

ORIGINAL RESEARCH

Patient satisfaction with the quality of care provided by student nurses at Ndola Teaching Hospital in Ndola, Zambia

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ABSTRACT

Introduction: Patients' satisfaction with the care provided by student nurses indicates that students are able to meet the patients' needs, which could also be an indicator of the quality of nursing education received by students and quality of care offered by future nurses. Quality of care influences patient satisfaction and also boost the morale of the care givers.

Methods: This was a descriptive quantitative cross sectional study done on 100 randomly selected patients from four admission wards at Ndola Teaching Hospital. The data was collected using a validated semi-structured questionnaire and analyzed with the Statistical Package for Social Sciences version 25. A p -value of $\leq .05$ was considered statistically significant using Chi square test.

Results: The results showed that patients (79%) were dissatisfied with the nursing care provided by student nurses. The cause of dissatisfaction was low quality of care received (48%), lack of student supervision (60%), poor student patient interactions (68%) and level of training (75%). Patient satisfaction had a significant association with availability of supervisors ($p = .010$), level of training ($p = .002$), number of students per ward ($p = .011$) and student interactions ($p = .001$).

Conclusions: Patients are not satisfied with the care provided by student nurses due to poor quality of care provided as students are not guided, and overcrowding in the wards making patients uncomfortable being exposed to a lot of unqualified staff, These findings will help educators to identify areas of improvement in student clinical learning to enhance quality care. Therefore it is recommended that training institutions should strengthen clinical supervision of student nurses by faculty members and senior nurses to enhance the quality of care.

Key Words: Patient satisfaction, Quality nursing care, Clinical supervision

1. INTRODUCTION

Measuring patient satisfaction with nursing care has the potential to improve nursing service quality by making the

formulation of care standards not just easier but more valid as a measure while keeping track of both results and patients' perceptions of quality.^[1] According to Freitas, et al.,

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in 2014, the need for improved healthcare services was identified through health-related information and technological advances, changes in expectations and opinions about health care, an increase in individuals' involvement in their health care, and increased cost and competitiveness in the health sector.^[2] The opinions and satisfaction of patients and their relatives can be used to assess the quality and sufficiency of healthcare services.^[3]

In the hospital setup patients receive care provided by a multidisciplinary health care team among which the nurses and student nurses belongs. Patients' satisfaction with the care provided by student nurse indicates that students are able to meet the patients' needs, which could also be an indicator of the quality of nursing education students are receiving and quality of care offered by future nurses.^[4] Scholars conceptualized patient satisfaction with nursing care as the degree of congruence between a patient's expectations of ideal nursing care and his/her perception of the real nursing care he/she receives from either student nurses or qualified nurses.^[5]

Nursing education includes a combination of theoretical and practical learning experiences that enable nursing students to gain the information, skills, and attitudes needed to provide nursing care. Clinical training of nursing students is often regarded as the foundation of nursing practice and patients have been used for training by student nurses in gaining their clinical experience and competencies. Competence of nurses has direct effects on the safety and health of patients, and lack of it can result in medical mistakes and severe results for the patients. It is critical that nurses demonstrate their capacity to provide high-quality patient care while collaborating with other nurses and co-workers.^[6] Irrespective of the level of education, student nurses are expected to provide quality nursing care throughout their education. For this reason, student nurses require close supervision by their clinical instructors and qualified health staffs, so that client satisfaction can be maintained in the health institution. It is in the clinical area that students must relate theory to practice, learn the necessary technical and interpersonal skills, make clinical judgements, become socialized into the profession and begin to appreciate its values and ethics.^[7] The development of competent practice is a primary goal for nursing education. To demonstrate this competence, Students must be able to practice in the "real world. Availability of clinical supervisors in clinical areas is important as it ensures safe care by giving guidance to students in their day to day clinical practice. More important is that it clinical supervisors ensures safe care, which is ahead of patient satisfaction. Unguided training may lead to provision of care that may dissatisfy the patient.^[8] Patients require proper diagnosis and treatment of their problems, as well as restoration of function and/or

relief of symptoms. It is the responsibility of every student nurse to be able to identify patient's problems, make proper nursing diagnosis, draw a proper nursing care or treatment plan in order to meet the patient's needs or restore health. If patient's needs are not met accordingly, it may lead to dissatisfaction and poor image of the institution.

