



Assessment of Nurse Work Environment and Quality of Nursing Care in Medical and Surgical Units of a Teaching Hospital South-South Nigeria

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Assessment of quality of nursing care, assessment of nurses work environment, medical-surgical units

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ABSTRACT

This study evaluated the characteristics of the work environment of nurses, quality of nursing care services and environmental factors influencing the quality of nursing care in Medical and Surgical Units of University of Benin Teaching Hospital, (UBTH) Benin City. The objectives of the study assessed the characteristics of the nurse's work environment., determined the level of quality nursing care services and identified environmental factors influencing the quality of nursing care. Descriptive survey research design was employed and a sample of 259 nurses were recruited for the study. Validated questionnaire was administered to the respondents, 251 were retrieved and their responses were analyzed using descriptive statistics. The result obtained revealed seven (7) favourable characteristics of work environment in medical -surgical units of UBTH out of twenty-four variables. The non-favourable were more than the favourable characteristics in that work environment, therefore the work environment was not favourable for quality nursing care. Quality of nursing care was rated fair, positive and negative environmental factors influencing quality of nursing care services were identified It was concluded that the characteristics fall short of a healthy work environment for high quality care. It was recommended that enhancing the nurse work environment will motivate clinical nurses to provide quality care.

INTRODUCTION

Work environment is a crucial element in service provision and productivity systems including health care system. Work environment refers to any location in which people work or the setting, social features and physical conditions in which a worker performs his or her job^[1]. Healthy environment characterized by the presence of good degree of autonomy, staffing, opportunities for promotion, implementation of care models and professional development through education contribute to the better quality of nursing care provided^[2]. The Nurse Work Environment is a complex concept with several perspectives^[3]. According to NWE has been defined as the organizational characteristics that enable or constrain professional nursing practice and includes nursing foundations in quality of care, nurses' participation in hospital policy, staffing and resources adequacy and collegial nurse-physician relationships^[3]. The second NWE context is the social context, which includes relations, interaction between employees and teamwork^[4]. The nurse work environment as positive or negative. The negative environment reduces nurses' performance and adversely affects patient care. The positive environment improves morale, increases productivity and promotes quality care. Thus, environment where the nurse works affects the patient positively or negatively^[5]. According to AL-Hadrawi *et al.* (2017), work environment of nurses in medical and surgical wards of two main teaching hospitals Iraq were described as unhealthy^[6]. In Nigeria, Guobadia and Odetola (2015) similarly reported that environments where nurses work in teaching hospitals were unfavourable for nurses^[7]. Juanamasta *et al.* (2021), defined QNC as the excellent degree of caring conducted by the nurse to meet patients' needs^[8]. Ditlopo *et al.* (2034), reported that in Ethiopia quality of nursing was often substandard because nursing environment and management were unfavourable^[9]. Bibi *et al.* (2021) evaluated perception of nurses on work environments in four tertiary health institution of Pakistan. The results indicated that nurses work environments were unfavorable for practice^[10]. In a study on environmental factors influencing nursing quality care, Kaboodmehri *et al.* (2019) assessed nurses' perspective on environmental factors influencing errors of medication administration in Iran. The authors identified two main factors of 68.32% as contributing to the errors., the first (36.47%) was of three elements of inadequate light, loud noise level, improper room temperature and the last (31.84%) included inadequate medication space, poor staff-patient ratio and insufficient of material resources for work. Poor lighting system which has a

