



Factors affecting the use of nursing process in Lagos University Teaching Hospital, Lagos, Nigeria



F. Folami^{a,*}, A. Olowe^a, Joshua Olugbade^b

^a Department of Nursing, College of Medicine, University of Lagos, Nigeria

^b Department of Nursing Science, University of Lagos, Nigeria

1. Background

The Nursing profession has identified as a body of knowledge that contributes to the prevention of illness, promotion of health, and to the maintenance or restoration of the client's health (or relief of pain and provision of support when a return to health is not possible). The Nursing process is the basis of all nursing actions and is the essence of nursing grappling with the need to be identified as professionals (Doenges & Moorhouse, 2012). The Nursing profession has evolved due to the constantly changing health care environment, with critical thinking as a requisite skill for nurses (Afolayan, Donald, Baldwin, Onasoga, & Adeyanju, 2013). Nurses work with well and ill clients; in addition, they play the role of caregivers, care managers, care coordinators, teachers, counselors, advocates and researchers (Mahmoud & Bayoumy, 2014).

The Nursing process is a systematic, problems solving approach to nursing care, based on theoretical knowledge combined with technical and communication skill (Wagoro & Rakuom, 2015). It is dynamic, flexible and goal oriented which can be applied to all levels of nursing practice. The Nursing process is a methodical and organized approach to delivering nursing care, the process is a series of steps or components leading to achievement of a goal, these includes; assessment; diagnosing; planning; implementation, and evaluation. The nurse performs different activities and tasks under each component to gather correct and adequate information upon which diagnoses, and clinical decisions are made and a line of action is determined to either assist the individual sick or well, prevent or treat illness, for recovery of health or to peaceful death. The Nursing process involves the application of critical thinking to client care activities, these activities must agree with the seven properties of the Nursing process i.e. they must be systematic; dynamic; interpersonal; flexible; theoretically based; goal oriented and universally acceptable (Mahmoud & Bayoumy, 2014).

Wagoro and Rakuom (2015) postulate that the nurse employs the nursing process as a problem-solving tool for meeting the healthcare needs of the clients he/she encounters on a day-to-day basis. The nursing process as a form of patient record is useful for communication and continuity of care; care planning; quality review; decision analysis;

education; research; legal documentation; financial billing and reimbursements, auditing and monitoring and historic documentation. Nurses through their training are being equipped with knowledge of the advantages and the importance of the nursing process, nevertheless, it has been discovered that the nursing process booklets used in the clinical areas are hardly used, with many sections left empty or blank, comprehensive design and use of the nursing care plan is not being practiced, evaluation of care and diagnoses are hardly done even in clinical areas.

The nursing process being the core and anchor of all nursing activities, it is hereby important that nurses demonstrate a positive attitude towards its use (Hagos, Alemseged, Balcha, Berhe, & Aregay, 2014). However, this is not always the case as some nurses do not show interest in the application of the nursing process while some do not completely apply the various constituents of the nursing process. It is on this premise that the researcher is interested in finding out the level of knowledge, acceptance and attitude of nurses towards the nursing process and factors that affect their attitudes towards the use of the nursing process in patient care. Olaogun and Adeyemo (2013) investigated factors affecting the use of nursing process in health institutions in Ogbomoso town, Oyo state, Nigeria. Their objective was to find out the relative contribution of knowledge factor, institutional issues, professional factors and attitudinal factors in the prediction of the use of nursing process and to evaluate which of the predictor variables is the most potent predictor of the use of nursing process. Findings revealed that knowledge had the highest effect on the use of nursing process, followed by institutional factor and professional factor, the least was the attitude. They concluded that the knowledge factor had the most important influence on the use of nursing process and recommended that the introduction of educational programs will enhance nurses' ability to use nursing process to improve the quality of patient's care. Motivation of nurses is very important in improving care-planning systems that would further promote consistency in the use nursing process.

* Corresponding author.

E-mail addresses: Ffololami@yahoo.com (F. Folami), joshuaolugbade@yahoo.com (J. Olugbade).

