# BARRIERS TO IMPLEMENTATION OF NURSING PROCESS AMONG NURSES WORKING IN NAROK COUNTY REFERRAL HOSPITAL

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## Abstract

**Purpose of the study:** This study therefore assessed barriers of nursing process implementation by Narok County Referral Hospital nurses.

**Methodology:** A descriptive cross sectional study design was used to collect data from 102 randomly sampled nurses in NCRH. The study instruments used were self-administered questionnaires and key informant interview. SPSS version 20.0 was used to analyze quantitative data and sample characteristics were analyzed using mean and median. Themes were used to analyze qualitative data and narratively presented. Association between the study variables was calculated using chi square at 95% level of significance while statistical significance of results obtained was calculated using p values of 0.05. Data analysis was presented using tables and graphs. Approval was sought from relevant authorities.

**Results:** The study results revealed that female participants were the majority at (70.6%). Most participants (71.6%) had attained diploma level of education and among them, 92.2% had received training in nursing process. Majority 95 (93.2%) were observed not to implement nursing process and of those who implemented, only 1 (1%) correctly outlined all the steps, a sign of poor nursing process implementation. NP implementation was of statistical significance with age of nurses as 18 out of 29 of younger nurses aged 21-30 years were found to actively practice it (p =0.001, work experience (p = 0.001), training (p > 0.05): institutional factors (p = 0.001).

**Unique contribution to theory, practice and policy:** Nursing process mainstreaming interventions such as regular staff refresher courses and mentorship On NP in the hospitals, availability of relevant resources: human resource and supplies can highly mitigate these barriers.

**Key words:** *NCRH, Barriers, Nursing Process, Nurses*

## 1.0 INTRODUCTION

Around the world, nursing process has gained popularity and is being used in clinical settings to offer quality individual nursing care to patients. According to Herdman and Kamitsiru (2015), the NANDA explained nursing diagnosis, which is one of the nursing process steps as a judgment made clinically about community, a family or an individual, towards responding to risks or already existing health problems or life processes which provide nursing intervention and assist nurses to achieve nursing outcome.

In Nigeria, Nursing process through the degree program is reported to have begun in the 1980s in the universities but its implementation in the clinical set up materialized in the 1990s, which is approximately 10 years later. Berman et al., (2008) also stated that the nursing process is a process which is continuous for every individual patient's problem and care.

Similar challenges according to Department of Nursing (2009), regarding utilization of nursing process in practical setup are faced in Kenyan hospitals hence leading to substandard quality of health care service. In support of the above statement, Mahmoud and Bayoumy, (2014) have attributed these challenges to inadequate resources, incompetence, negative attitudes, nurse characteristics like age, education level and experience. A study by Manal & Hala, (2014) revealed that education status of a nurse is directly proportional to the application and implementation of nursing process and Queiroz *et al.,* (2012), are also in support of the above as they found out that nurses' lack of awareness of nursing process steps, nurses' inadequate training, and time constraints impede nursing process implementation in practical setup.

Inadequate utilization of nursing process towards management of patients can lead to substandard care, prolonged hospital length of stay and increase in death rate and debilitation related to actual as well as possible risks which could have otherwise been prevented if nursing care plans are utilized by all nurses as required (Bastable, 2008).

Nursing process has been incorporated in the training curriculum for all cadres of nurses in Kenya. However, according to Nyatichi (2012), nurses find it difficult to utilize the nursing process using the available framework and this has attributed to sub-standard quality health care (QHC) in public hospitals in Kenya. Use of nursing care plan in the management of patients in clinical practice has been found to be conspicuously absent in most Kenyan Hospitals including Narok County Referral Hospital despite nurses exhibiting high commitment and due diligence in caring patients.

The purpose of the paper is to seek publication of the study results, conclusions and recommendations in the light of trying to shade more light on the barriers towards nursing process implementation in the said health facility and all other health facilities offering inpatient services in NCRH. This paper will focus on two objectives; nurses' and institutional barriers. Most researches that have been undertaken by different scholars concentrated majorly on factors affecting utilization of the nursing process in the clinical set-up. Very little research was undertaken regarding barriers towards nursing process implementation. This necessitated a study to find out the possible barriers hindering nurses from putting to action nursing process in care of patients in Narok County Referral Hospital.

**Specific objectives**

1. To determine the institution-related barriers to implementation of the nursing process in Narok County Referral Hospital.

2. To determine the nurse-related barriers to implementation of the nursing process among nurses working in Narok County Referral Hospital.

## LITERATURE REVIEW

Relevant literature on barriers to nursing process implementation was examined extensively in this chapter. The chapter also identified gaps in literature in terms of use of nursing care plan through blending of worldwide studies that have faced the same challenges and the situation in Kenya in order to try to look at the problem in different dimensions. Written materials on barriers to nursing process implementation towards care of patients were available and were reviewed extensively based on study objectives.

According to American Nurses Association (2009), as reported by Herdman and Kamitsiru (2015), NP use entails blending its two sides; the art and science and its application has been found practically to be effective in bringing global revolutions to patient care, outcome as well as nursing practice in general.

Nursing process practice is facing numerous challenges globally and even in Kenya, but despite the challenges, use of nursing care process has been found to be beneficial to patient care and nursing profession in states where its application has been done effectively. As reported by Habermann and Uys (2005), nursing process has been proven through research to be offering a framework that acts as a guideline to the nurses towards provision of care that is systematic and organized in clinical area.