In Zambia, nursing education is offered based on the requirements set by the Nursing and Midwifery Council of Zambia (NMCZ) and other regulatory authorities for academic award mainly the Higher Education Authority (HEA). Nursing and Midwifery Council of Zambia (NMCZ) is a professional regulatory authority responsible for registration of all nurses in the country who have completed and passed the licensure examination in relevant fields and are given registration certificate to practice as Nurses.

At UNZA, School of Nursing Sciences, with regards to the guidelines provide by NMCZ, clinical placement activities are guided by a hybrid-competence based curriculum model that promotes student centred learning, early clinical exposure and integration of theory into practice, problem solving, evidence-based practice, critical thinking, and lifelong learning. Essentially, the nursing programme is clinical based with the concurrent delivery of both theory and clinical components in order to facilitate application of theory to practice. Learners also employ the theory of experiential learning which demands self-motivation, and reflection on the learning activity previously undertaken. Early clinical exposure enables learners to participate and engage fully in workplace activities which are a central component of learning required for the attainment of nursing competences.

Prior to their clinical placement, student nurses are first introduced to clinical procedures in the skills laboratory which helps in shaping their skills. In the skills laboratory, students are exposed to a number of procedures mimicking the ideal ward situation using simulations and use of standardised patients. The clinical setting is properly chosen, accepted by nurse instructors, prior to clinical attachment and well planned with the view of transforming nursing students into competent nurses after the experience. This is reliant on a variety of factors, including curriculum design, cost effectiveness, and relationships with specialized health care facilities. Furthermore, students also undergo and preclinical orientation program where the clinical learning objectives are reviewed with the clinical coordinator and set targets for attainment of the objectives for each placement period.

Patients' satisfaction will be determined by nurses' and student nurse's role in the hospital because they are frontline people and more acquainted to provision of bedside nursing care than any other health personnel in the hospital.^[9]

As a result, measuring patient satisfaction with nursing care delivered by student nurses is critical for determining and evaluating the quality of care offered and whether it effectively meets patients' needs.^[10] It will further help in the development of practical nursing student education and improving the quality of clinical training to be offered to students. Above all, Satisfaction evaluations reflect the expectations from the patients' point of view and compare with the realities of the care received.

Patients who are content with their care, on the other hand, are more likely to adhere to medically suggested regimens, resulting in a favourable impact on their health.^[11-13] According to reports, satisfied patients are more likely to refer their family and friends to the hospital.^[14,15] Patients' opinions, according to many experts, are the finest source for informing clinicians about what is essential, but also should be used with scholarly evidence to support education and practice which is why this information can be used in nursing education, healthcare planning, and evaluation.^[3,16,17]

Staffing levels and level of competence have an impact on the quality of nursing care provided to the client. Hence the need to ensure that student nurses are allocated task according to their competence and level of training as maintenance of quality of nursing care is vital to patient outcomes and patient satisfaction.

It is well-known that nursing being a hands on profession should apply theory to practice in real settings which provides a necessary and valuable experience for students. In recent years, the number of student nurses in clinical practice has been increasing due to increase in the number of student enrolments in government schools and the increase in number of new private nursing schools in Zambia. This increment in number of enrolments of students and new private nursing school has led to overcrowding of hospital wards and other departments with students. This may compromise the skill acquisition of weak students who may not have access to the limited number of patients.