<https://doi.org/10.1016/j.ijans.2018.12.001>

Received 1 July 2018; Received in revised form 25 November 2018; Accepted 1 December 2018

Available online 03 December 2018

2214-1391/ Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1.1. Components of the nursing process

The nursing process is a methodical and organized approach to delivering nursing care, the process is a series of steps or components leading to achievement of a goal, these includes; assessment, diagnosing, planning; implementation, and evaluation (Hagos et al., 2014). An overview of the components, their description, purpose and activities of each step of the nursing process are discussed below.

- 1. Assessment:** involves collecting, organizing, validating, and documenting client data. This is done to establish a database about the client's response to health concerns or illness and the ability to manage health care needs (Hagos et al., 2014). The nurse performs the following activities; establish a database; collect subjective data (not measurable) and objective data (measurable); obtain a nursing health history; review client records; review nursing literature; consult support persons; consult health professionals; update data as needed; organize data; validate data and communicate/document data (Hagos et al., 2014).
- 2. Diagnosis:** involves clustering, analyzing and synthesis of data, problem identification and nursing diagnosis labelling (Hagos et al., 2014). To develop an individualized care plan that specifies client goals/desired outcomes and related nursing interventions. Outcome statement must be patient centered, specific, and measurable. The nurse interprets and analyze data: compare data against standards; cluster or group data (generate tentative hypotheses); identify gaps and inconsistencies, determine client's strengths, risks, and problems and formulate nursing diagnoses and collaborative problem statements (Hagos et al., 2014).
- 3. Planning/Goal/Outcome:** involves determining how to prevent, reduce, or resolve the identified client problems; how to support client strengths; and how to implement nursing interventions in an organized individualized, and goal- directed manner. To develop an individualized care plan that specifies client goals/desired outcomes and related nursing interventions. Outcome statement must be patient centered, specific, and measurable. The nurse sets priorities and writes goals/outcomes in collaboration with client, consults with other health professionals, writes nursing orders and nursing care plan, communicates care plan to relevant healthcare providers, and formulates short term and long term goals (Hagos et al., 2014).
- 4. Implementation:** involves carrying out the planned nursing interventions. To assist the client to meet desired goals/outcomes; promote wellness and disease; restore health; and facilitate coping with altered functioning. The nurses select nursing strategies/interventions; Determine need for nursing assistance; Perform or delegate planned nursing interventions; Communicate what nursing actions were implemented: by documenting care and client responses to care, giving verbal reports as necessary; carrying out the plan (Hagos et al., 2014).
- 5. Evaluation:** involves measuring the degree to which goals/outcomes have been achieved and identifying factors that positively or negatively influence goal achievement (Kozier et al., 2009).

2. Conceptual model

The theoretical model used to guide this study is the general systems theory. This theory was introduced by Ludwig Von Bertalanffy (1969) as a universal theory that could be applied to many fields of study. This theory explains the breaking of whole things into parts and the working of those parts in systems. The theory explains the relationship between wholes and parts, a description of concepts about them, and predictions about how the parts will behave and react (Kozier et al., 2009). This theory explains how the nursing process consisting of different parts and components culminate towards the achieving of a desired outcome and how each component or part interacts with each other.

The Nursing process being the core and anchor of all nursing

activities, it is hereby important that nurses demonstrate a positive attitude to its use, this is not the case as some nurses do not show interest in the application of the nursing process while some do not completely apply the various constituents of the nursing process. It is on this premise that the researcher is interested in finding out the level of knowledge, acceptance and attitude of nurses to the nursing process and factors that affect the attitude of nurses towards the use of the nursing process in patient care.

