Assessing Barriers To Implementation Of Nursing Process Among Nurses Working At A Tertiary Hospital In Kenya

Article · February 2018

CITATIONS
12

READS
3,289

5 authors, including:

Dennis N Mbithi
Kenyatta University
2 PUBLICATIONS **12** CITATIONS
SEE PROFILE

Paul Wambugu
Kenyatta University
4 PUBLICATIONS **12** CITATIONS
SEE PROFILE

Simon Githui
University of Eastern Africa, Baraton
3 PUBLICATIONS **13** CITATIONS
SEE PROFILE

Assessing Barriers To Implementation Of Nursing Process Among Nurses Working At A Tertiary Hospital In Kenya

Dennis N. Mbithi
Nursing Services, Kenyatta University, P.O.Box 43844-00100, Nairobi

Omuga Blasio
University of Nairobi, College of Health Sciences, School of Nursing Sciences, P.O. Box 19676-00202 Nairobi, Kenya

Ayieko Antony
University of Nairobi, College of Health Sciences, School of Nursing Sciences, P.O. Box 19676-00202 Nairobi, Kenya

Simon N. Githui
School of Nursing, University of Eastern African, Baraton, P.O.Box 2500-30100, Eldoret

Paul Wambugu
School of Nursing, Kenyatta University, P.O.Box 43844-00100, Nairobi

Researchjournali.com
Exclusive Journal publishing house

ABSTRACT

Background: Nursing process (NP) is a global concept, which forms the foundation of nursing as a profession, it is a scientific method for delivering holistic and quality nursing care and its effective implementation is critical for improved quality of nursing care. However, its implementation in most hospitals especially in low and middle-income countries reportedly remains a challenge despite efforts being made. **Objective:** To assess barriers to implementation of nursing process among nurses. **Methods:** A descriptive cross-sectional study was carried out where 134 nurses were recruited in the study. Data was collected through self-administered questionnaires. **Results:** One-third (33.1%) of nurses reported that they were actively implementing the nursing process but only 8.2 %(n=11) nurses correctly listed all the steps of the nursing process. Nursing process implementation was significantly associated with nurse's demographics (age $p < 0.001$, experience $p = 0.001$), training ($p = 0.013$), institutional factors ($p = 0.048$). Social ($p > 0.05$) and cultural ($p = 0.993$) factors were not significantly associated with nursing process implementation. **Conclusion**: The Nursing Process implementation among nurses is significantly influenced by their demographic characteristics which include age and experience, training on nursing process and institutional factor like availability of relevant resources for NP implementation.

Key words: Nursing Process, Barriers, Machakos Level 5 Hospital

1. INTRODUCTION

Nursing process (NP) is a global concept, which forms the foundation of nursing as a profession. It is a widely accepted scientific method to guide procedures and quality nursing care (Pokorski, *et al.*, 2009). It identifies, prevent and treat actual or potential health problems and promote wellness of clients (Carlson, 2010).Implementation nursing process in clinical settings facilitates high quality nursing care, improves client health outcomes and promotes nursing as a professional scientific discipline (Hagos et al., 2014) .According to Manal and Hala, (2014), barriers to nursing process implementation in most of the health care institutions can be related to nurse's perception, experience, work, resources, and others related to administration of the health care institutions. From a study by Potter and Perry, (2007) lack of adequate time, poor nurse patient ratio, high patient turn over and lack of equipment and supplies are highlighted as key hindrances to implementation of the nursing process at clinical setting. Akbari and Shamsi, (2011) also cited inadequate knowledge and incompetence as barriers to nursing process implementation in clinical setting. Despite nurse knowledge on nursing process, its use in most hospitals globally and regionally is lagging behind despite all the effort of nursing professionals to implement it (Momoh & Chukwu, 2010). In Kenya establishing nursing process within clinical settings faces the same challenges resulting to low quality of health care service (Department of Nursing, 2009). These challenges have been attributed to negative attitudes, incompetence and lack of resources

(Mahmoud and Bayoumy, 2014). Demographic characteristics of nurses like age, work experience and level of education has shown to have a significant impact on nursing process implementation, nurse educational status has a direct statistical significance relationship with the knowledge of nurses on nursing process (Manal & Hala, 2014).According to Queiroz *et al.*, (2012), lack of awareness of nursing process steps, lack of training of the nurses concerned, and lack of time to perform nursing process serves as key barriers in its implementation at clinical set up.