loading factor of 0.89 was reported as the worst environmental factor contributing to medication errors. It was recommended that authorities of hospitals mitigate medication errors and improve patient's safety by modifying environmental conditions^[11]. Similarly, Brewer *et al.* (2018) investigated how the design of nursing units' impact on some variables of quality nursing care using rate of fall and its association to the size and shape of the unit in United States of America. Considering quality care, Ribeiro *et al.* (2020) studied Contributions from expert nurses in medical-surgical nursing on quality of nursing care in Portugal. It was concluded that the performance of medical-surgical nursing nurses was consistent with quality standards. With customer satisfaction, dimensions of responsibility and rigor as the most performed activities^[12]. Better quality of nursing care is assured if the environment is healthy. These reports imply that quality nursing means a situation whereby application of medical science and technology is done in a manner that increases health benefits without increasing risk. The results indicated that nurses work environments were unfavourable for practice^[13]. It was discovered from the literature, that shortage of staff and supplies, environmental interruptions, nursing work overload, communication between nurses and physicians were the major reasons for low quality of nursing care practice. Thus, it is evident from the review that there is no established way for measuring the quality of nursing care. Also, the use of cross-sectional design may limit the ability to make strong causation statements. Creating a healthy work environment is fundamental to quality care and ultimately safe patient outcomes. An increasing body of evidence has shown that unless the work environments are healthy, patient safety continues to be threatened^[14,15]. They found that practice environment was a significant predictor of quality nursing care. For the researcher, the recent shortage of nurses, the multiple roles and lack of consensus on what constitutes ideal work environment for quality nursing care in our country has motivated this study on evaluation of nurse work environment characteristics and the quality of services provide.

Conceptual Framework/Application of Theory to Study: The study utilizes the Donabedian Model to assess nursing care quality in inpatient settings. The model emphasizes **structure** (environmental factors like design, tools and staffing), **process** (delivery of care, including patient assessment and communication) and **outcomes** (quality of care). Effective structures and processes improve nursing actions, reduce errors and lead to better patient outcomes.

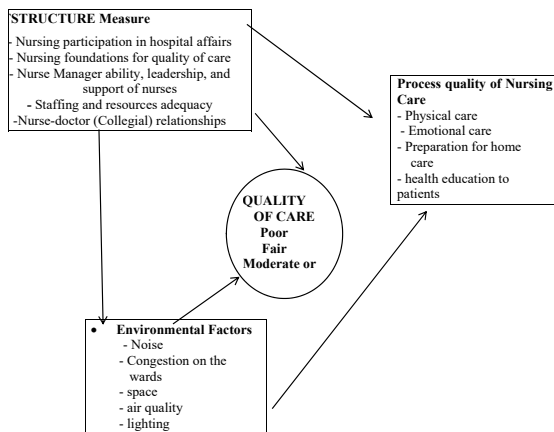


Fig. 1: Pathway Analysis of NREM Conceptual Adapted from the Modified Version of NREM

MATERIALS AND METHODS

Research Design: A descriptive cross-sectional study design.

Area of Study: This study will be conducted in University of Benin Teaching Hospital.

Population of Study: The study will include all nurses working in the medical-surgical wards of University of Benin Teaching Hospital. The medical surgical unit comprises of 259 staff., Medical 142, Surgical 117.

Sample and Sampling Technique: The whole population of 259 nurses constituted the sample because the number which is suitable for a descriptive survey research will reduce biases. The use of population size as sample is known as census technique. This method suits the study as the number involve is suitable for the study and this technique rules out the possibility of sampling error.

Instrument for Data Collection: The data was collected by using a self-administrated questionnaire. It consisted four parts.

First Part: This part consisted of designed questionnaire to collect socio-demographic of the studied the sample.

Second Part: The is researcher's modified questionnaire on Nursing Practice Environment from Perceived Environment Scale-Nursing Work Index (PES-NWI), developed to measure the hospital nursing practice environment.

Third Part: Quality of Nursing Care: This is an adapted quality of nursing care questionnaire for Registered Nurse developed by Safford, Scholfeldt and Bolcer (1960) used to assess quality of nursing care.

Fourth Part: Assessed nurses' perceived environmental factors affecting the quality of nursing. Performance measurement tool contains nine items which are self-rating five point Likert scale.

Validity of the Instrument: The face and content validity of this study were be assessed by the project supervisor and two experts with a master's degree in nursing and environmental health respectively.

Reliability of the Instrument: The reliability of instrument was determined by first pilot testing it on twenty-six (26) nurses. Cronbach alpha coefficient of 0.782. Each sub scale had a Cronbach's alpha greater than 0.7 which indicates internal consistency Also, the internal consistency of quality assessment scales using Cronbach's alpha was 0.822. Each sub scale had a Cronbach's alpha greater than 0.7 which indicates internal consistency. The self-structure questionnaire on environmental factors affecting the quality of nursing care had Cronbach's alpha value of 0.892, indicating internal consistency.