3. Research methodology

A descriptive non-experimental design was used for this study. The setting of the study was Lagos University Teaching Hospital, located in Idi Araba, Lagos, Nigeria. The Lagos University Teaching Hospital (LUTH) is one of the largest teaching hospitals in Nigeria located in Idia-raba, Surulere, Lagos State, south-west Nigeria. It is a 750 bedded hospital established in 1962 and has arguably the largest number of medical and allied specialists in the nation and has a long history of providing world class medical services. LUTH is a Federal Government owned tertiary institution which together with the Medical School Complex grew out of a cabinet decision of April 1961. There are various departments in LUTH which includes;

- Accident and Emergency
- Medical Out-Patient (MOP) I
- Medical Out-Patient (MOP) II
- Surgical Out-Patient (SOP) I
- Surgical Out-Patient (SOP) II
- Ear, Nose and Throat – ENT
- Guinness Eye Centre (GEC)
- Staff Medical Clinic
- Paediatric Out Patient
- Obstetrics and Gynaecology
- Community Health
- Oral Maxillo Facial

4. Sample and sampling techniques

Simple random sampling (balloting) method was used to select the wards that were included in the study and convenience sampling method meaning that all the nurses on duty during the time of data collection who agreed and were willing to participate in the study were surveyed.

5. Sample size

The hospital currently has staff strength of about 638 nurses. According to Araoye (2004), if

N (the entire population is less than 10,000; the following formula should be used

$$\frac{n}{1 + \frac{(n)}{(N)}} = nf$$

where nf = desired sample size when population is less than 10,000; n = the minimum required sample size in the population > 10,000:100; N = the estimate of the population: 600

$$\frac{150}{1 + (150)/(600)} = 120$$

$$nf = 120$$

The desired sample therefore is 120 nurses.

The questionnaire was adapted from previous study that was done in Mekelle Zone Hospitals, Northern Ethiopia on application of nursing process and its affecting factors among nurses by Hagos, Alemseged, Balcha, Berhe, & Aregay in 2014. Small changes were made in relation

to the factors affecting the use of nursing process in Lagos University Teaching Hospital, Lagos, Nigeria. Due to fact that the instrument was adapted, a pilot study was carried out to test for the reliability of the questionnaire at one of the wards that was not selected for the study. Ten percent of the sample size was used for the pilot study, arriving at a size of approximately 12. Split half method was used to calculate the reliability. A reliability coefficient the Guttman split-Half coefficient gave 0.509 which is good for the instrument. In order to ensure the validity of the instrument, a copy of the modified structured questionnaire was presented to the panel of experts consisting of nursing professionals for content and face validity. The corrected and validated version of the instrument was pretested on twelve nurses at one of the ward that is not selected for the study.

The ethics and research board of the Lagos University Teaching Hospital did ethical considerations and approval with the Health Research Committee assigned number ADM/DCST/HREC/APP/2480. An introductory letter was sent to the heads of the selected wards where the research was conducted. The questionnaire was distributed and collected face to face from the respondents by the researcher and three trained research assistants at the selected wards. Consent was sought, assurance of confidentiality was also made, and freedom to withdraw from participating was made known to the participants.

6. Results

One hundred and twenty self-structured questionnaires were distributed to nurses who are staff of Lagos University Teaching Hospital; all were returned but only 115(95.8%) were found adequate for analysis.

Table 1 shows that majority of the respondents 41 (35.7%) were ages between 31 and 40 years while 38 (33.0%) 20–30 years of age. Females 104 (90.4%) were the major respondents and males were 11(9.6%). 81(70.4%) were married while 33(28.7%) were singles. Majority of the respondents 106(92.2%) are Christians while 9(7.8%) are Muslims. Respondents with BNSC were 52(45.2%) while RN make up 44(38.2%) of the respondents. Nursing Officer I were the major respondents with 50(43.5) while Chief Nursing Officer make up 7(6.1%) of the respondents. Majority of the respondents 41(35.7%) have served between 5 and 10 years while only 12(10.4%) have served for over 21 years.

Table 2 reveals that the majority of the respondents 83(72.2%) strongly agreed that they have adequate knowledge of the nursing process, 78(67.8%) of the respondents strongly agreed that they I acquired knowledge of the nursing process during my training in school. Only 10(8.7%) of the respondents strongly disagreed that they I need more information to put to practice the nursing process.

Table 3 shows that the respondents 94(81.7%) strongly agree that they are willing to apply the nursing process in the care of my patients, 63(54.8%) strongly disagree that they find it difficult to understand the nursing while 5(4.3%) agreed. Majority of the respondents 72(62.2%) strongly disagreed that they prefer to be left out of using the nursing process in practice. 99(86.1%) of the respondents strongly disagreed that Application of the nursing process should be left for those with degrees in nursing.