2. METHODS

A descriptive cross-sectional study design was used to carry out the study at Machakos Level 5 Hospital in Machakos County, Kenya. The study participants were nurses working in medical units, surgical unit, maternity unit, theatre, Psychiatry unit Accident and Emergency departments. Simple random sampling was used to get a sample size of 134 nurses. Practising nurses who consented were included in the study, student nurses and non-consenting nurses were excluded. Semi structured questionnaire was administered to the nurses to gather information on barriers affecting nursing process implementation. Key informant interview was conducted on the nurse managers to determine institutional support to the nurses implementing nursing process. Study instruments were pretested in medical ward. Audio tapes were transcribed. Analysis of data was done using Statistical Package for Scientific Solutions (SPSS) version 20.0. Results were expressed in frequencies and presented in tables, graphs and charts. Inferential statistics, such as test of significance and coefficient correlations was used to compare variables. Level of significance was set at a p value of less than or equal to 0.05.

The study received ethical approval from Kenyatta National Hospital/University of Nairobi (KNH/UON), Ethics and Research Committee. Permission to conduct the study was granted by Machakos County administration and written informed consent was sought from all study participants before participation.

3. RESULTS

3. 1 DESCRIPTIVE ANALYSIS

The characteristics of the nurses participating in the study are summarized in Table 1. The mean age of the participants was 34.3 years. Most participants 50% (n=67) were aged between 21 and 30 years of age. Females accounted for 66.4% (n=89) of the nurses participating giving a male to female ratio of 1: 2.

Table 1: Distribution of respondents by Gender, Age and Marital Status

	Frequency (n)	Percent (%)
Gender		
Male	45	33.6
Female	89	66.4
Total	134	100
Age		

21-30	67	50.0
31-40	29	21.6
41-50	25	18.7
51-60	13	9.7
Total	134	100
Marital status		
Single	56	41.8
Married	74	55.2
Widowed	4	3
Total	134	100

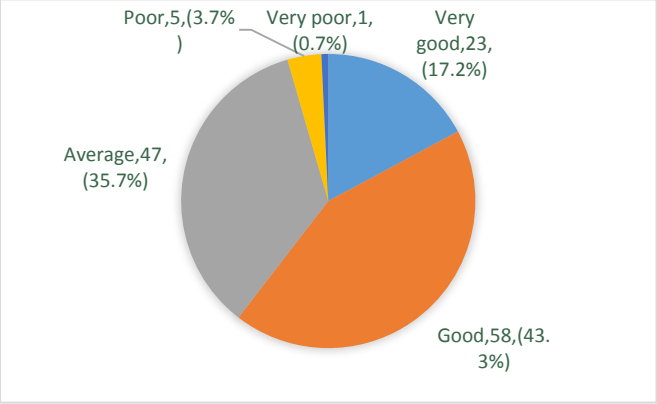
Table 2 shows that 57.5% (n=77) of the nurses in Machakos L5 Hospital were diploma holders, and 30.6% (n=41) nurses had undergraduate training in nursing (BScN). Approximately 10% of nurses had certificate training and 2 (1.5%) had post graduate qualifications.

Table 2: Academic qualification and experience of nurses

	Frequency (n)	Percent (%)
Academic qualification		
Certificate	14	10.4
Diploma	77	57.5
BScN	41	30.6
MScN	2	1.5
Total	134	100
Experience		
Below 5	49	36.6
5-10	31	23.1
11-15	17	12.7
16-20	12	9
21-25	11	8.2
26-30	11	8.2
Above 30	3	2.2
Total	134	100

Nearly half nurses 43.3% (n=58) rated their understanding of nursing process as being good, 35% (n=47) rated average, 17.2% (n=23) rated very good, 3.7 %(n= 5) rated poor while 0.7 %(n=1) rated very poor as shown in figure 1.

