



## PARTICIPATION IN PATIENT CARE DECISION MAKING AMONG NURSES IN A NIGERIAN TERTIARY HOSPITAL

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### ABSTRACT

**Background:** Nursing practice expects nurses to participate in patient care decision making processes with co-nurses (intra-professional) and other healthcare professional groups (inter-professional).

**Aim:** This study examined the participation of nurses in patient care decisions at University of Calabar Teaching Hospital, southern Nigeria.

**Methodology:** A cross-sectional study design was conducted on a sample of 163 respondents. Proportionate sampling technique was utilized for selecting respondents. Data was collected using a semi-structured Participation in Patient Care Decision Making (PPCDM) questionnaire. Data analysis was done using descriptive and inferential statistics at 5% level of significance with the aid of SPSS21 software.

**Results:** The respondents had inadequate intra-professional (69.6, range 0-100, criterion value 70.0) and inter-professional (37.4, range 0-100, criterion value 70.0) participation in patient care decisions. The overall participation was

inadequate (53.5, range 0-100, criterion value 70.0). Reported factors for non-participation were non-supportive attitude of healthcare staff and low rank in healthcare service. The risk of non-participation in patient care decision making process was 3.7 times greater in respondents aged 20-39 years, 2.7 times greater in hospital-based nursing diploma holders, 1.9 times greater in the junior ranks, 1.7 times greater in respondents with years of experience  $\leq 15$ , and 1.4 times greater in males nurses ( $p=0.046$ ).

**Conclusion:** The respondents had inadequate intra and inter-professional participation in patient care decisions which was influenced by age, educational qualification, rank, years of nursing experience and gender. More continuing education on intra and inter professional collaboration for health care providers might remedy the identified situation.

**Keywords:** Decision making, patient care, health personnel, hospital, Nigeria





## INTRODUCTION

Globally, about 98,000 patients die yearly due to poor clinical decision mechanisms.<sup>1</sup> Decisions for patient safety are made at different levels of the healthcare service by professional groups in the hospital.<sup>2</sup> Hospitals depend partly on doctors and nurses for actions and decisions that promote around-the-clock patient safety.<sup>3</sup> The nature of direct patient care offered by nurses makes them unarguably instrumental to maintaining patient safety.<sup>4</sup> The care decisions nurses make could directly affect patient care outcomes.<sup>5</sup> The constantly changing patient care environment often require nurses to be competent care decision makers so as to enable accurate and objective response to patients' nursing care needs.<sup>6</sup> Based on this, nurses need good care decision making skills to promote positive patient care outcomes.<sup>7</sup> The less experienced nurses would often develop their decisional skills from novice to expert by active participation in patient care decision making processes.<sup>8</sup>

Patient care decision making has been used interchangeably with clinical judgment and clinical reasoning in medico-nursing literature.<sup>9</sup> It refers to an evidence-based selection of an ideal option after evaluating a comprehensive list of alternative options for patient care.<sup>1</sup> It makes for the difference between professional and non-professional hospital personnel.<sup>10</sup> It is an essential element in the professional performance of nurses.<sup>11</sup> It is a part of the nursing process which involves critical thinking using data from assessment, identified health problem, diagnosis and evaluation of care options for

effectiveness.<sup>12</sup> Effective nursing-related care decisions would guarantee desired nursing care outcomes.<sup>13</sup>

Participation in patient care decisions involve the distribution of authority on decisions that govern the patient care environment between and among doctors, nurses and other hospital-based healthcare providers.<sup>4</sup> Patient care decisions could be made within nurses (intra-professional) and between nurses and other healthcare staff (Intra-professional). It has been theorized to promote positive intra and inter professional work environments.<sup>12</sup> Studies have shown that nurses in Taiwan, China and the Netherlands became more innovative, productive and effective in delivering nursing services as a result of their participation in clinical patient care decisions.<sup>7</sup> This evidence has stimulated a global drive towards promoting nurses' involvement in clinical patient care decisions as a strategy towards better patient safety and hospital care outcomes.<sup>4</sup> This study aimed at examining the participation of nurses in patient care decisions in a Nigerian tertiary hospital.