### Nurse-related barriers

According to Ojo and Irinoye (2002), nursing process practice in Nigeria and Ghana is substandard as the identified barriers are negative attitudes of senior nurses and Matrons in Obafemi Awolowo University Teaching Hospitals. The senior nurses who are supposed to be role models to the junior ones have been found to be exhibiting negative perceptions of NP hence affecting quality service delivery towards the said process. Consequently, this has led to junior nurses following the footsteps and instructions of their seniors by not applying NP in patient management. According to Jooste *et al., (*2010) study on nursing care process application in Gynecology Wards in Namibia, some study subjects claimed having knowledge of nursing care and also highly doubted the effectiveness of the process. Negative beliefs towards nursing care plan use were also highly communicated and some participants expressed their views by saying that this process is merely record keeping.

According to Manal and Hala (2014), nurses' attitudes, working experience, resources, and administrative issues came out as hindrances utilization of nursing care plans in majority of health facilities. In addition, from the study findings, 68.2% of the respondents cited time constraint, difficulty with defining diagnosis and continuous evolution as being barriers to nursing process implementation. According to Ojo and Irinoye (2002), nurses in senior cadre and those holding diplomas and degrees were associated with application and use of care plans in

patient management compared to their counterparts who are in junior cadre or those with less experience.

Nurses make up a greater percentage of health staff and their effectiveness is directly proportional to the productivity of health care. The working unit may also impact on the nurse's performance depending on the patients' diagnosis, prognosis and willingness of the nurse to work in a particular unit (Edet *et al.,* 2009).

According to a study by Ojo and Irinoye (2002), Nurses working on medical units were thrice more susceptible to not using nursing care plans unlike those working in surgical units because of high patient volume and volatile nature of diagnosis. Garba *et al.,* (2011) also found out that putting to practice nursing care plan process varies from one ward to another and received varied responses regarding use of nursing care plan across wards like medical, surgical, obstetrics & gynecology, paediatrics and special other units.

As revealed by Bastable (2008) in his study, data collection, organization, and analysis regarding clinical nursing have been more often than not a problem with nurse practitioners and this impacts negatively on health service standards at the service delivery points.

According to Fissehe *et al.,* (2014), one major barrier towards practicing nursing care process in patient management is poor understanding of the process by nurses who are the direct implementers of the process. In his study, he found out that nurses' perceptions on nursing process stood out to be the major hindrance. The leading barrier which came out was lack of comprehension in carrying out the process. Alfaro-LeFevre (2010) and Akbari and Shamsi (2011) agree with Fissehe *et al.,* (2014), as they also found that in hospital setups, incompetence and inadequate knowledge stood out as hindrances to application of the said scientific process in patient management.

As revealed by Hagos *et al.,* (2014), Ethiopian nurses exhibited inadequate knowledge towards nursing process implementation and this was attributed to the majority of the key informants reporting lack of necessary knowledge regarding nursing process while some claimed that they were unable to manage patients using the nursing process because they hardly practice what they learnt in school. The same studies also revealed that knowledge was one of the prerequisites for nursing process application in practical setup. Abebe *et al.,* (2013) also concurs with Hagos *et al.,* (2011) and found out that nursing process was implemented mostly by nurses who had knowledge of the process as opposed to those who lacked similar knowledge.

**Organization/institution-related barriers**

According to Aseratie (2011), in a study carried out in Addis Ababa, on 202 nurses, organizational factors were identified to have been the greatest hindrance of nursing care process practice in management of patients. Lack of material resource was also reported by nurses as having highly affected their ability to apply the process since those staff placed in units with availability of all needed resources necessary equipment were far much better than those lacking such equipment.

In a study by Jooste *et al.,* (2010) and Edet *et al.,* (2009), nurses have cited excess workload and inadequate staffing as the leading and greatest hindrances to nursing process application and utilization and secondly, insufficient material resources while the least barriers nurses perceived

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include lack of sufficient knowledge and poor incentive. In addition, Akbari and Shamsi, (2009), are in agreement with the above study and reported that the most important management barriers that emerged from other previous studies were related to excessive number of patients which in turn created constraint in time required to apply nursing process in managing these patients.

Similar studies in Botswana as reported by Sabona *et al.,* (2005) also revealed that the leading barriers to nursing process implementation were inadequate staffing as the nurse-patient ratio was high and excess workload followed by inadequate resources while the least barriers nurses perceived were lack of sufficient knowledge and poor incentive. Resources inadequacy is equally agreed upon by Dominguez-Bellido *et al.,* (2012) and Garba *et al.,* (2011).

A study by Nabaale (2003), on nurses' perception on practice of nursing process in southern Ghana, revealed that under-motivation in form of promotions of nurse practitioners was a major barrier cited by the nurses in these health institutions since majority of them have stagnated in specific job groups for more than a decade hence affecting their morale in work place. Lack of incentives also was cited as a barrier though did not majorly affect performance compared to stagnation in career progression.

**Theoretical Framework**

Expectancy value theory alongside Orlando's nursing process theory guided this study. Originally this theory was created in order to explain and predict individual's attitudes towards objects and actions and it is used in different fields of study including health. This theory developed by Eccles et al., (1983); Eccles & Wigfield, (2002) explained behavioral reward as being driven by the likelihood of a certain action achieving a desired outcome i.e. expectations for success and task value are shaped by a combination of factors such as abilities to perform given tasks, previous experiences, goals, self-concepts, beliefs, expectations and environment.

The researcher was guided by this theory in looking into behavioral responses of nurses towards perceived barriers from them, the institution as well as patients on NP use in Narok County referral Hospital. Individual nurse perceptions pertaining use of nursing care plan was also predicted using this theory and determine whether the nurses' feelings on using nursing care plan is of any value addition towards their practice. This theory is applicable in this study because it tends to assist in understanding how nurses' knowledge, work experience and attitudes among other factors contribute to non-implementation of NP in patient management. According to Wayne (2014), practicability of NP through formulation of care plans aids nursing officers in achieving better patient outcomes by making nurses focus on ways of improving the patient's behaviour. Wayne also puts a lot of strength on alleviating the patient's discomfort first, since this has been seen to impact positively on outward behaviour of patients.  Another theory that have been adopted by this study is Orlando's nursing process theory and as explained by Parker & Smith (2010), Orlando's theory elaborates that effective interaction between nurses and patients based on the patient's needs leads to improved patient's behaviour and also emphasized on finding out first what the patients' needs are before attending to them, since nursing is not professional when one intervenes before scrutinizing the benefits of such interventions to the desired beneficiary i.e. patient.