Figure 1: Nurse self-rated understanding of Nursing Process



Of the nurses participating in the interview, a total of 109 (81.3%) reported that they had ever had any training on the nursing process (Table 3). Most of the nurses who had been trained, 61.2 % (n=82), reported receiving training on nursing process in college Twenty-one (15.57%) nurses were trained during seminars and 20 (14.9%) during Ministry of Health organized training. The nurses who reported that training enables them to competently practice nursing process were 77 (70.6%) compared to 32 (29.4%) who reported that training did not enable them to competently practice nursing process.

Table 3: Nursing process training among nurses in Machakos Level 5 Hospital

	Frequency (n)	Percent (%)
Ever trained on nursing process		
Yes	109	81.3
No	25	18.7
Total	134	100
Where trained on Nursing process		
College	82	61.2
Seminar	21	15.7
On job training	11	8.2
MOH NP training	20	14.9
Total	134	100
Training enables nurse to competently practice Nursing Process		
Yes	77	70.6
No	32	29.4
Total	109	100

The implementation of nursing process was assessed by asking for evidence of preparation and implementation of nursing care plans for patients in the one week period prior to the interview. As shown in Table 4, 44 (33.1%) of nurses reported that they were actively practicing the nursing process. Of these nurses reporting that they practiced the nursing process, 11 (8.2%) of could list all the steps of the nursing process.

Table 4: implementation of nursing process among nurses in Machakos Level 5 Hospital

	Frequency (n)	Percent (%)
Developed a nursing care plan in the last one week		
Yes	44	33.1
No	89	66.9
Total	133	100
List the steps of the Nursing process followed in preparing care plan		
Able to list all the steps	11	8.2
Unable to list all the steps	123	91.8
Total	134	100

Table 5 shows how the hospital management supports the implementation of nursing process. Most 105 (78.9%) nurses reported that hospital administration recognized nursing process as a framework for quality nursing care delivery. One-half 67 (50%) of nurses stated that the hospital administration supports implementation nursing

process, 42 (31.8%) reported that management monitors nursing process and 20 (14.9%) indicated that management recognizes staff applying the nursing process. Only 6(8%) nurses in this study reported that management rewards staff applying nursing process. 101(75.4%) participants reported that the hospital administration supplies relevant equipment to enable staff implement nursing process.

Table 5: Institutional Support

	Frequency (n)	Percent (%)
Hospital administration recognized NP as framework for quality nursing care delivery		
Yes	105	78.9
No	28	21.1
Hospital administration supports implementation of NP		
Yes	67	50
No	67	50
Management monitors implementation of NP		
Yes	42	31.8
No	90	68.2
Management recognizes staff for applying NP		
Yes	20	14.9
No	114	85.1
Incentive given by management in recognition of NP application		
Rewarding	6	8
NP implementation forms part of annual performance appraisal objectives		
Yes	47	35.3
No	84	63.2
Institution supplies relevant tools to enable staff implement NP		
Yes	101	75.4
No	33	24.6

3.2 BIVARIATE ANALYSIS

3.2.1 ASSOCIATION BETWEEN DEMOGRAPHIC FACTORS AND NURSING PROCESS IMPLEMENTATION

There was a significant association between nursing plan implementation and nurses' age ($p < 0.001$) and also nursing plan implementation and nurses experience ($p = 0.001$), Table 9. The younger nurses aged between 21 and 30 years were more likely to practice nursing process 33 (49.3%) compared to nurses aged 31-40 years (24.1%), 41-40 years (8%) and 51-60 years (15.4%). Recently qualified nurses with experience less than 5 years and experience between 5 and 10 years were more likely to implement nursing process at 38.8% and 54.8%, respectively compared to 11-15 years (23.5%) and 16 or more years (10.8%).