Ethical Consideration: Ethical considerations were maintained during the research exercise.

Procedure for Data Collection: The Director of Nursing was informed and a project link person from within the nurse management team was nominated. Also, four research assistants were trained on the purpose of study and how to collect data from the respondents. Respondents for the study were approached individually in the selected wards and those who accepted to participate voluntarily completed the questionnaire.

Method of Data Analysis: The data generated were collated and analyzed using descriptive statistics of frequencies, percentages, means and standard deviations with the aid of Statistical Package for Social Sciences (SPSS) 17.0 version. The result of the evaluation of nurse work environment was based on a score of four-point scale ranging from "Strongly Disagree" (1), "Disagree" (2), "Agree" (3) to "Strongly Agree" (4). Mean guided decision making. Items response mean below 2.5 were rejected while items response mean above 2.5 were accepted. For quality of nursing care evaluation the responses, a 4-point Likert scale was used for responses. On a Likert-type scale, the frequency of carrying out activities that contribute to the quality of care varied between 1 and 4, with 1 referring to never, indicating poor quality, 2 rarely, indicating fair quality, 3 sometimes, indicating moderate quality and 4 always, indicating high quality. For environmental factors influencing quality of care, performance measurement tool was based on a self-rating five point Likert scale (1=not at all, 2=very little, 3=fairly well, 4=quite well, 5=perfectly). Mean guided decision the making. Items response mode above 3 were accepted as positive factor influencing quality nursing care while items response mean <3

were rejected as negative factors influencing quality nursing care. The responses on the completed questionnaires were coded and data analyzed on an item-by-item basis, using percentages for the research questions. The data were analyzed item-by-item indicating the mean and standard deviation (SD) of each item.

RESULTS AND DISCUSSIONS

(Table 1) shows sociodemographic data or respondents. Most respondents 201(80.1%) were females., majority 85(33.9%) were within the age range of 21-30 years., 154(81.1%) had BNSC., 134 (56.5%) were RN/RM., 148(59%) were married., 105 (41.8%) had <5 years' experience and 129(51.4%) in the medical ward.

Research Question One: What are the Work Environment Characteristics in Medical-Surgical Wards of University of Benin Teaching Hospital, Benin City? Data were analyzed sub scale by sub scale, item by item and the mean scores and standard deviations for each item as presented on (Table 2).

Therefore the Characteristics of Work Environment Acknowledged in this Study were:

- There were opportunities for promotion in the clinical career.
- The nurse manager were accessible and available to staff for any official activity.
- Nurse manager were supportive to nursing staff in decision making.
- Nurses are clinically and academically competent.
- Nursing care based on a nursing model rather than a biomedical model.
- Good working relationship between physicians and nurses.
- Team conferences often held between nurses and physicians.

Research Question Two: What is the Level of Quality Nursing Care in Medical-Surgical Wards of University of Benin Teaching Hospital, Benin City?

The mean score 2.5 is regarded as characteristic factor while the score below 2.5 were rejected.

For Level of Quality Care: Mean score.

- <2.5 indicate poor quality.
- 2.5-3=fair quality.
- 3.5-4=moderate quality.
- 4.5-5=high quality.

All the items assessed in (table 3) had mean scores >2.5. Summary of the variables showed that sub scale physical care (Mean, 3.06) indicating moderate quality care., the second variable preparation for home, (Mean 2.70) indicating fair quality care, emotional care

(Mean 2.98) has fair quality care. The grand mean (2.91) indicate fair quality care.

Objective 3: What are the environmental factors influencing the quality of nursing care in medical surgical units of University of Benin Teaching Hospital, Benin City. Ten (10) items generated to realize this objective was subjected to descriptive analysis using frequency and percentage. Data were analyzed item by item and presented on (Table 4).