According to Orlando, through implementation of nursing process, nurses can attend to patients from a nursing perspective and make them function as a separate entity and profession without necessarily relying on the orders from clinicians. Therefore, nurses are

required to ask patients what their needs are rather than attending them based on assumptions.

This study utilized Orlando's theory because it puts emphasis on unexpected problems arising from the patients and how nurses are required to deal with these problems as they manifest and as such, the job of the nurse is to know how to deal with those problems so that the patient can reclaim his or her well-being. Ida Jean Orlando developed her Deliberative Nursing Process that allows nurses to formulate an effective nursing care plan that can also be easily adapted when and if any complexity comes up with the patient. This theory goes further to stress the reciprocal relationship between patient and nurse as well as emphasize the critical importance of the patient's participation in the NP.

## 3.0 METHODS

### Study design, study population and sampling procedures

A descriptive cross-sectional study design was used to collect data in Narok County referral hospital which was purposively randomly selected. The study participants were 102 nurses working in the said health facility and that were sampled using proportionate formula and later convenience sampling method as well as having met the inclusion criteria of having worked in the said facility for more than two weeks and have given a consent to participate. The researcher preferred convenience sampling because nurses work in shifts and at no particular point in time were all of them available at work. Therefore, this method was easier to use to select the most readily available or accessible subjects in a study. A brief explanation of the study was given to the nurses who met the inclusion criteria and voluntary consent was sought from the respondents. Data was collected using a self-administered, pre-tested, semi-structured questionnaire. It was constructed based on the study objectives. The nurse managers and hospital administrator were interviewed in order to establish the support nurses receive from the institution that enabled them implement the nursing process. The research instruments were presented in English.

### Data collection and analysis

The research proposal was submitted to Kenya Methodist University ethical review Committee and NACOSTI for clearance and approval following KeMU library antiplagiarism check. Anonymity was maintained by asking the respondents to avoid providing their identification details like names in the questionnaires. Informed voluntary consent was sought from the study participants who then received comprehensive explanation on the study objectives as well as purpose. They were also assured of their rights and freedom to withdraw from the study at any time if they did not wish to continue. Permission to carry out research was sought from Narok County director for health, County director for education, County commissioner, Medical Superintendent and hospital matron. Confidentiality of data obtained was maintained and research assistants took a confidentiality pledge prior to data collection process. The respondents were asked to write to the researcher through the email provided if they would wish to get the

final report. They were equipped with information on where to obtain the study findings and that the study results may be published in peer reviewed journals.

Questionnaires were self-administered and after filling, they were scrutinized for completeness and in preparation for data analysis they were arranged in order and coded for easier processing and analysis. Data was then entered into a computer database and SPSS version 24 was applied in analyzing the data while inferential statistics were used in establishing the relationship between categorical variables. All statistical tests of significance

were at 95% Confidence level, which is widely acknowledged as conventional (Polit & Beck, 2012). Serialization of all questionnaires was done then data analysis was done using descriptive statistics such as measures of central tendencies and percentages. The analyzed data was presented using graphs, bar charts and frequency tables while qualitative data was analyzed thematically and presented in narrative form.

## 4.0 RESULTS

### 4.1The respondents' demographics

Table 1 shows summarized characteristics of the study participants. The female participants were the majority (70.6%) and males (29.4%). Most participants were between 31 – 40 years (47.1%) then 21 – 30 years (28.4%) and age 51-60 years were the least at 7.8%.

**Table 1**
*Respondents' Distribution By Gender And Age*

|  | Frequency (N) | Percentage (%) |
|---|---|---|
| **Gender** | | |
| Male | 30 | 29.4 |
| Female | 72 | 70.6 |
| **Total** | **102** | **100%** |
| Age in years | | |
| 21-30 | 29 | 28.4 |
| 31-40 | 48 | 47.1 |
| 41-50 | 17 | 16.7 |
| 51-60 | 8 | 7.8 |
| **Total** | **102** | **100%** |

In Table 2, the different levels of education of nurses working in Narok County Referral Hospital are shown. Majority (71.6%) of nurses indicated that they are diploma holders followed by Bachelor's degree (19.6%) then certificate holders (7.8%) and others (1%) who had higher diploma. There was a fair distribution in terms of the working experience with nurses having worked for 16 years and above taking the lead with (33.3%) followed by those who have worked between 6 – 10 years (31.4%).

**Table 2:***Respondents' Working Experience And Education Level*

|  | Frequency (N) | Percentage (%) |
|---|---|---|
| **Education Level** |  |  |
| **Certificate** | 8 | 7.8 |
| **Diploma** | 73 | 71.6 |
| **BScN** | 20 | 19.6 |
| **Masters** | 0 | 0 |
| **Others** | 1 | 1 |
| **Total** | **102** | **100** |
| **Working experience** |  |  |
| **<5 years** | 17 | 16.7 |
| **6-10** | 32 | 31.4 |
| **11-15** | 19 | 18.6 |
| **>16** | 34 | 33.3 |
| **Total** | **102** | **100** |