Table 6: Nurse demographic characteristics and implementation of nursing process

	Nursing plan implementation			
	Yes	No	Chi square	P value
Age				
21-30	33(49.3)	33(49.3)	18.5	<0.001*
31-40	7(24.1)	22(75.9)		
41-50	2(8.0)	23(92.0)		
51-60	2(15.4)	11(84.6)		

Academic qualification				
Certificate	2(14.3)	12(85.7)	5.5	0.141
Diploma	24(31.2)	52(67.5)		
BScN	18(43.9)	23(56.1)		
MScN	0(0.0)	2(100.0)		
Experience				
Below 5 years	19(38.8)	30(61.2)	17.2	0.001*
5-10 years	17(54.8)	13(41.9)		
11-15 years	4(23.5)	13(76.5)		
16 years and above	4(10.8)	33(89.2)		
Hospital unit of deployment				
Medical	10(43.5)	13(56.5)	9.3	0.235
Pediatric	11(39.3)	17(60.7)		
Obstetrics	14(40.0)	20(57.1)		
Surgical	4(21.1)	15(78.9)		
Accident and Emergency	2(40.0)	3(60.0)		
Theatre	0(0.0)	7(100.0)		
Out patient	2(18.2)	9(81.8)		
Other	1(16.7)	5(83.3)		

3.2.2 ASSOCIATION BETWEEN TRAINING AND IMPLEMENTATION OF NURSING PROCESS

Table 7 shows associations between training on nursing process and implementation of nursing process in practice. Nurses who reported ever having trained in nursing process were also more likely to implement the nursing process 41 (37.6%) compared to those who had not trained 3 (12%). Nurses who had trained in the nursing process, were also similarly likely to report that the training had enabled them to competently practice the nursing process ($p = 0.002$).

Table 7: Training and implementation of nursing process

	Nursing plan implementation			
	Yes	**No**	**Chi square**	**P value**
Self-rated understanding of NP				
Very good	12(52.2)	11(47.8)	8.8	0.068
Good	21(36.2)	37(63.8)		
Average	11(23.4)	35(74.5)		
Poor	0(0.0)	5(100.0)		
Very poor	0(0.0)	1(100.0)		
Ever trained on NP				
Yes	41(37.6)	67(61.5)	6.2	0.013*
No	3(12.0)	22(88.0)		
NP training has enabled competent practice of NP				
Yes	36(46.8)	40(51.9)	9.6	0.002*
No	5(15.6)	27(84.4)		

3.2.3 INSTITUTIONAL FACTORS AND THE ASSOCIATION WITH IMPLEMENTATION OF NURSING PROCESS

Table 8 presents the associations between nursing process implementation and institutional factors. Among the factors examined only a single factor, namely institutional supply of relevant tools required for nursing process implementation was related to the implementation of nursing process ($p = 0.048$). Out of the nurses who reported that the institution supplied the relevant tools 38 (37.6%) implemented the nursing process compared to 6 (18.2%) of nurses who indicated that the institution did not provide the relevant tools for implementation

of nursing process. Other variables which included supervision (p = 0.404), performance appraisals (p = 0.131) and staff motivation (p=0.751) were not significantly associated with the implementation of nursing process.

Table 8: Institutional factors and the association with implementation of nursing process

	Nursing plan implementation			
	Yes	**No**	**Chi square**	**P value**
Hospital administration recognizes NP as a framework of care delivery				
Yes	33(31.4)	71(67.6)	0.6	0.452
No	11(39.3)	17(60.7)		
Hospital administration support implementation of NP				
Yes	20(29.9)	46(68.7)	0.5	0.499
No	24(35.8)	43(64.2)		
Management monitors NP implementation				
Yes	12(28.6)	30(71.4)	0.7	0.404
No	32(35.6)	57(63.3)		
Management recognizes staff for applying NP				
Yes	6(30.0)	14(70.0)	0.1	0.751
No	38(33.3)	75(65.8)		
NP implementation forms part of annual performance appraisal objectives				
Yes	15(31.9)	32(68.1)	4.1	0.131
No	27(32.1)	56(66.7)		
Institution supplies relevant tools required for NP implementation				
Yes	38(37.6)	63(62.4)	3.9	0.048*
No	6(18.2)	26(78.8)		