Factors Influencing Quality of Nursing Care: Mean guided decision making. Items response mode above 3 were accepted as positive factor influencing quality nursing care while items response mean <3 were rejected as negative factors influencing quality nursing care.

Positive Factors: Four (4) of the factors identified to have positive influence on the quality of nursing care were acknowledged by respondents. Specifically, respondents acknowledged that there is enough of space in the charting area (**M** 3.04±1.02), Short walking distance to patient rooms (**M** 3.06±0.93), Location and size of storage area (clean and dirty) adequate (**M** 3.02±0.98 and Hand-washing and disinfection materials are located at each bay (**M** 3.18±1.32) as factors that negatively influence.

Negative Factors: Six (6) out of ten factors were not acknowledged to have positive influence on quality of nursing care. These are-Arrangement of furniture in nursing station does not cause obstructive (**M**2.82/**SD**1.03).,-no Privacy for nursing records (**M**2.62/**SD**1.04).,-nursing station does not allows visibility to all areas of the unit (**M** 2.94, **SD**1.08).,-size of medication room does not allow for preparation (**M**2.57**SD**1.19).,-high Noise level/acoustics (**M**2.41, **SD**1.24) and poor lighting of the ward (**M**2.58, **SD**1.13).

Major Findings Include the Following:

- Most respondents 201(80.1%) were females, majority 85(33.9%) were within the age range of 21-30 years.
- Majority had Bachelor of Nursing Science degree.
- Out of the twenty-four (24) work environment variables, only seven (7) were identified as favourable in medical-surgical units of UBTH.
- The level quality of nursing care in medical-surgical wards was fair.
- Noise, lighting, size of medication room, visibility of all nursing areas, were identified negative factors influencing quality of nursing care.

Nurses work environment has been a nerve center of health care policy all over the world as quality nursing care can be achieved in a favourable work environment.

Table 1: Sociodemographic Data of Respondents

Demographic Variables	Male N=50 N (%)	Female N=201 N (%)	Total. N251 N (%)
Unit			
Medical Unit	26(10.4)	103(41.0)	129(51.4)
Surgical Unit	24(9.6)	98(39.0)	122(48.6)
Age			
21-30 years	17(6.8)	68(27.1)	85(33.9)
31-40 years	13(5.2)	56(22.3)	69(27.5)
41-50 years	13(5.2)	48(19.1)	61(24.3)
>51 years	7(2.8)	29(11.5)	36(14.3)
Professional qualification			
RN only	16(6.4)	67(26.7)	83(33.1)
RN/RM	30(12)	120(47.8)	150(59.8)
RN/Others	4(1.6)	14(5.6)	18(7.2)
Marital status			
Single	18(7.2)	71(28.3)	89(35.5)
Married	29(11.6)	119(47.4)	148(59.0)
Divorced	1(0.4)	5(2.0)	6(2.4)
Educational qualification			
BNSc	2(0.8)	6(2.4)	8(3.2)
MSc	30(12)	124(49.4)	154(61.4)
Ph.D.	5(2.0)	23(9.2)	28(11.2)
None	0(0.0)	8(3.2)	8(3.2)
Years of experience			
<5 years	15(6.0)	46(18.3)	61(24.3)
5-10 years	21(8.4)	84(33.5)	105(41.9)
11 years and above	13(5.1)	50(19.9)	63(25.0)
	16(6.4)	67(26.7)	83(33.1)