Figure1 shows the units of work/ wards of deployment of nurses in Narok County referral hospital. Medical wards had highest number of nurses as Obstetric and Gynaecological ward recorded the least number of nurses. This is attributed to preference of medical conditions in the region compared to illnesses related to reproductive health of the population.  The male and female medical had 18 (17.7%) each, Male surgical had15 (14.7%), female surgical had 16 (15.7%), and those working in Paediatric ward were 14 (13.7%). Obstetrics and Gynaecology ward had8 (7.8%) while Maternity had 13 (12.7%).
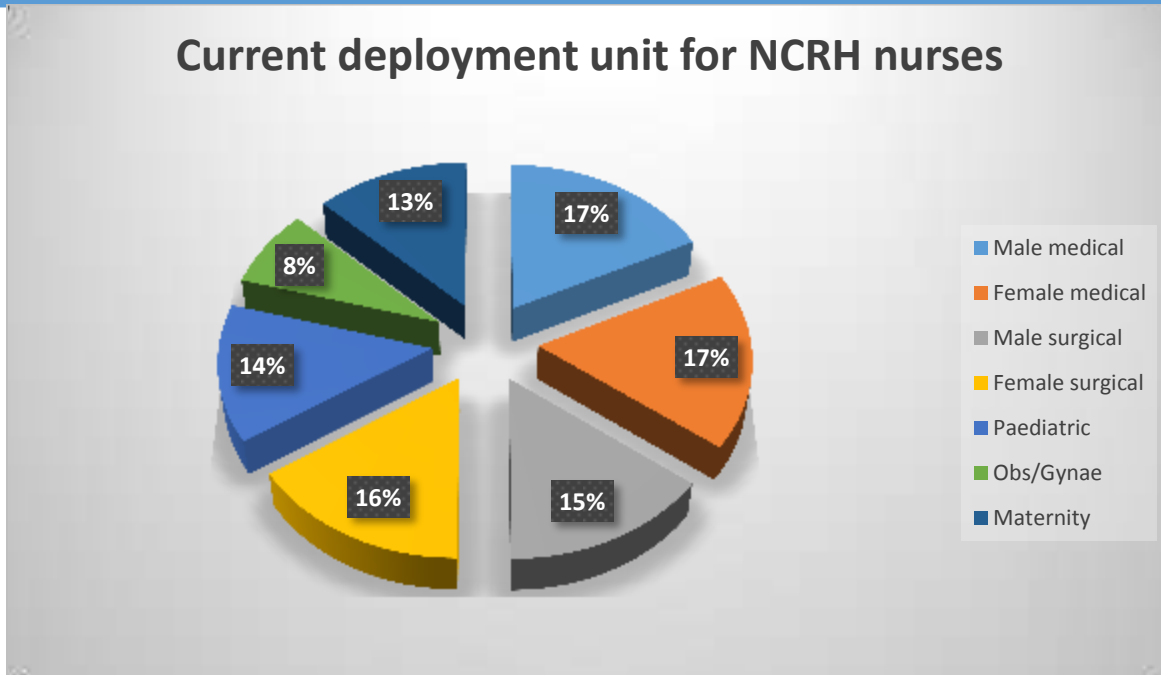
**Figure 1: Units of deployment for nurses in Narok County referral hospital**

## 4.2 Nurses' Knowledge of the NP

In assessment of the nurses' knowledge, Slightly more than half 52% (n=53) of the nurses rated themselves as being good in terms of understanding of the nursing process, Those who rated themselves as being average accounted for 19.6% (n=20), another 20% (n=20) also rated themselves as being very good, poor rating received 6% (n=6) while those who perceived themselves as having very poor understanding of the nursing process amounted to 3% (n=3) and the figure below illustrates these results.
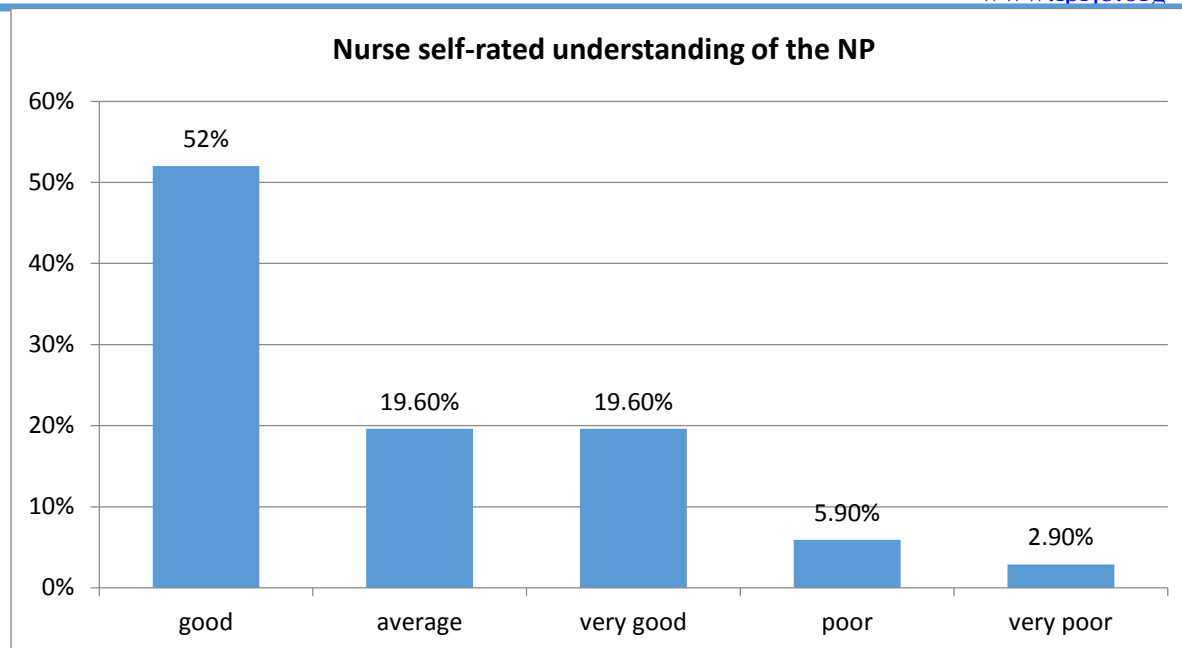
**Figure 2: Nurse self-rated understanding of Nursing Process**

## 4.3 Training on Nursing Process

Majority, (92.2%) of the nurses have been trained on the nursing process. Of those, 95.1% were trained in college while those trained in seminars were (4.9%). On whether the acquired NP knowledge was sufficient to allow nurses practice the same, majority (76.5%) reported that the acquired knowledge was not sufficient enough to competently allow for development and use of NP while the remaining (23.5%) reported that the knowledge acquired was sufficient to allow them to competently apply the scientific process in patient care as illustrated in table 3.