4. DISCUSSION

The study assessed barriers to implementation of nursing process among nurses working at Machakos Level 5 Hospital. This study objectively assessed nurse demographic factors, institutional factors, social and cultural factors which were hindering implementation of nursing process in clinical setting.

The findings of this study showed that there was a significant association between nursing process implementation with the nurses' age and experience. The younger nurses were more likely to practice nursing process compared to elderly nurses. Recently qualified nurses with experience less than 5 years and experience between 5 and 10 years were more likely to implement nursing process respectively compared to the nurses who have more years of experience. These findings could be attributed to positive shift of attitude towards nursing process by the young 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. This is in agreement with the findings of Manal & Hala, (2014) that demographic characteristics of nurses like age and years of work experience have significant impact on nursing process implementation.

Although academic qualifications has been found to have a direct statistical significance and a relationship with nursing process knowledge and implementation in a study by Manal & Hala, (2014), the results of this study indicate that academic qualification (p=0.141) was not significantly associated with nursing process implementation though again this study results revealed that nurses with bachelors degree in nursing were more likely to implement nursing process as compared to nurses with diploma and certificate in nursing. This study finding could be attributed to lack of nursing process implementation emphasis by the current training curriculum, lack of enabling or facilitating factors in the institution of this study like facilitative supervision by manager, lack of enough resources, poor staffing levels and lack of guided practice.

The results of this study revealed that nurses who reported to have ever trained on nursing process were more likely to implement nursing process compared to those who had not trained, similarly they were more likely to report that the training had enabled them to competently implement nursing process (p = 0.002). However, among the sample population (n=134) only 44(33.1%) were actively implementing nursing process by formulating nursing care plans. Among the implementing nurse, 11(8.2%) could list all the steps of nursing process correctly. Majority of the trained nurses not implementing nursing process could be attributed to knowledge gap on nursing process, increased workload, lack of updates on nursing process, inconsistence in facilitative supervision and low motivation among nurses working at Machakos level 5 Hospital. These findings are in line with Delgado & Mendes, (2009) who noted that what is taught in school could be different from what is actually being done in practice.

The study revealed that over more than half of the nurses rated their understanding of nursing process as very good and good, however the study results shows no significant association between understanding and implementation of nursing process. The statistical insignificance of the finding could be as a result of inconsistence in nursing process practice, negative attitude, poor staffing ratios and lack of relevant resources to implement nursing process. This finding varies with several studies. A study by Florance and Adenike, (2013) reports that the more nurses are knowledgeable, the more they are likely to implement nursing process The result of this study also varies with a study results in Ethiopia by Fisseha Hagos, *et al*., (2014) that knowledge is one of the most key determinant factors for application of nursing process in clinical setting. Another study by Fisseha Hagos, *et al*., (2014) found out that highly knowledgeable nurses were 8.78 times more likely to implement nursing process than nurses who were not knowledgeable.

Among the institutional factors examined in this study, supply of relevant tools required for nursing process implementation by the institution was significantly associated with the implementation of nursing process. This is in agreement with the findings of Abebe, Abera and Ayana, (2014) in Northern Ethiopia which revealed that nurses who reported availability of necessary resources and equipment for patient care in the hospital were three times more likely to implement nursing process than those who reported inadequate resources and equipment

for patient care. Out of the nurses who reported that the institution supplied the relevant tools, 38 (37.6%) implemented the nursing process compared to 6 (18.2%) of nurses who indicated that the institution did not provide the relevant tools.