Table 2: Characteristics of Nurse Work Environment

Work environment	Scale	Variables	Strongly Agree F (%)	Agree	Disagree	Strongly Disagree	Mean±SD
Nurse participation in hospital affairs		1.Nursing officers are involved in hospital policy decision making	20(7.95)	50(12.56)	120(47.80)	61(24.30)	2.11±0.87
		2. Nursing officers can serve on hospital committees.	24(9.56)	54(21.51)	140(55.77)	33(13.14)	2.27±0.81
		3. The nurse managers have equal power and authority as other managers in the hospital	50(19.92)	26(10.35)	69(27.49)	106(42.23)	2.07±1.14
		4. Management listens and acts appropriately to issues of nurses' concerns	38(15.13)	45(17.92)	126(50.19)	42(16.73)	2.31±0.93
		5. There are opportunities for advancement and promotion in the clinical career	25(9.96)	149(59.36)	56(18.3)	21(8.36)	2.70±0.75
Nurse manager leadership skills and support of nurses		1.Supervisors use mistakes as learning opportunities not criticism	30(11.91)	75(29.88)	104(41.43)	42(16.73)	2.37±0.90
		2.The nurse manager accessible and available to staff for any official activity	31(12.35)	135(53.78)	64(25.49)	21(8.36)	2.70±0.79
		3.Nurses get praised and recognized for work well done	31(12.35)	70(27.88)	102(40.63)	48(19.12)	2.33±0.92
		4.A nurse manager is supportive to nursing staff in decision making	33(13.14)	127(50.59)	63(25.10)	28(11.15)	2.65±0.84
		1.There is active staff development or continuing education programs for nurses	25(1.99)	40(15.93)	66(26.29)	120(39.84)	1.87±1.01
Education to improve quality nursing care		2. Management are concerned that nurses provide high quality nursing care	27(10.75)	80(31.87)	66(26.29)	78(31.07)	2.22±1.01
		3.There is a clear philosophy of nursing that permeates the care environment	31(12.35)	38(15.13)	148(58.96)	34(17.5)	2.26±0.84
		4. I work with nurses who are clinically and academically competent	31(12.4)	136(54.2)	58(23.1)	26(13.54)	2.68±0.82
		5. An active quality assurance program that nurses can participate in is available	43(17.13)	38(15.13)	130(51.79)	40(15.93)	2.33±0.94
		6.There is a written, up-to-date nursing care plans for each patient using nursing diagnosis	11(4.38)	20(7.96)	142(56.57)	78(31.07)	1.85±0.73
Staffing and resource adequacy		7. There is a programme for welcoming and mentoring new nurses	55(21.91)	47(18.72)	70(27.88)	79(31.47)	2.31±1.13
		8. Nursing care is based on a nursing model rather than a biomedical model	45(17.92)	102(40.63)	54(21.51)	50(19.92)	2.56±1.00
		1. Adequate support services allow me to spend time with my patients	11(4.38)	30(11.95)	148(58.96)	62(24.70)	1.96±0.73
		2. There is sufficient time and opportunity to discuss patient care issues with the other nurses	26(10.35)	39(15.53)	146(58.16)	40(15.93)	2.20±0.83
		3. There enough registered nurses to provide quality patient care	8(3.18)	46(18.32)	135(53.78)	62(24.70)	2.00±0.74
Collegial Nurse-Physician Relations		1.Physicians and nurses have good working relationships	38(15.13)	121(48.20)	72(28.68)	20(7.96)	2.70±0.82
		2. Nurses and physicians have team conferences often	9(3.58)	22(8.76)	150(59.76)	70(27.88)	1.88±0.70
		3.Nurses are able to keep physicians informed as to their patients progress	51(20.31)	170(67.72)	20(7.96)	10(3.98)	3.04±0.66
		4.Nurse had time to assist physicians as needed	30(11.95)	162(64.54)	49(19.52)	10(3.98)	2.84±0.67