Table 3: Nurses' Training On NP

|  | Frequency (N) | Percentage (%) |
|---|---|---|
| Received Training On Nursing Process |  |  |
| **Yes** | **94** | **92.2** |
| **No** | **8** | **7.8** |
| Total | 102 | 100 |
| Where did you train on nursing process |  |  |
| **College** | **89** | **95.1** |
| **Seminars** | **5** | **4.9** |
| Total | 94 | 100 |
| Sufficiency of acquired knowledge towards practice |  |  |
| **Yes** | **24** | **23.5** |
| **No** | **78** | **76.5** |
| Total | 102 | 100 |

## 4.4 Nursing process implementation

Table 4 shows that out of 6.9% (N=7 ) nurses who reported to have actively practiced NP, only 1% (N=1) was able to list correctly all the NP steps meaning that the gap is extremely huge in terms of knowledge as well as practice. The reasons given by nurses for not developing and implementing nursing process in patient management received varied responses with high patient volume/workload taking the highest percentage at 57.9% followed at a distance by staff shortage at 25.3%, insufficient knowledge 8.4%, lack of motivation 3.1% while 5.3% gave no reason.

**Table 4:***NP Implementation Among Nurses In NCRH*

|  | Frequency (N) | Percent (%) |
|---|---|---|
| **Prepared NCP For Patients** | | |
| Yes | 7 | 6.9 |
| No | 95 | 93.1 |
| **Total** | **102** | **100%** |
| **NP steps used in preparation of the NCP** | | |
| Correctly outlined all the NP steps | 1 | 14.3 |
| Incorrectly outlined all the NP steps | 6 | 85.7 |
| **Total** | **7** | **100%** |
| **Reasons for non-implementation of NP in patient care** | | |
| High workload/ High patient volume | **55** | 57.9 |
| Staff shortage | 24 | 25.3 |
| Insufficient knowledge | 8 | 8.4 |
| Lack of motivation from administration | 3 | 3.1 |
| No reason | 5 | 5.3 |
| **Total** | **95** | **100%** |

## 4.5 Institution barriers

### 4.5.1 Workload distribution

Regarding nurse-patient ratio in various in-patient departments in NCRH, male medical ward reported the highest mean ratio of 32.0 (range 18 to 45) meaning the number of patients in this ward is high at a given point in time compared to the number of nurses working in this unit. In female medical ward, the mean ratio was also high at 33.0 (range 17 to 48) depicting high patient volume in relation to nurses working in this unit. The lowest ratio was reported in Obs/Gynae ward (mean 17.0 and range 10-24) and this is as a result of lower number of patients admitted in this particular unit at a specific time or day. Generally, this means that some wards have fewer patients compared to others and also, this may mean that nurses' distribution per department is not revised according to workload. The widest variability of nurse to patient ratio was recorded in Maternity unit with a mean ratio of 23.0 and a range of 6 to 40. This range depicted the different nurse to patient ratios in the postnatal, antenatal and labor wards all of which are under maternity department. Conclusively, this would mean that nurses are distributed by the hospital management based on the prevailing workload conditions in each ward and that this distribution need revision from time to time so as to avoid overworking nurses in particular departments. The varied range of number of patients per ward may mean that nurses gave out the numbers based

on the workload at a particular point in time as well as based on disease outbreaks which tend to bring up the numbers of patients admitted in a particular time. Table 4.5 illustrates the above information.

**Table 5: Nurse To Patient Ratio In Inpatient Units In Narok County Referral Hospital**

|  | Minimum Ratio | Maximum Ratio | Mean Ratio |
|---|---|---|---|
| **Ward** |  |  |  |
| Paediatric | 1:15 | 1:38 | 27.0 |
| Male medical | 1:18 | 1:45 | 32.0 |
| Male surgical | 1:10 | 1:30 | 20.0 |
| Female medical | 1:17 | 1:48 | 33.0 |
| Female surgical | 1:12 | 1:33 | 23.0 |
| Obs/Gynae | 1:10 | 1:24 | 17.0 |
| Maternity | 1:6 | 1:40 | 23.0 |

### 3.6 Institutional Support

Table 6 illustrates the support given by hospital administration towards NP use in patient management. Majority (90.2%) of the respondents said there is no recognition of NP by hospital leadership as a tool for delivery of quality nursing care and the same number (90.2%) also said that no support was given by the hospital leadership towards NP implementation. Majority (92.2%) stated that no monitoring of NP implementation is done by the hospital administration and 100 (98%) said that there is no recognition of staff that apply NP in patient management. All respondents 102 (100%) said that no incentive is given by the hospital administration, 90 (88.2%) said that NP implementation is not part of their annual performance appraisal objectives and majority (83%) of them said that the hospital management provided them with the necessary NP equipment.