## METHODOLOGY

**Study design:** We utilized a cross-sectional design for this study on consenting nurses at the University of Calabar Teaching Hospital (UCTH) between June and December of 2016. The UCTH is a tertiary level teaching hospital located in Calabar, Cross River State, Nigeria. It has served as a referral centre since 1979, and is a training centre for doctors, nurses and other medical scientists and researchers. It is located within the Calabar Municipal. It has a total of 568



nurses, but the target population for this study include 271 nurses practicing in its medical and surgical wards of various departments such as paediatrics, adult, orthopaedic, gynaecology, obstetrics, ophthalmology and ENT (Ear, nose and throat).

**Sample size determination:** A sample size of 180 was determined for this study. The Taro Yamene's 1967 formula for cross-sectional studies was applied. A minimum sample size of 162 was computed when  $N = 271$  and  $e = 0.05$  were substituted into the formula  $n_0 = N/(1+Ne^2)$ .<sup>14</sup> Adjusting for non-response, the minimum sample size was increased by 10% to arrive at 180 using the formula  $n_f = n_0/(1-0.1)$ .<sup>15,16</sup>

**Sampling technique:** Proportionate sampling technique was utilized for the selection of 180 respondents from the medical and surgical divisions (90 respondents each) of paediatrics, internal medicine, orthopaedic, gynaecology, obstetrics, ophthalmology and ENT. The potential respondents were allowed to pick tallies from a bag without replacement. Those who picked "yes" were enrolled into this study, whereas those who picked "no" were not. The inclusion criteria for this study were nurses practicing at direct patient care capacity, and in medical /surgical wards at the departments of paediatrics, adult, orthopaedic, gynaecology, obstetrics, ophthalmology and ENT. The exclusion criteria were nurses practicing at administrative capacity, and outside medical and surgical wards such as outpatient clinics, theatre, and administrative offices.

**Study instrument:** We designed a semi-structured Participation in Patient Care Decision Making (PPCDM) questionnaire for the purpose of this study. It was a 28-item questionnaire split into 3 sections (A, B and C). Items 1-6 comprise section A which extracted the background socio-demographic profile of the respondents using structured items with categorical options. Items 7-26 comprise section B which assessed the respondents' participation in patient care decision making using structured items with dichotomous options (yes/no). Items 27-28 comprise section C which extracted the factors inhibiting respondents' participation in patient care decisions using open ended items. The instrument was worded in English. Its content validity was assessed by 5 nursing research experts. The agreement between assessors (Content Validity Index) was 0.92. Stability of the instrument was done using test-retest method on 16 nurses at University of Uyo Teaching Hospital at an interval of 21 days. A reliability index of 0.87 was computed. Responses to items 1-6 (socio-demographic profile) were categorized and analyzed using frequency and percentage. Each "YES" responses to items 7-16 (intra-professional participation) received a score of 1, and percentage of all "YES" responses was calculated to give the group score for each item. An average of all item scores gave the final group score for Intra-professional participation. An intra-participation score  $\geq 70$  (range 0-100) was classified as adequate, whereas  $<70$  was classified as inadequate. The fore-mentioned technique was also applied to responses to items 17-26 (Inter-professional participation). The



unstructured responses to items 27-28 were coded and categorized into themes, then summarized using frequency and percentage.

**Data collection and procedure:** Data was collected from consenting respondents between September and November 2016. Four research assistants were recruited and trained for two days on data collection for this study. After obtaining administrative permission, the consenting respondents were approached in the wards. The questionnaires were given to them to fill after explaining the aim of this study to them. The respondents were allowed 30 minutes to anonymously fill the questionnaire and return it to a central collection box.