Clinical nursing education faces issues such as declining efficacy, sticking to established approaches, and reluctance to innovation, according to certain research findings.^[18,19] In order to provide effective care and improve clinical education, it is necessary to assess the impact of clinical teaching on nursing students' clinical performance as well as patient satisfaction with nursing students' care.^[20] Nursing education contributes to a nurse's capacity to practice efficiently. As a result, having a well-educated nursing workforce results in better patient care.^[21] Several studies have found that, despite having a strong knowledge background, nursing students struggle in clinical situations. Consequently

as more incompetent students are admitted to clinical settings, the quality of care offered in these settings continues to deteriorate.^[22]

Student nurses provide a significant amount of nursing care in the clinical area during their practice. They are an extra addition to the number of staff on the ground. The more staff you have attending to one patient the likelihood of higher quality care is greater.^[23] Much as we appreciate the care student nurses provide to patients, patient satisfaction with this care has not been evaluated in many health institutions. There are few studies on care given by nursing students, particularly on patient satisfaction with nursing care provided by student nurses especially in Zambia and the Sub Sahara region.

Equally Ndola Teaching Hospital (NTH) has neither conducted any evaluation to check on patient's satisfaction with the quality of care that student nurses provide to patients as they practice especially with the presence of large numbers of student nurses in the clinical area. In line with this background and since no evaluation has been conducted to check on patient's satisfaction with the quality of care that student nurses provide as they practice, especially with the presence of large numbers of student nurses in the clinical area at Ndola Teaching Hospital (NTH), this study address three questions:

- 1) How satisfied are the patient's with the care provided by student nurses at Ndola Teaching Hospital?
- 2) What are the factors that influence patient satisfaction with the care provided by student nurses at Ndola Teaching Hospital?
- 3) Are nursing students supervised and guided during their clinical experience at Ndola Teaching Hospital?

With the above questions answered, the study highlighted the importance of getting patients views on the care they receive from student nurses and provided insights as to how impactful nursing student's clinical placements can be on patient populations as well as the importance of clinical preceptors and instructors in guiding students.

Summary literature review

Patients' opinions, especially with scholarly evidence according to many experts, is one indicator of clinical performance, as it informs clinicians about what is essential, which is why this information can be used in nursing education, healthcare planning, and evaluation.^[3,16,17] Several studies have found that, despite having a strong knowledge background, nursing students struggle in clinical situations. Consequently as more incompetent students are admitted to clinical settings, the quality of care offered in these settings continues

to deteriorate.^[22]

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2. METHODS

2.1 Study design

A descriptive quantitative cross sectional study was conducted between July 2017 and June 2018 to determine patient's satisfaction with the quality of care provided by student nurses at Ndola Teaching Hospital in Zambia.

2.2 Study area and population

The study was conducted at Ndola Teaching Hospital located in Ndola in the copperbelt province of Zambia. The hospital is a tertiary hospital and training institution with a bed capacity of 1,200. Approximately 1,428 patients are seen daily for various elements. The site was chosen because it is one of the major clinical practicum area that receive a lot of student nurses from different government and private training nursing schools for clinical attachments. The study population consisted of all patients aged 18 years and above, who were not critically ill, not mentally disturbed and admitted to the selected wards for more than two days and had received care from student nurses.

2.3 Sampling procedure

Study respondents were selected by simple random sampling. A sampling frame of all patients in the four wards was drawn. Random numbers were generated and put in a raffle box where stable patients were allowed to pick one and read out the number on the paper.

2.4 Sample size determination

The minimum number of participants required for the study's threshold was calculated using the Slovin formula. Slovin's formula is used to calculate an appropriate sample size from a population.^[24] This formula is mostly used when a population's behaviour, is not known. The formula was formulated by Slovin in 1960. It is written as, $n = N / (1 + Ne^2)$. Where n = Number of samples, N = Total population and e = Error tolerance (level). With a confidence interval of 95% and a

margin error of 0.05, this formula gave a minimum number of 100 patients.

2.5 Inclusion criteria

All patients aged above 18 years who had been admitted to medical, surgical, and obstetric-gynaecological wards for more than two days and voluntarily consented to participate in the study were included.