### *Table 6:* **Support By Institution/Hospital**

|  | Frequency (n) | Percent (%) |
|---|---|---|
| Recognition of NP as a quality nursing care delivery framework |  |  |
| Yes | 10 | 9.8 |
| No | 92 | 90.2 |
| Total | 102 | 100 |
| NP implementation |  |  |
| Yes | 10 | 9.8 |
| No | 92 | 90.2 |
| Total | 102 | 100 |
| Monitoring of NP implementation |  |  |
| Yes | 8 | 7.8 |
| No | 94 | 92.2 |
| Total | 102 | 100 |
| NP use being among performance appraisal objectives |  |  |
| Yes | 12 | 11.8 |
| No | 90 | 88.2 |
| Total | 102 | 100 |
| Supply of relevant tools for use by staff in implementation of the NP |  |  |
| Yes | 85 | 83 |
| No | 17 | 17 |
| Total | 102 | 100 |

### 3.7 Relationship between nurses' demographics and nursing process implementation

Chi-square test was utilized to assess the relationship between implementation of nursing process and demographic characteristics of the respondents which include age, academic qualification, working experience and unit. The test showed that there was a close relationship between respondents' age and implementation of the NP (p =0.001). This means that nurses who are younger and aged between 21-30 years utilized the process in managing patients unlike their counterparts since they had higher chances of practicing the process (62%) unlike older ones (31-40) 25%, (41-50) 23.5% and (51-60 years) 12.5%.

There was also a close association between nurses' working experience and implementation of NP (p = 0.015) because the study revealed that recently qualified nurses with experience <5 years and those 6<years<10 had high probability of implementing the NP at 64.7% and 43.8% respectively in relation to 11-15 years (26.3%) and 16 years and above (29.4%). The other covariates on academic qualification (p=0.626) and working unit (p=0.725) showed that they do not influence nursing process and all the above is illustrated in table 7.

*Table 7:*Nurse Demographics And NP Implementation

| Variable | Implemented NP (n=40) Number (%) | Didn't implement NP (n=62) Number (%) | Statistical test |
|---|---|---|---|
| *Age versus implementation of nursing process* | | | |
| *21-30* | *18 (62%)* | *11 (38%)* | |
| *31-40* | *12 (25%)* | *36 (75%)* | $\chi^2 = 2.72, df = 3, P = 0.001$ |
| *41-50* | *4 (23.5%)* | *13 (76.5)* | |
| *51-60* | *1 (12.5)* | *7 (87.5%)* | |
| *Academic qualification versus implementation of nursing process* | | | |
| *Certificate* | *1(2.5%)* | *7(11.3%)* | |
| *Diploma* | *35(87.5%)* | *38(61.3%)* | $\chi^2 = 15.515, df = 3, P = 0.626$ |
| *BScN* | *4(10%)* | *16(25.8%)* | |
| *Masters* | *0(0%)* | *0(0%)* | |
| *Others* | *0(0%)* | *1(1.6%)* | |
| *Working experience versus implementation of nursing process* | | | |
| *<5 years* | *11(27.5%)* | *6(9.7%)* | |
| *6-10 years* | *14(35%)* | *18(29%)* | $\chi^2 = 33.308, df = 3, P = 0.015$ |
| *11-15 years* | *5(12.5%)* | *14(22.6%)* | |
| *>16 years* | *10(25%)* | *24(38.7%)* | |
| *Working unit/ward versus implementation of nursing process* | | | |
| *Paediatric* | *5(12.5%)* | *9(14.5%)* | |
| *Male/ Female Medical* | *13(32.5%)* | *22(35.5%)* | $\chi^2 = 19.502, df = 4, P = 0.725$ |
| *Male/ Female surgical* | *11(27.5%)* | *21(33.9%)* | |
| *Obs/ Gynae* | *4(10%)* | *4(6.5%)* | |
| *Maternity* | *7(17.5%)* | *6(9.7%)* | |

### 3.8 Association between training and nursing process implementation

Table 8 shows that there was no relationship between the training nurses have ever received (p=0.158), the self-rated understanding of the nursing process (p=0.548) with the implementation of nursing process. On the other hand, the sufficiency of acquired knowledge through training (p=0.001) turned out to have a statistically significant relationship with NP implementation as 34

(90%) of the respondents agreed to be sufficient in terms of knowledge acquired during training and at the same time implemented it.

**Table 8:** *Association Between Training And NP Implementation*

| Variable | Implemented NP (N=40) Number (%) | Didn't Implement NP(N=62) Number (%) | Statistical Test |
|---|---|---|---|
| **Ever been trained on NP** | | | |
| Yes | 37(92.5%) | 57(91.9%) | $\chi^2 = 1.994, \mathrm{df} = 1, \mathrm{P} = 0.158$ |
| No | 3(7.5%) | 5(8.1%) | |
| **Self-rated understanding of NP** | | | |
| Very good | 9(22.5%) | 11(17.7%) | $\chi^2 = 13.09, \mathrm{df} = 4, \mathrm{P} = 0.548$ |
| Good | 25(62.5%) | 28(45.2%) | |
| Average | 4(10%) | 15(24.2%) | |
| Poor | 1(2.5%) | 5(8.1%) | |
| Very Poor | 1(2.5%) | 3(4.8%) | |
| **Sufficiency of acquired knowledge** | | | |
| Yes | 36(90%) | 30(48.4%) | $\chi^2 = 18.436, \mathrm{df} = 1, \mathrm{P} = 0.001$ |
| No | 4(10%) | 32(51.6%) | |

### 3.9 Association between institutional factors and nursing process implementation

Table 9 depicts that majority of the institutional factors; nursing process recognition (p=0.085), hospital administration support (p=0.123), appraisal (p=0.056) and monitoring (p=0.034) had no significant relationship with NP implementation. The only institution-related factor that came out to be of statistical significance with NP implementation was the supply of necessary tools (p = 0.001) as those nurses who indicated that they were supplied with necessary materials such as nursing care plans and pens, majority (70%) were able to put to use NP.