**Data analysis:** Collected data were analyzed with the aid of the Statistical Package for Social Sciences version 21 (SPSS, IBM Chicago, USA). Descriptive and inferential statistics were used to test for associations at 5% level of significance.<sup>17</sup>

### Ethical Clearance

This study adhered to the Helsinki Declaration and was approved by the University of Calabar Ethics Committee in June 2016. Administrative permission was obtained from UCTH management and ward heads. Informed consent was obtained from each respondent. Respondent anonymity was maintained throughout the study. All obtained data was utilized for the approved academic purpose.

### RESULTS

Only 163 filled questionnaire were returned

(Return rate = 90.6%). Table 1 summarize the socio-demographic profile of respondents where majority (61; 37.4%) of the respondents were 20-29 years old (mean age 34.81(9.87) years). They were mostly female (122; 74.8%) with Bachelor's degree in nursing (80; 49.0%). The majority had the rank of Nursing Officer I (46; 28.2%), with 1-5 years of nursing experience (38; 23.3%) and practiced in the medical ward (85; 52.1%).

**Table 1:** Socio-demographic profile of respondents N = 163

Item	Variables	n (%)	Mean(SD)
1.	Age (in years)		34.81(9.87)
	Mean		
	20-29	61 (37.42)	
	30-39	52 (31.90)	
	40-49	34 (20.86)	
2.	Gender		
	Female	122 (74.85)	
3.	Educational qualification		
	Bachelors degree (BSN)	80 (49.08)	
	Post Graduate (MSN)	22 (13.50)	
4.	Rank		
	CNO (Chief Nursing Officer)	28 (17.18)	
	ACNO (Assistant Chief Nursing Officer)	23 (14.11)	
	PNO (Principal Nursing Officer)	12 (7.36)	
	SNO (Senior Nursing Officer)	21 (12.88)	
	NO 1 (Nursing Officer 1)	46 (28.22)	
5.	Years of nursing experience		
	1-5	38 (23.31)	
	6-10	26 (15.95)	
	11-15	31 (19.02)	
	16-20	22 (13.50)	
	21-25	18 (11.04)	
	26-30	16 (9.82)	
31-35	12 (7.36)		
6.	Type of ward		
	Medical	85 (52.15)	
	Surgical	78 (47.85)	

Key: SD = standard deviation, n = frequency, % = percentage

Table 2 summarized participation of nurses to patient care decisions, and showed inadequate participation (mean 53.5, range 0-100, criterion value 70.0). The respondents had inadequate intra-professional (mean 69.6, range 0-100, criterion value 70.0) and





inter-professional (mean 37.4, range 0-100, criterion value 70.0) participation in patient care decisions.

**Table 2:** Participation of nurses in patient care decisions N = 163

Item	Question	Response		Score	Interpretation
		No	Yes		
<b>Intra-professional Domain</b>					
	Do you participate in case -review meetings with other nurses in your ward to...	n	n		
7	assess patients' need to remain on admission?	45	118	72.39	Adequate
8	assess patients' changing health status?	57	106	65.03	Inadequate
9	assess the need for the doctor to alter patients' medication?	39	124	76.07	Adequate
10	contribute ideas based on empirical evidence on a possible approach to caring for patients with newsworthy conditions?	22	141	86.50	Adequate
11	review of laboratory and diagnostic findings in line with nursing diagnosis and interventions?	27	136	83.44	Adequate
12	develop and review emergency nursing protocols and pathways for patients with rapidly changing health conditions?	76	87	53.37	Inadequate
13	assess the need for the doctor to alter the maintenance intravenous fluids in line with patients' hydration status?	65	98	60.12	Inadequate
14	assess the need to conduct additional investigations on a patient to rule out other differential medical diagnosis and make for an effective nursing diagnosis and care plan?	61	102	62.58	Inadequate
15	assess the need for the doctor to discharge a patient from your ward?	76	87	53.37	Inadequate
16	assess the need to discuss patients' condition and prognosis with patient and patient relatives?	27	136	83.44	Adequate
<b>Intra-professional Mean score</b>				<b>69.63</b>	<b>Inadequate</b>
<b>Inter-professional Domain</b>					
	Do you participate in ward rounds with doctors to...				
17	assess patients' need to remain on admission?	95	68	41.72	Inadequate
18	assess patients' changing health status?	101	62	38.04	Inadequate
19	assess the need to alter patients' medication?	89	74	45.40	Inadequate
20	contribute ideas based on empirical evidence on a possible approach to caring for patients with newsworthy conditions?	117	46	28.22	Inadequate
21	review patients' laboratory and diagnostic findings?	95	68	41.72	Inadequate
22	feedback and review emergency protocol and case -pathway for patients with rapidly changing health conditions?	69	94	57.67	Inadequate
23	contribute ideas based on empirical evidence on the need to alter patients' maintenance intravenous fluids in line with hydration status?	74	89	54.60	Inadequate
24	contribute ideas on the need to conduct additional investigations on a patient to rule out other differential medical diagnosis and make for an effective nursing diagnosis and care plan?	136	27	16.56	Inadequate
25	assess the need for the doctor to discharge a patient from your ward unit?	102	61	37.42	Inadequate
26	to assess the need to discuss patients' condition and prognosis with patient and patient relatives?	141	22	13.50	Inadequate
<b>Inter-professional Mean Score</b>				<b>37.48</b>	<b>Inadequate</b>
<b>Overall mean score</b>				<b>53.56</b>	<b>Inadequate</b>