Table 4 shows that the majority of the respondents 86 (74.8%) strongly disagreed that the application of the nursing process makes no difference in patients’ recovery but 6 (5.2%) agreed. Most the respondents strongly agreed that the application of nursing process in patient care has improved patients respond to care while just (7.0%) disagree.

Table 5 shows that forty five (39.1%) of the respondents disagreed that applying the nursing process requires tedious documentation that nurses cannot sustain while 22(19.1%) agreed that it is tedious. Majority of the respondents 77(67.0%) strongly agreed that the hospital management needs to be enlightened on the benefits of the nursing process. Most of the respondents 74(64.3%) strongly agreed that the

Table 1
Socio-Demographic Characteristics of the Respondents.

Variables	Frequency	Percentage
Age		
20–30	38	33.0
31–40	41	35.7
41–50	36	31.3
Total	115	100.0
Sex		
Male	11	9.6
Female	104	90.4
Total	115	100.0
Marital status		
Single	33	28.7
Married	81	70.4
Divorced	1	0.9
Total	115	100.0
Religion		
Christianity	106	92.2
Islam	9	7.8
Total	115	100.0
Educational level		
RN	44	38.3
Post Basic	18	15.7
BSc	52	45.2
Others	1	0.9
Total	115	100.0
Cadre		
NO I	50	43.5
NO II	30	26.1
SNO	16	13.9
PNO	5	4.3
ACNO	7	6.1
CNO	7	6.1
Total	115	100.0
Years in service		
Less than 5 years	39	33.9
5 to 10 years	41	35.7
11yrs to 15 years	15	13.0
16 to 20 years	8	7.0
21 and above	12	10.4
Total	115	100.0

Table 2
Knowledge Base of Practicing Nurses.

Variables	Frequency	Percentage
I have adequate knowledge of the nursing process.		
Strongly disagree	0	0
Disagree	0	0
Agree	32	27.8
Strongly Agree	83	72.2
Total	115	100.0
I acquired knowledge of the nursing process during my training in school.		
Strongly Disagree	6	5.2
Disagree	3	2.6
Agree	28	24.3
Strongly Agree	78	67.8
Total	115	100.0
I got the knowledge of the nursing process from seminars.		
Strongly Disagree	16	13.9
Disagree	46	40.0
Agree	24	20.9
Strongly Agree	29	25.2
Total	115	100.0
I need more information to put the nursing process into practice.		
Strongly Disagree	10	8.7
Disagree	19	16.5
Agree	46	40.0
Strongly Agree	40	34.8
Total	115	100.0

Table 3
Respondents' Acceptability and Willingness to Practice the Nursing Process.

Variables	%	Frequencies
I am willing to apply the nursing process in the care of my patients.		
Disagree	1	0.9
Agree	20	17.4
Strongly Agree	94	81.7
Total	115	100.0
I find it difficult to understand the nursing process		
Strongly Disagree	63	54.8
Disagree	45	39.1
Agree	5	4.3
Strongly Agree	2	1.7
Total	115	100.0
I prefer to be left out of using the nursing process in practice		
Strongly Disagree	72	62.6
Disagree	41	35.7
Agree	1	0.9
Strongly Agree	1	0.9
Total	115	100.0
Application of the nursing process should be left for those with degrees in nursing		
Strongly Disagree	99	88.1
Disagree	13	11.3
Strongly Agree	3	2.6
Total	115	100.0

Table 4
Relationship between Application of the Nursing Process and Patient Outcome.

Variables	Frequencies	Percentage
The application of the nursing process makes no difference in patients' recovery		
Strongly Disagree	86	74.8
Disagree	22	19.1
Agree	6	5.2
Strongly Agree	1	0.9
Total	115	100.0
The application of nursing process in patient care has improved patients respond to care.		
Strongly Disagree	1	0.9
Disagree	7	6.1
Agree	33	28.7
Strongly Agree	74	64.3
Total	115	100

nurse to patient ratio in the hospital affects the use of the nursing process.

Table 6 shows that the majority of the respondents 106(92.2%) have good understanding of the factors that hinder the implementation of the nursing process.