Despite majority (80%) of the respondents recognizing NP as a tool for quality nursing care delivery by hospital administration, only 14.5% implemented it (p=0.085). Regarding whether hospital administration supports NP implementation, only 11.3% implemented it out of the 75% who agreed to have received support from the institution (p=0.123). On monitoring of NP implementation by hospital administration, 70% of the respondents agreed that indeed the hospital administration closely monitors them on the use of the said process but out of this, only 11.3% were found to manage patients using NP (p=0.034). The respondents who said that NP implementation was among performance appraisal (annual) objectives were 50% but only 17.7% implemented NP in patient management (p=0.056).

**Table 9:** *Association Between Institutional Factors And Implementation Of Nursing Process*

| Variable | Implemented NP (N=40) Number (%) | Didn't Implement NP(N=62) Number (%) | Statistical Test |
|---|---|---|---|
| **Recognition of NP as a tool for quality nursing care delivery by hospital administration** | | | |
| Yes | 32(80%) | 9(14.5%) | $\chi^2 = 3.372, \mathrm{df} = 1, \mathrm{P} = 0.085$ |
| No | 8(20%) | 53(85.5%) | |
| **Hospital administration supports NP implementation** | | | |
| Yes | 30(75%) | 7(11.3%) | $\chi^2 = 12.692, \mathrm{df} = 1, \mathrm{P} = 0.123$ |
| No | 10(25%) | 55(88.7%) | |
| **Monitoring of NP implementation by hospital administration** | | | |
| Yes | 28(70%) | 7(11.3%) | $\chi^2 = 7.182, \mathrm{df} = 1, \mathrm{P} = 0.034$ |
| No | 12(30%) | 55(88.7%) | |
| **NP implementation being among performance appraisal (annual) objectives** | | | |
| Yes | 20(50%) | 11(17.7%) | $\chi^2 = 11.959, \mathrm{df} = 1, \mathrm{P} = 0.056$ |
| No | 20(50%) | 51(82.3%) | |
| **Institution supplies relevant tools for use by staff in implementation of the NP** | | | |
| Yes | 28(70%) | 57(91.9%) | $\chi^2 = 36.125, \mathrm{df} = 1, \mathrm{P} = 0.001$ |
| No | 12(30%) | 5(8.1%) | |

### 3.11 Key informant interview

The key informant interview consisted of 5 questions. The nursing officer in charge of the facility and hospital administrator were interviewed in order to establish the support nurses receive from the institution regarding enhancement of NP implementation. The first question was on whether there is practice of nursing care plan in patient management by nurses in the health facility. The response was that nurses do not practice the process despite its scientific rationale because the acute shortage of personnel and high patient volume leads to burnout for nurses hence making it impossible to carry out all nursing activities including formulation of nursing care plan for each individual patient. The interviewee also raised a concern that understaffing has been and is still an issue in the health sector particularly in NCRH but it is beyond the hospital leadership. When it comes to staffing function of management, it is done by higher authority leaving the health facility with fewer staff than expected or as recommended by WHO regarding nurse-patient ratio. She also added that this stands out to be the major reason why nurses are unable to manage patients using nursing care plan. When the nurse manager was asked about the number of nurses that have been trained on NP, she said that she could not give the exact number of nurses trained on NP but was certain that almost every nurse in the facility received training on NP in the various colleges they attended as the NP is included in the nursing curriculum. Lastly, the nurse manager and hospital administrator revealed that no audit or evaluation is done to ascertain the nursing care plan use in patient management hence making it hard for monitoring and evaluation of the importance of the said scientific process in service delivery particularly in nursing care.

## 3.12 Discussion

The research findings revealed a close relationship between respondents' age and working experience with implementation of the NP. Nurses who are younger and aged between 21-30 years utilized the process in managing patients unlike their older counterparts. In addition, those nurses with experience <5 years and those between 6-10 years had high probability of implementing the process compared to 11 and above years. These findings could be attributed to positive shift of attitude towards nursing process by the young and newly employed nurses, the current mode of nursing upgrading system which is enhancing upward mobility of nursing education and more so the push for patient centered care in our current society. Manal & Hala, (2014) are in total agreement with the above results as they also found out that demographic characteristics of nurses; working duration as well as age significantly impact nursing care application in provision of nursing services to patients.

Although level of education impacts directly to the nurses' knowledge of the NP and how they implement it as revealed by Manal & Hala, (2014), the results of this study however indicate that academic qualification had no any statistical relationship with use of care plan in patient management. As was observed, bachelor's degree nurses however had high likelihood of implementing the process unlike certificate and diploma holders and in my own view, these findings could be as a result of lack of emphasis of NP training curriculum, lack of enabling or facilitating factors in the institution like facilitative supervision by managers, lack of enough resources, poor staffing levels and lack of guided practice.

The training received by the respondents and NP implementation had no significant relationship according to the findings of this study, as majority of nurses who acknowledged having received training on nursing process did not practice the same in the clinical areas. On the other hand, some of those nurses who said they did not receive any training on the nursing process actually implemented it in service delivery while those who said that they ever received training, agreed that the acquired training was sufficient enough to enable them apply nursing care plan towards service delivery and patient management. However, among those nurses that used NP through developing care plans (39.2%), only 2 of them were able to outline correctly the order of steps of the NP that they used in formulation of patient nursing care plan. This shows that majority (92.2%) of those nursing staff who received training were unlikely to practice NP and this can be due to lack of know-how on NP, increased workload, lack of updates on nursing process, inconsistence in facilitative supervision, negative attitude towards NP as well as low motivation of nursing staff and these findings marry with the findings of Delgado & Mendes, (2009) as they also found out that there is a mismatch of what is learnt from practice. Conclusively, what is learnt in class is not always obviously practiced.