Decision rule: Mean score < 70 is inadequate; > 70 is adequate participation

Table 3 summarized perceived factors inhibiting participation of nurses in patient care decisions, and showed key findings. Non-supportive attitude of nurses (68.7%) and low rank in nursing profession (54.6%) were the most frequently reported factors for non-participation in intra-professional patient care decisions. In addition, low rank in the health service (76.0%) and non-supportive attitude of other healthcare staff (63.1%) were the most frequently reported

factors for non-participation in inter-professional patient care decisions.

**Table 3:** Perceived factors inhibiting participation of nurses in patient care decisions N=163

Item	Question	n (%)	Rank
27	List factors that seem to inhibit your participation in intra-professional patient care decisions.		
	Non-supportive attitude of other nurses	112 (68.71)	1
	My low rank in the nursing profession	89 (54.60)	2
	Heavy nursing work-load	51 (31.29)	3
	Poor technical and specialist communication skills of other nurses	22 (13.50)	4
28	List factors that seem to inhibit your participation in inter-professional patient care decisions.		
	My low rank in the health service	124 (76.07)	1
	Non-supportive attitude of other health care staff	103 (63.19)	2
	Low self confidence	91 (55.83)	3
	Unfavourable hospital policy	87 (53.37)	4
	Poor technical and specialist communication skills	16 (9.82)	5

Table 4 summarized the association between socio-demographic variables and participation in patient care decisions, and showed statistical association with age, educational qualification, rank, gender, and years of nursing experience ( $p < 0.05$ ). The risk of non-participation in patient care decision making process was 3.76 times greater in respondents aged 20-39 years, 2.71 times greater in hospital-based Nursing specialty diploma holders, 1.93 times greater in the junior rank nurses (Nursing Officer 1 and 2), and 1.76 times greater in respondents with years of experience  $\leq 15$  ( $p = < 0.01$ ). In addition, the risk of non-participation was 1.46 times greater in male nurses ( $p = 0.04$ ).

**Table 4:** Association between nurses' socio-demographic variables and participation in patient care decisions N=163



Variables	Participation in Patient care decisions		Fisher	p	RR (95%CI)
	Inadequate	Adequate			
<b>Age (in years)</b>					
20-39	68	45	27.18	<0.001*	3.76 (1.96-7.22)
40-59	8	42			
<b>Gender</b>					
Male	25	16	4.53	0.046*	1.46 (1.06-2.01)
Female	51	71			
<b>Educational qualification</b>					
Hospital-based Diploma (RN with speciality)	47	14	36.26	<0.001*	2.71 (1.93-3.80)
University degree (BSN, MSN)	29	73			
<b>Rank</b>					
Junior (NO 1, NO 2)	49	30	14.61	<0.001*	1.93 (1.35-2.75)
Senior (CNO, ACNO, PNO, SNO)	27	57			
<b>Years of nursing experience</b>					
1-15	54	41	9.55	0.003*	1.76 (1.19-2.58)
16-35	22	46			
<b>Type of ward</b>					
Medical	37	48	0.68	0.435	0.87 (0.63-1.21)
Surgical	39	39			