Table 3: Responses on Quality of Nursing Care Rendered

Nursing tasks	Activities	Never	Rarely	Sometimes	Always	Mean±SD
Physical Care	1. Were you able to collect appropriate patient information	6(2.4)	8(3.2)	168(66.9)	69(27.5)	3.20±0.60
	2. Was there time for treatments and medications to be given on time?	4(1.6)	8(3.2)	154(61.4)	85(33.9)	3.27±0.60
	3. Was there time for p.r.n medications to be given promptly?	4(1.6)	52(20.7)	137(54.6)	58(23.1)	2.99±0.71
	4. Did you have the supplies and equipment necessary to give good care	4(1.6)	20(7.8)	154(61.4)	73(29.1)	3.18±0.64
	5. Operate in the continuity of the nursing care process	8(3.2)	46(18.3)	121(48.2)	76(30.3)	3.06±0.78
	6. Were you able to give your patients necessary assistance in getting in and out of bed	4(1.6)	14(5.6)	148(59)	85(33.9)	3.25±0.63
	7. Were you able to take adequate precautions to prevent patient injuries	4(1.6)	18(7.2)	150(59.8)	79(31.5)	3.21±0.64
	8. Were you able to see your patients enough to recognize untoward signs and symptoms	4(1.6)	24(9.6)	181(72.1)	42(16.7)	3.04±0.57
	9. Was there time to get to know the individual patient's needs	14(5.6)	67(26.7)	135(53.8)	35(13.9)	2.76±0.76
	10. Was there time to teach your patients how to care for themselves	4(1.6)	87(34.7)	111(44.2)	49(19.5)	2.82±0.76
Preparation for Home	Mean Physical care	5(1.99)	34(13.7)	146(58.1)	65(25.9)	3.06±0.46
	1. Was there time to determine what your patients would need for home care	8(3.2)	89(35.5)	123(49.4)	31(12.4)	2.71±0.72
	2. Was there time to explain to your patients how to care for themselves	6(2.4)	75(29.9)	125(49.8)	45(17.9)	2.83±0.74
	3. Were you able to spend enough time with your patients and their relatives so that you felt confident they were well-prepared for the patient's discharge and home care	10(4)	107(42.6)	107(42.6)	27(10.8)	2.60±0.73
	Mean preparation for home	8(3.2)	90(35.8)	118(47.1)	35(13.9)	2.70±0.61
Emotional Care	1. Was there time to make new patients feel welcome on the unit	8(3.2)	105(41.8)	84(33.5)	54(21.5)	2.73±0.83
	2. Were you able to take time to discover the fears of your patients and to try to relieve them	4(1.6)	97(38.6)	121(48.2)	29(11.6)	2.70±0.69
	3. Were you able to give your patients families the amount of attention they needed	8(3.2)	50(19.9)	133(53)	60(23.9)	2.98±0.75
	4. Was there time to protect the privacy of your patients	4(1.6)	18(7.2)	126(50.2)	103(41)	3.31±0.67
	5. Was there time to give your patients as much information as they needed	8(3.2)	85(33.9)	103(41)	55(21.9)	2.82±0.81
	6. Do you feel that your patients enjoyed the nursing care you gave them	10(4)	18(7.2)	110(43.8)	113(45)	3.30±0.77
	Mean Emotional care	7(2.8)	57(22.7)	116(46.2)	70(28.3)	2.98±0.45
Key: M-Mean SD-Standard deviation						
Summary Sub scales	Never	Rarely	Sometimes	Always	Mean±SD	
1. Physical care	5(1.99)	34(13.7)	146(58.1)	65(25.9)	3.06±0.46	
2. Preparation for home	8(3.2)	90(35.8)	118(47.1)	35(13.9)	2.70±0.61	
3. Emotional Care	7(2.8)	57(22.7)	116(46.2)	70(28.3)	2.98±0.45	
Total	7(2.8)	60(23.9)	127(50.6)	57(22.7)	2.91±0.55	

Table 4: Environment Factors Influencing Quality Nursing Care N (%)