Another institutional factor in this study was nurse workload. Results indicated that nurse to patient ratio was high at Machakos Level 5 Hospital and this could be one of the barriers hindered nursing staff from applying nursing process. This agrees with a study by Clarke and Aiken, (2003) that revealed certain factors limiting the ability of nurses to implement nursing process in their daily practice as lack of time and high numbers of patient. Lukes, (2010) also noted that most nurses find it easily to use the nursing process when caring for special patients individually but with increase in the number of patients, this process becomes impossible be used.

5. CONCLUSION

Nursing process implementation in Machakos Level 5 Hospital is below par (33.1%) and is significantly affected by the nurses demographic factors including age and experience, lack of continuous nursing process update trainings, poor staffing ratios and inadequate resources to enable nurses implement nursing process effectively. There is need to strengthen national policy frameworks and interventions aimed at improving nursing process training and implementation at clinical setting in Kenya.

ACKNOWLEDGEMENT

We wish to express our appreciation to the respondents who participated in this study for their cooperation and sacrificing their precious time. Our gratitude also goes to the Machakos County administration and Machakos Level 5 Hospital management for their support and assistance.

COMPETING INTERESTS

The authors declare that they have no competing interests.

6. REFERENCES

Akbari M. (2009). The effect of nursing process education to nurses on quality of nursing cares (MSc Thesis) Tehran: Branch of Medicine, Islamic Azad University; p. 5

Carlson S. (2010). A practical approach to the nursing process. *The American Journal of Nursing*, 72, 1589–91.

Clarke SP, Aiken LH (2003) Failure to rescue. *American Journal of Nursing* 103: 42-47.

Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/12544057

Delgado and Mendes M.R.(2009).The nursing process presented as routine care actions:

building its meaning in clinical nurses' perspective. *Revista Latino-Americanade Enfermagem*, vol. 17, no. 3, pp. 328–334.

Department of Nursing (2009). Nursing sub-sector strategic plan 2008–2013: Nurses can make a difference in ‘‘Reversing the Trends’’. Kenya: Afya House-Ministry of health.

Fisseha, H., Fessehaye, A., Fikadu, B., Semarya, B., &Alemseged, A. (2014). Application of Nursing Process and its Affecting Factors among Nurses Working in Mekelle Zone Hospitals, Northern Ethiopia. Retrieved from http://dx.doi.org/10.1155/2014/675212

Florance, O.A. and Adenike A.E.O (2013): Factors affecting the use of nursing process in health institutions in Ogbomoso Town,Oyo State.Intern J Med. Pharm Sc.,3(1):91-98.

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 Research and Practice, 8. http://dx.doi.org/ 0.1155/2014/675212.

Lukes E. (2010). The nursing process and program planning. *AAOHN* ; 58:5–7.

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.

Manal, H.M., & Hala, M.B. (2014). Barriers and facilitators for execution of nursing process from nurses' perspective *International Journal of Advanced Research*, 2(2), 300-315.

Momoh, M. A. and Chukwu, D.O. (2010). Factors that militate against the use of nursing process: a hospital based study. *Continental J. Pharmaceutical Sciences*, 4, 6-9.

Pokorski, S., Moraes, M.A., Chiarelli, R., Costanzi, A.P. and Rabelo, E. R. (2009). Nursing process: From literature to practice. What are we actually doing? *Rev Latino-am Enfermagem, maio-junho*, 17(3), 302-307.

Potter, P. A., & Perry, A. G. (2007). Basic nursing (6th ed.). St. Louis: Mosby.

Queiroz, O.C.A., Sant'Ana, R.S.E., Oliveira, S.C., Moinhos, A.S. and Santos, L.S. (2012): Nurse's perception in front of the implementation of nursing diagnosis and prescription. *Nursing Journal. UFPE on line*, 6(7), 1347-51.

Zewdu Shewangizaw, Abera Mersha. Determinants towards Implementation of Nursing Process. *American Journal of Nursing Science.* Vol. 4, No. 3, 2015, pp. 45-49. doi: 10.11648/j.ajns.20150403.11