Decision rule: p < 0.05 = significant

## DISCUSSION

This study found inadequate overall participation of nurses in patient care decision making (mean 53.5, range 0-100, criterion value 70). This finding corroborates a study which found inadequate involvement of nurses in decision-making as 24.8% reported participation and 75.2% non-participation.<sup>12</sup> Based on the criterion of 70% participation to be classified as adequate, the findings in the studies were considerably similar. The similarity in findings could be linked to the cross-sectional design utilized in both studies. A cross-sectional design offers a snap shot of the phenomenon under study at one point in time without variable manipulation. The reproducible result reinforces a need for encouraging nurses to participate more in intra-professional care planning and inter-professional ward round routines.

This study found the perceived inhibitors to nurses' participation in patient care decisions to include low rank (76.0%) and non-supportive attitude of co-workers (68.7%). The nurses in junior rank such as nursing officers I and II were more inhibited. This could be as a result of poor/low self-confidence which was also reported as a

limiting factor by 55.8% of respondents in this study. This assertion is in line with a study which noted that nurses with greater self-confidence were 3 times likely to engage in clinical decisions.<sup>6</sup> Based on the premise that rank is not different from work experience, and attitude of co-workers is not different from work environment, this finding corroborates an Ethiopian study which found the key perceived inhibitors to be low nursing experience (73.8%) and poor work environment (68.7%).<sup>6</sup> The similarity in results could be due to similarities in data collection methods. The Ethiopian study employed structured self-administered questionnaire and interview guide for in-depth discussions. Similarly, this study utilized semi structured self-report questionnaire. The open ended self-report questionnaire items may have been efficient in the extraction of qualitative themes similar to those obtainable in in-depth discussions.

This study demonstrated that participation in patient care decisions among nurses were statistically associated with age, educational qualification, nurses' rank, years of nursing experience and gender. This finding corroborates a study which listed experience, qualification, age and gender as factors affecting nurses' participation in patient care decision making.<sup>18</sup> In this study, respondents with  $\leq$  15 years of experience had 76% more likelihood of non-participation in patient care decisions. In practice, about 15 years of clinical nursing experience is required to rise in rank from Nursing Officer II (A non-managerial cadre) to Assistant Chief Nursing Officer (a managerial cadre) in Nigerian public health facilities. In addition, 15 years



represents about 40% of the maximum of 35 years of public service expected of a nurse. More so, patient care decisions require the input junior and senior ranking nurses as it allows for mentorship opportunities. This finding support a study which found that nurses of higher years of experience had significantly higher scores in decisional participation. Furthermore, nurses with hospital-based nursing specialty diploma (RN and RN-specialty) were less involved in intra and inter-professional patient care decision making. This could be as a result of the expertise, prestige and self-confidence that come with passing through university-based education to acquire a BSN and/or MSN. Although gender was a statistically significant limiting factor, it may be reasonable to put perspective that this could be because there are fewer male nurses in the sample examined in this study. Unfortunately, nurses' rank as a limiting factor has not been abundantly studied in previous studies so remains a subject for further study. Nonetheless, low rank nurses may be dependent on the higher ranking and perhaps more experienced nurses for clinical decisions. This probably explains their non-participation as described in this study.

The PPCDM questionnaire used in this study has never been used in a similar study. This makes comparison between results of this study and previous studies very limited. We perceive this to be a major limitation to this study.

#### CONCLUSION

The respondents had inadequate intra and inter-professional participation in patient

care decision making. Participation is affected by age, educational qualification, rank, years of nursing experience and gender. More continuing education on intra and inter professional collaboration for health care providers is recommended to remedy the identified situation.

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