Variables	Not at all	Very little	Fairly well	Quite well	Perfectly	Mean±SD	Decision
1. There is enough of space in the charting area	18(7.2)	30(12.0)	131(52.2)	56(22.3)	16(6.4)	3.04±1.02	Negative Factor
2. Short walking distance to patient rooms	36(14.3)	18(7.2)	119(47.4)	68(27.1)	10(4.0)	3.06±0.93	Negative Factor
3. Location and size of storage area (clean and dirty) adequate	42(16.7)	20(8.0)	117(46.6)	56(22.3)	16(6.4)	3.02±0.98	Negative Factor
4. Hand-washing and disinfection materials are located at each bay	44(17.5)	36(14.3)	57(22.7)	67(26.7)	47(19)	3.18±1.32	Negative Factor
5. Arrangement of furniture in nursing station does not cause obstructive	40(15.9)	37(14.7)	116(46.2)	48(19.1)	10(4.0)	2.82±1.03	Positive Factor
6. No Privacy for nursing records	52(20.7)	46(18.3)	114(45.4)	29(11.6)	10(4.0)	2.62±1.04	Positive Factor
7. Nursing station does not allow visibility to all areas of the unit	30(12.0)	37(14.7)	110(43.8)	60(23.9)	14(5.6)	2.94±1.08	Positive Factor
8. Size of medication room does not allow for preparation	46(18.3)	65(25.9)	87(34.7)	39(15.5)	14(5.6)	2.57±1.19	Positive Factor
9. High Noise level/acoustics	88(35.1)	68(27.1)	37(14.7)	40(15.9)	18(7.2)	2.41±1.24	Positive Factor
10. Poor lighting of the ward	96(38.2)	40(15.9)	63(25.1)	34(13.5)	18(7.2)	2.58±1.13	Positive Factor

Key: SD-Standard deviation

Determining the Characteristics of Nurse Work Environment:

The present study found that there are opportunities for advancement and promotion in the clinical career. This agrees with the study carried out in Philippines, which revealed that there are active development programmes for nurses in the hospitals and opportunities to be promoted in the clinical setting^[16]. Opportunities of this type are expected to enhance remuneration and improved professional skills but in Nigeria, nurses have often joined other health workers to protest for increased salaries. Thus, these characteristics are not enough for healthy work environment. Also, the present study reported that the nurse managers are accessible to staff for any official activity and supportive to nursing staff in decision making as characteristic factor of the medical-surgical unit. This is congruent with a study carried out in Turkey and Ethiopia respectively identified that nurses acknowledged manager support in their work setting^[17,18]. Also, studies conducted in Saudi Arabia acknowledged that nurses were involved in the hospital decision making process^[19]. Incongruent with this study is the finding of (Moisoglou, 2020) in Greece that Nurse Managers' ability and leadership was not rated as an aspect of the participants work environment characteristics. In spite of the difference in results, the roles of the nurse manager is enormous. Poor managerial support in the work environment can generate stress which can be linked to poor quality care^[20]. Concerning "education to improve quality of care", nurses were clinically and academically competent. The present finding agrees with a similar Malaysia and Nigeria respectively, in which most of the nurses were diploma holders^[21]. However, the study by (Moisoglou, 2020) in a Greek hospital disagreed with this result, as most of the nurses were certificate holders functioning as assistant nurses^[20]. Higher education is useful in improving nurses' skills and in return quality of patient care. In addition, nursing care is based on models and nursing diagnosis. This finding is consistent with that of (Weldetsadik *et al*, 2019) which reported support for nursing education and the use of scientific models in Ethiopia. This is useful for the development of framework of nurses' work environment^[22]. Respondents in this study disagreed with availability of resources and staff adequacy, which is consistent with a study in Pakistan by (Bibi *et al*, 2021) where no variable was accepted. Literature has revealed that Staff- shortage is a consistently reported nursing problem all over the world^[23]. In Nigeria, health sector, particularly public hospitals have been adversely affected by the economic crisis. Though nursing staff is an essential variable for the provision of quality and safe healthcare services, government is unable to replace those who left the system. Currently, the numbers of nurses leaving Nigeria to work overseas increase monthly. According to Anzai *et al*, (2014) nursing shortages compromise the safety and

quality of nursing care^[14]. The study results show that majority of the respondents agreed with collegial nurse physician relationship in the work setting. This result is inconsistent with another study carried out in Port Said where poor team work and less collaboration was identified^[24].

