents fully documented the nursing care intervention. About 16.5% (41) of the respondents partially documented the nursing care interventions while 71.5% (178) of them never documented any nursing interventions at all. In this case, the nursing care plans were left blank. Each of the nursing care intervention must have a documented scientific rationale. In the current study, only nine percent (23) of the scientific rationales were fully documented while 19% (47) were partially documented. Most [72% (179)] of the respondents did not document any

scientific rationales in relation to the nursing interventions. In terms of implementation, only 25.7% (64) of the respondents fully documented the nursing care intervention while 2.4% (six) of them partially documented them. The study results showed that 72% (179) of the respondents did not document any nursing interventions. Once the nurse has implemented the planned nursing care interventions, he/ she has to evaluate them in order to establish whether the stated expected nursing care outcomes have been achieved. In this case, only 2% (4) of the nursing care evaluations were fully documented while 11% (28) were partially documented, with 87% (217) of the nursing care evaluations not being documented at all. To make an overall inference, the fully and partially documented content was collapsed to “fully-partially documented” while the content which was not documented was labeled as “not at all”.

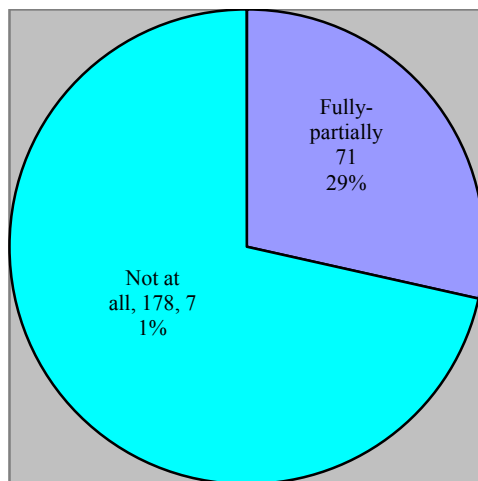


Figure 1. Respondents' overall utilization of Nursing Process

Figure 1 shows that only 28.5% (71) of the respondents were able to carry out their procedures and document (fully-partially documented) according to the steps of the nursing process.

5. Discussion

Out of the 249 respondents observed, only 10% of them were able to perform and fully document the patient assessment data, an indication that utilization of nursing process among the respondents was poor since documentation is the only evidence that the planned care was provided. Failure to document the care provided to the patient may also lead to medication error like repetition of administration of the same drug among others. On the contrary, a cross-sectional study conducted to analyze the nursing records used at public and private centers in the health area Gipuzkoa (Basque Country) showed that nursing process was being utilized to provide nursing care to patients in 98% of all the centers included in the study, translating to good provision of nursing care to the patients [15]. Findings of the study showed that only four of the respondents fully documented the nursing diagnoses in the nursing care plans

according to the assessment data. Since formulation of nursing diagnoses form the basis of developing nursing care interventions, it also means that the nurses did not develop the right interventions, which may also lead to poor patient care. The percentage of the respondents who fully formulated the nursing diagnoses is less than the ones who had documented the patient assessment data. This could still be explained by the fact that more than half of the respondents said that they had difficulties in formulating nursing diagnoses. These findings are in contrast to the results of a case study conducted in three government hospitals in Ethiopia to assess the implementation of nursing process whereby more than 68% of the nursing diagnoses were documented, indicate good provision of nursing care to the patients [17]. If the diagnostic statements are not well formulated, there is likelihood that the nursing interventions and patient care expected outcomes may also be poorly formulated. Consequently, the study findings showed that only seven percent of the respondents managed to document the expected nursing care outcomes in line with the developed nursing diagnoses. With only seven percent of the respondents document the expected care outcomes properly, this also demonstrates that the care provision to the patients was poor. Corresponding findings were established in a study conducted among 150 nurses in three selected hospitals in Ibadan, Nigeria to determine the extent of utilization of the nursing process for documentation of nursing care whereby documentation of nursing care using nursing process was realized to be poor [22]. The study findings also showed that most (71.5%) of the respondents did not document the nursing care interventions, which could also be the explanation why only nine percent of the respondents fully documented the scientific rationales. All these were indications of poor utilization of nursing process among the respondents. Similarly, a study to evaluate utilization of nursing process among nurses in a Psychiatric hospital in Port Harcourt (Nigeria) showed that utilization of nursing process was poor [9]. Regarding the implementation of the nursing care interventions, only 25.7% of the respondents fully documented them, which may be interpreted to mean that the interventions that were not documented were never implemented, which is an indication of poor nursing care to the patients. This could also be translated to indicate that the respondents had difficulties in relation to utilization of the various steps of nursing process. This makes it difficult for them to provide the required nursing care to the patients. Similarly, a study on the barriers and facilitators for execution of nursing process from nurses' perspective in two hospitals at Najran region, Saudi Arabia showed that most of the respondents faced difficulties in implementing the phases of nursing process [16]. The study results showed that only two percent of the respondents fully documented the nursing care evaluations. Through evaluation of the implemented nursing care interventions, the nurse is able to establish whether the desired outcomes were achieved. If this is not done as in the case of this study, this means that the nurses never assessed

the achievement to the set patient care goals. This could possibly lead to poor patient outcomes. Likewise, findings in a study carried out to establish the challenges faced by nurses working in Jaffna Teaching Hospital special units in relation to implementation of nursing process showed that only three percent of them knew how to evaluate the implemented care [23]. Overall, only 28.5% of the respondents were able to carry out their procedures and document according to the steps of nursing process. Corresponding findings were also realized in a descriptive retrospective study which was conducted to evaluate nursing process utilization at a Brazilian teaching hospital by reviewing 68 medical records in which case all the steps of nursing process were not documented [12].