7. Discussion of findings

Table 1 showed that Majority of the respondents (35.7%) were between ages 31–40 years while (33.0%) 20–30 years of age. Females were (90.4%) of the respondents and males were only (9.6%). (70.4%) were married while 33(28.7%) were single. Majority of the respondents (92.2%) are Christians while (7.8%) are Muslims. Respondents with B.NSc degree were (45.2%) while those with RN degree were (38.2%) of the respondents. Nursing Officer I were the major respondents with (43.5) while Chief Nursing Officer made up (6.1%) of the respondents. (35.7%) of the respondents have served between 5 and 10 years while only (10.4%) have served for over 21 years. Table 2 shows that majority of the respondents (72.2%) strongly agreed that they have adequate knowledge of the nursing process, of this, (67.8%) of the respondents acquired knowledge of the nursing process during their training in school. Table 3 shows that majority, 115(100%) of the respondents have good knowledge.

Table 3 indicates that most of the respondents 94(81.7%) are willing to apply the nursing process in the care of patients, while 63(54.8%) do

Table 5
Factors that Hinder the Implementation of the Nursing Process.

Variables	Frequencies	Percentage
Applying the nursing process requires tedious documentation that nurses cannot sustain.		
Strongly Disagree	39	33.9
Disagree	45	39.1
Agree	22	19.1
Strongly Agree	9	7.8
Total	115	100.0
Management of hospitals cannot sustain supply of the necessary materials for the nursing process practice		
Strongly Disagree	13	11.3
Disagree	32	27.8
Agree	54	47.0
Strongly Agree	16	13.9
Total	115	100.0
The nursing staff strength is inadequate to fully practice the nursing process.		
Strongly Disagree	7	6.1
Disagree	18	15.7
Agree	49	42.6
Strongly Agree	41	35.7
Total	115	100.0
The hospital management needs to be enlightened on the benefits of the nursing process		
Strongly Disagree	1	0.9
Disagree	7	6.1
Agree	30	26.1
Strongly Agree	77	67.0
Total	115	100.0
The nurse to patient ratio in the hospital affects the use of the nursing process		
Strongly Disagree	4	3.5
Disagree	7	6.1
Agree	30	26.1
Strongly Agree	74	64.3
Total	115	100.0

Table 6
Overall factors that hinder the implementation of the nursing process.

Variables	Frequencies	Percentage
Poor	9	7.8
Good	106	92.2
Total	115	100.0

not find it difficult to understand the nursing process but 5(4.3%) do. Majority of the respondents 72(62.2%) would prefer not to be left out of using the nursing process in practice. Unanimously, 99(86.1%) of the respondents strongly disagreed that application of the nursing process should be left for those with BSc degrees in nursing. The findings of Tables 2 and 3 confirm and agree with Bowman, Thompson and Sutton study on Nurses' attitudes towards the nursing process which recommended that a structured educational program was beneficial in creating a positive attitude towards the nursing process. Respondents who had structured training either in a school or through a seminar all demonstrated good knowledge of the nursing process as well as a positive attitude towards the use of the nursing process. Unlike the study done by Hagos, Alemseged, Balcha, Berhe and Aregay on application of nursing process and its affecting factors among nurses working in Mekelle Zone Hospitals, Northern Ethiopia (2014) where majority (90%) of the respondents had poor knowledge and (99.5%) of the respondents had a positive attitude towards the nursing process, findings from the current study shows that (100%) of the respondents have good knowledge and (100%) demonstrated a positive attitude towards the nursing process.

Table 3 disagrees with findings from Martin et al. (2009) study on the Nurses' attitudes toward nursing process as measured by the Dayton Attitude Scale which reported that participants were knowledgeable of the nursing process and held a relatively positive attitude toward the nursing process and participants with Higher nursing degrees were

associated with more positive attitudes. The current study reports that respondents irrespective of the level of their nursing degree displayed good knowledge and all demonstrated positive attitude to the nursing process.