Assessment of the Quality Nursing Care Rendered:

In the present study, all the characteristics of quality nursing care were considered fair. This result is related to the findings of similar study carried out in Tehran Iraq. Also, Darega *et al*, (2016) in their study regarding quality of nursing care practices, in Southeast Ethiopia reported that quality of nursing care as rated by nurses was good^[25]. On the other hand, Weldetsadik *et al*, (2019) reported contrary results in Ethiopia^[22]. Again, in a qualitative research in a hospital in Ghana, it was found that nurses could not do much for the patients due to some restraining factors, therefore quality of nursing care was poor^[26]. The possible reason for this achievement on the level of quality nursing care could be due to a low nurse-patient ratio which could affect the sustain ability of nurses' performance. The results suggest that in spite of the rejected characteristics of the environment, the standard of nursing care was not compromised. There may also be biases in reporting by the nurses, however, the importance of favourable work environment cannot be overemphasized as it will challenge the nurses to use their skills, expertise and clinical knowledge in their nursing practice.

Identify Environmental Factors Influencing Quality Nursing Care:

Considering the judgement of the respondents, factors such as arrangement of furniture in nursing station, privacy for nursing records, visibility from the nursing station to all areas of the unit, size of medication room, noise level and lighting condition of the wards did not influence quality care negatively. Other factors ranging from space in the charting area, walking distance to patient rooms, location and size of storage area (clean and dirty) adequate and availability of hand-washing and disinfection materials, were acknowledged by the respondents as factors that negatively influence quality nursing care. Again, the positively influence factors, the result is similar to the findings of Xuan *et al*, (2024) who reported that a medication room adjacent to nurses' station provided efficient communication^[27]. Also, a study in New York, by Bruyneel *et al*. (2022) reported that nurses were more satisfied with the placement of the nursing station in proximity to patients' rooms and other support rooms (such as medication room, dirty room, utility room and storages)^[28]. In contrast, Kaboodmehri, *et al*, (2019), found inadequate space for medication preparation in Intensive Care Unit of hospitals affiliated to Guilan University of Medical Sciences^[29]. The notion that the care unit's design and

layout of functional areas affect nurse behavior and satisfaction has been supported by Lee^[30]. Most nursing activities require nurses moving from several functional and transitional areas rather than completing an activity inside a single functional area. Regarding on environmental factors influencing quality nursing care negatively, the findings are consistent with the study of Kaboodmehri, *et al*, (2019) who reported three variables of poor lighting, high noise levels and inappropriate room temperature in an intensive care unit of a hospital in China^[11]. Another study conducted in Iran reported that the noise level in hospitals is louder than that recommended by World Health Organization (WHO)^[31]. WHO, as well as Environmental Protection Agency recommended that noise level should not exceed 45 decibels (dB) during the day and 35 dB at the night^[32]. Considering the study areas, there are a number of potential sources of noise such as alarms, televisions, rattling of trolleys, ringing phones, staff, visitor and patients' conversation.

Implication of the Study: The findings of the present study have significant implications for both clinical practitioners and nurse leaders. The knowledge evolved from this study can be used by clinical nurses to evaluate and improve their practice. The results of this study indicate that work environments characteristics is a foundation for the adoption of diverse strategies essential to enhance the quality of patient care. Therefore interventions, even in these difficult economic times, for nurse managers to improve quality of nursing care is to create conducive work environment. Furthermore, the study findings provide insight for reframing nursing education towards enhancing quality patient care. Nursing, curriculum that includes the dynamics of the work environment would enhance the student's ability to promote quality nursing care. Finally, at policy making level, the evidence raised from this study may contribute to creating positive working environments, supporting teamwork and involve nurses in adjudication of proposal requests.

Contribution to Knowledge: This study evaluated nursing practice environment and quality care of a teaching hospital medical surgical unit in Nigeria using an internationally established instruments (PES-NWI and Quality of nursing care questionnaire for Registered Nurse Scales). In addition, this study provides an input for need of policymakers to maintain adequate staffing, healthy work environments, in order to deliver high quality and safer care. Furthermore, this study established that to achieve excellent quality of care, nursing unit teams are important through involvement of leaders, physicians, nurse managers as well as other nursing cadres.

CONCLUSION

Our data reflected the objectivity of the day to day nationwide complaints and dissatisfaction on the quality of health care specifically the status of the nurses' work environment. The level of quality nursing care requires urgent attention to avoid deterioration. Finally, the nursing field is dynamic and constantly changing. Nurses must flexible and adapt to the rapidly changing.

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