6. Conclusions

The study results demonstrated that utilization of each of the steps of nursing process was poor. This is because only less than 30% of them were able to utilize each of the steps according to the set protocols. Overall, only 28.5% of the respondents demonstrated proper utilization of nursing process, which translated to poor utilization of nursing process among the respondents. Since this is one of the main strategies which nurses utilize in provision of nursing care, it may also indicate provision of nursing care to the patient in these facilities was poor. This calls for further investigations to be instituted to establish the possible factors which led to this poor practice of nursing care provision to the patients.

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REFERENCES

- [1] Berman A and Snyder S. (2012). *Kozier and Erb's Fundamentals of Nursing: Concepts, Process and Practice*; 9th Ed, Pearson education inc: Upper Saddle River, New Jersey.
- [2] Thoroddesen N, Ehnfors M and Ehrenberg A. (2011). Content and completeness of care plans after implementation of standardized nursing terminologies and computerized records; *Computers, Informatics Nursing*; CIN; 29:599-607.
- [3] Smelter SC, Barre BG, Hinkle JL and Cheever KH. (2010). *Brunner and Suddarth's Text Book of Medical- Surgical Nursing*; (12thed). Lippincott Williams and Wilkins: Philadelphia.
- [4] Betty J, Ackley A, Gail B and Ladwig S (2011). *Nursing diagnosis Handbook: An evidence based guide to planning care*. (9th Ed). St Louis, Missouri: Mosby.
- [5] Molly, S. (2007). *Nursing Process: A clinical guide*. (2nd Ed). Jaypee brothers Medical Publishers LTD: New Delhi.
- [6] Dreyer, L. (2006). The patient interview: Learn to communicate, *RDH*; 26(2): 46-50.
- [7] Pamela, SD. (2012). *Nursing Process and Critical Thinking: Ohio Board of Nursing Law and Rules*; www.ohnurses.org; 5 (3).
- [8] Juall L and Carpenito M. (2010). *Nursing diagnoses: Application to Clinical practice*; (13th Ed). Philadelphia: Lippincott William and Wilkins.
- [9] Afolayan AA, Donald B, Baldwin DM, Onasoga O and Babafemi A. (2013). Evaluation of the utilization of Nursing process and patient outcome in Psychiatric Nursing: Case study of Psychiatric Hospital, Rumuigbo, Port Harcourt In Nigeria; *Advances in Applied Science Research*, 4(5), 34-43.
- [10] Pokorski S, Moraes MA, Chiarelli R, Costanzi AP, Rabelo ER (2009). Nursing process: from literature to practice: What are we actually doing?. *Rev Latino-am Enfermagem maio-junho*; 17(3):302-7.
- [11] Muller-Staub M, Lavin MA, Needham I and Achterberg T. (2006). Nursing diagnoses, interventions and outcomes - application and impact on nursing practice: systematic review; *Journal of advanced Nursing*; 56 (5):514-31.
- [12] Lopes MH, Higa R, Christoforo FF, Oliveira RN, Reis MJ, (2010). Evaluation of the nursing process used at a Brazilian teaching Hospital; *International Journal of Nursing terminologies and classifications*; 21(3):116-123.
- [13] Edet, A.B, Mgbekem, M.A. and Edet, O.B. (2013). Professional Nurses' perception of the nursing process at the University of Calabar Teaching Hospital (UCTH), Calabar, Nigeria. Accessed on 6th January, 2017 from: <https://www.researchgate.net/publication>.
- [14] Afoi BB, Emmanueul A, Garba SN, Gimba SM and Afuwai V. (2012). Evaluation of the implementation of nursing process among nurse Clinicians. *Continental J. Nursing Science*, 4 (1): 34 – 46.
- [15] Huitzi-Egilegor JX, Elorza-Puyadena MI, Urkia-Etxabe JM, Zubero-Linaza J and Zupiria-Gorostidi X (2012). Use of the nursing process at public and private centers in a health area, *Rev. Latino-Am. Enfermagem*, 20: 5.
- [16] Mahmoud MH and Bayoumy HM. (2014). Barriers and facilitators for execution of nursing process from nurses' perspective in two hospitals at Najran region, Saudi Arabia. *International journal of advanced research*, 2 (2): 300-315.
- [17] Semachew A. (2017). Implementation of nursing process in clinical settings: the case of three governmental hospitals in Ethiopia. *BMC Research notes*; 1: 173.
- [18] Hakans VB. (2012). Nurses' perception of nursing diagnosis. *Nurs inform*, 2012:054.
- [19] Mangare LN, Omondi L, Ayieko A, Wakasiaka S, Omoni G and Wamalwa D. (2016). Factors influencing implementation of the nursing process in Naivasha District Hospital, Kenya. *African Journal of Midwifery and Women's Health*, 10 (2).
- [20] Levin KA. (2006). Cross-sectional studies. *Evidence-Based Dentistry*; 7: 24–25.

- [21] Polit, DF & Beck, CT. (2010). *Nursing research: Principles and methods* (7th ed). Philadelphia: Lippincott Williams & Wilkins.
- [22] Ofi B and Sowunmi O. (2012). Nursing documentation: Experience of the use of the Nursing process model in selected hospitals in Ibadan, Oyo State, Nigeria. *International Journal of Nursing practice*; 18(4): 354-62.
- [23] Thuvaraka S, Vijayanathan S, Pakeerathy M, Subathra R, Laavanya M, Priyanthi W. (2018). Challenges Faced by Nurses for Implementation of Nursing Process in Special Units at Teaching Hospital Jaffna, *International Journal of Science and Healthcare Research*; 3 (1): 61-64.