Table 6 illustrates that the application of the nursing process has a positive effect on patient outcome with majority of the respondents 105(95.7%) reporting so. Table 6 also shows that 45(39.1%) of the respondents disagreed that applying the nursing process requires tedious documentation that nurses cannot sustain while 22(19.1%) agreed that it is tedious. Majority of the respondents 77(67.0%) strongly agreed that the hospital management needs to be enlightened on the benefits of the nursing process. Ninety percent of the respondents agreed that the nurse to patient ratio in the hospital affects the use of the nursing process, and this agrees with the finding in the study done by Hagos, Alemseged, Balcha, Berhe and Aregay on Application of Nursing Process and its Affecting Factors among Nurses Working in Mekelle Zone Hospitals, Northern Ethiopia (2014) which also reported that high patient nurse ratio affects the application of the nursing process.

8. Conclusion

After a careful study and analysis of the various findings, the following conclusions were drawn;

- Attitude towards the nursing process is facilitated by good knowledge gotten from school or training seminars and this attitude is not affected by the difference of educational level
- The application of the nursing process has a positive effect on patient outcome.
- The nurse to patient ratio has an effect on the attitude of nurses towards the use of the nursing process; a high patient ratio will affect the attitude of the nurse negatively.
- The management of the hospital has a role to play in the continued use and practice of the use of the nursing process
- Nurses will continue to use the nursing process irrespective of how tedious the process of documentation is.

9. Recommendation

Based on the findings of the study, the following recommendations

are made:

- Hospital management should employ modern technological ways to reduce the difficulty in the process of documentation of the nursing process and provide necessary tools to sustain the process
- Continuing education of nurses to promote and sustain a high level of attitude and teach new ways and methods of applying the nursing process effectively in the management of patients.
- Further studies should be carried out to determine the nurse-patient ratio operated in the hospital and its effect on the use of the nursing process.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ijans.2018.12.001>.

References

- Adeyemo, F. O., & Olaogun, A. A. F. (2013). Factors affecting the use of the nursing process in health institutions in Ogbomoso Town, Oyo State. *International Journal of Medical and Pharmacological Sciences*, 1, 191–198.
- Afolayan, J.A., Donald, B., Baldwin, D.M., Onasoga, O., Adeyanju, B. (2013). Evaluation of the utilization of nursing process and patient outcome in psychiatric nursing: Case study of psychiatric Hospital Rumuigbo, Port Harcourt. Palagia research library. ISSN: 0976- 8610. USA.
- Araoye, M. O. (2004). *Research Methodology with Statistics for Health and Social Sciences. Subject Selection* (pp. 115–120). Ilorin: Nathadex Publishers.
- Doenges, M.E. & Moorhouse, M.F. (2013). *The nursing process: delivering quality care. Application of nursing process and nursing diagnosis: an interactive text for diagnostic reasoning*. Published by F.A. Davis Company, 1915 Arch street, Philadelphia, PA19131.
- Hagos, F., Alemseged, F., Balcha, F., Berhe, S., & Aregay, A. (2014). Application of nursing process and its affecting factors among nurses working in Mekelle Zone Hospitals, Northern Ethiopia. *Nursing Res. Practice*, 8, 1. <https://doi.org/10.1155/2014/675212>.
- Kozier, B., Erb, G., Berman, A., Synder, S. J., Bouchal, D. S. R., et al. (2009). *Fundamentals of nursing: concepts, process and practice* (2nd Ed.). Toronto press.
- Martin, P.A, Dugan, J., Freundl, M., Miller, S.E., Phillips, R., & Sharritts, L., (n,d). Nurses' attitudes toward nursing process as measured by the Dayton Attitude Scale. retrieved on the 21/09/2015 from <http://www.ncbi.nlm.nih.gov/pubmed/8138601>.
- Mahmoud, M. H., & Bayoumy, H. M. (2014). Barriers and facilitators for execution of nursing process from nurses' perspective ISSN 2320–5407. *International Journal of Advanced Research*, 2(2), 300–315.
- Wagoro, M. C. A., & Rakuom, C. P. (2015). Mainstreaming Kenya-Nursing Process in clinical settings: The case of Kenya. *International Journal of Africa Nursing Sciences*, 3(2015), 31–39.