Regarding self-rating of knowledge of the nursing process, most (52%) participants rated themselves as having good understanding while very good and average rating received (20%) and (19%) respectively. However, the findings of this study reveal that nursing process implementation does not have any relationship of statistical significance with the nurses' knowledge. This statistical insignificance of the findings could be as a result of negative perceptions, inconsistency in NP practice, inadequate staffing, missing supportive supervision and inadequate resources geared towards use of NP. This finding differ with several other studies

for instance, Florence and Adenike, (2013) who found out that the more knowledgeable nurses are, the higher the likelihood of using nursing process in patient management. Another study by Reppetto and Souza, (2005) in Brazil revealed that inadequate knowledge is among the several hindrances to efficient use of NP. Also having divergent views with this study is Hagos, et al., (2014) research conducted in Ethiopia which revealed out about knowledge deficit being amongst the leading hindrance for utilization of nursing care plan in service delivery by nurses. Similarly Zewdu and Abera, (2015) in their study observed that those nursing staff with sufficient education had 8.78 times probability index of using nursing care plan in managing patients compared to their counterparts who lacked knowledge of nursing process.

Nurses' workload is amongst major barriers which came out in this study and the results obtained showed that nurse to patient ratio was very high in all the units/wards and this could be a major hindrance for non-utilization of NP in care delivery to patients. The highest nurse: patient ratios reported by nurses in the respective wards are as follows; Paediatric 1:38, Male Medical 1:45, Female Medical 1:48, Male Surgical 1:30, Female Surgical 1:33, Maternity 1:40 and Obs/Gynae 1:24. A study by Lukes, (2010) revealed similar results to those of this study that nursing process is easily applicable by nurses to manage individual patients with special medical conditions as opposed to an individual nurse taking care of many patients. This is also in agreement with Clarke and Aiken, (2003) research which revealed that specific barriers like high patient volume and lack of time reduced the efficiency of nursing staff in daily use of the scientific process in delivery of individualized patient services and care.

The study findings clearly revealed a relationship of statistical significance on provision of necessary tools for NP application with the actual implementation of the said process. This agrees with the findings of Abebe *et al.,* (2014) in Northern Ethiopia which showed that nurses who reported having enough supply of materials required for daily operation in the ward had a higher probability of using nursing care plan in patient management than those who reported lacking some equipment for patient care.

The study findings revealed that 50.9% of respondents were in agreement with a statement on whether they liked NP followed closely by (31.4%) of respondents who on the contrary said they disliked the nursing process concept. Most respondents (64.7%) did not agree with the concept of NP being an easy way of identification of patients' priority and similarly (58.8%) disagreed about the nursing care plan enhancing nurses ability towards provision of individualized quality care which is patient oriented. Varied responses were given by the respondents pertaining if NP can be applied for all patients as most of them (68.6%) disagreed and 98% had a strong feeling that NP can be a cumbersome process in managing patients. Most nurses (51.9%) were also seen to disagree with a statement on whether the nursing process can increase patient satisfaction towards nursing care and on evaluating whether NP should be used in any setting, (62.7%) disagreed and on the other hand (27.5%) agreed and similarly, majority of the respondents (79.4%) strongly disagreed about NP not being applicable in practice. It was also observed that most nurses were in agreement with statements regarding NP being a waste of time as well the process only being record keeping. The responses given towards a statement on whether NP is a burden to nurses, a significantly high number of the respondents (76.4%) strongly agreed and on the final item on whether the NP should only be used by BScN and those nurses with higher

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qualification, almost half (49%) strongly agreed. According to Bowman et al., (1983) study in Australia, use of NP in patient management underwent negative perceptions and similarly, another study by Shabel, (2009) expounded on the issue of attitude that there was a 20% variation towards using NP in patient management. Also in perfect agreement is a study by O'Connell, (1998) which revealed that negative perceptions regarding use of NP were shown by some of the nursing staff and as such this is contrasting with nursing practice. Based on key informant interview, it was evident that not much support was given by the hospital administration to the nurses who are the direct implementers of the Nursing process. The administration pointed out that the much support needed by nurses towards practice on NP is beyond their reach and that the County Government plays a major role particularly when it comes to staffing which is a major obstacle to the health facility. Nurses' shortage has been and is still a barrier to quality service delivery in health care as a whole and in NCRH in particular.

## 5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### Summary

The study investigated barriers to implementation of nursing process among nurses working in Narok County Referral Hospital. It intended to generate more information on the possible barriers to use of the said process in the selected health facility since there existed a huge gap in terms of practice of NP in patient management. The study sought to examine institution and nurse-related barriers in respect to implementation of NP. The study established that some of the barriers related to nurses themselves were; level of education, working experience, negative perceptions and workload while institution barriers that came out were; understaffing, lack of necessary support and supervision and finally lack of motivation and recognition of staff for application of NP. The study also established that nurses had negative attitude towards nursing process as a whole despite the many challenges that impede their utilization of the said scientific process.

### Conclusions

Regarding these findings, the study therefore concludes that, institution and nurses are a potential barrier to implementation of the NP as each of them was found to impact it negatively.

### Recommendations

Based on the study findings, the study hereby recommends that Nurses who qualified prior to integration of NP in nursing training curriculum to be targeted with interventions aimed at improving nursing process implementation at clinical areas and also because of the moderate level of implementation of NP in recent qualified nurses. The study also recommends that the group be included in the interventions targeting nurses in older age group. Increased coverage of NP training among practicing nurses of all cadres by offering opportunities of knowledge enhancement through mentorship programs, Continuous Professional Developments/Medical Education and trainings while on work place (On Job Training) is also key in enhancing quality patient care through management by use of NP which is a scientifically-proven way of caring for patients individually based on their unique needs. Institutions should also put measures in place towards continuous provision of human personnel as well as material resource that are key in NP

implementation and The Ministry of Health, Kenya, Department of Nursing to continue with the nursing process mainstreaming program as an intervention to scale up its implementation in clinical setting. Need for further researches especially regarding importance of nursing process in patient management is necessary in order to look into issues affecting NP implementation in geographically diverse areas in Kenya and in higher level and lower level health facilities

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