2.6 Exclusion criteria

All patients who were unable to provide informed consent for the study, including those below the age of 18 years, those who were critically ill, mentally unstable and those who declined to consent for the study. Patients who spent less than two days in the wards were also excluded.

2.7 Data collection method

Data was collected using a validated researcher generated semi-structured questionnaire which was used during face to face interviews. The questionnaire was developed based on literature review and objectives that were aligned with the study's goals to ensure validity. In addition, particular objectives were cross-checked against all of the 38 questionnaire items. The questionnaire consisted of both open-ended and closed-ended questions derived from the previously validated tools on patient satisfaction with nursing care. Not all questions were obtained from these tools as some areas the current study was looking for were different. The questionnaire had five different sections; the first section collected data on the demographic variables of the patients namely age, sex, level of education, marital status and nationality, religion, residential address, and occupation. The second and third sections had questions related to clients ward characteristics and knowledge on health workers qualifications. The fourth and fifth section had questions on patient's satisfaction with nursing student's care and patients' general opinions of the nursing care services rendered in wards. These questions included how satisfied patients were with the following variables; hospital environment, students level of training, availability of clinical supervisors, number of students per ward, quality of care provided and student patient interaction. Patients rated their views using a five point Likert scale ranging from 1-5 as a measure of satisfaction. This tool outlined the degree of satisfaction whereas 4-5 meant satisfaction while 1-3 meant that they were not satisfied. This helped in answering research question number one. Question number two on the factors that may influence patient satisfaction with care provided, questions were asked in various areas of the variables which included hospital environment, students' level of training, availability of clinical supervisors, number of students per ward, quality of care provided and student pa-

tient interaction. Finally patients overall opinions about the care they receive from student nurses were measured using a five point rating scale of 1 to 5 where 1 meant Strongly Disagree 2 meant Disagree, 3 meant Uncertain 4 meant Agree and 5 meant Strongly Agree. Patients were asked to state their how much they agree or disagree with the statements.

2.8 Validity and reliability

Validity and reliability tests were conducted to determine internal consistency and uniformity of the tool. The Cronbach's α was 0.98 which was very high confirming the reliability of the tool. Also prior to data collection a pilot study was conducted on a group of 10 randomly selected men and women who were admitted in the medical ward at Kitwe Teaching Hospital to further test for the validity and reliability of the study tool and also suitability of the questions. The researchers conducted a pilot study at Kitwe Teaching hospital as it has the similar characteristics with Ndola Teaching Hospital as they are both training institutions where students from different nursing schools both private and government do their clinical placements. The pilot study revealed a few anomalies in terms of sequencing of the questions, grammar and spellings which were corrected and revised in the questionnaire.

2.9 Data collection process

In this study data was collected through face-to-face interviews between the interviewer and the interviewee by using semi structured questionnaire. The principal investigator led the data collection process assisted by three research assistants who were trained on what the tool intended to measure and how to conduct the interviews.

The researchers started by introducing themselves and getting permission from the ward in charge and asking for a private room to conduct the interviews. They further introduced themselves to the respondent and explained the purpose and the benefits of the study. The respondent were assured of confidentiality, participation was voluntary and that respondent were free to stop at any point in time without any consequences. Participants were also requested to give written consent by signing or using the right thumb print if unable to write. After the consent was obtained, the researchers proceeded to ask the respondent questions using the interview schedule. After the whole interview was completed, the researchers thanked the respondents for participation. No form of payment was made to the respondents.

2.10 Data analysis

Data was screened for completeness, internal consistency, legibility and any possible errors by scrutinizing each and

every questionnaire immediately after data collection. Complete questionnaires were entered on the computer data master sheet and analysed using SPSS version 25.0. Descriptive statistics were presented in frequency tables. Cross tabulations were also done to determine associations between independent variable and dependent variables. Chi-square test were used to measure the degree of association between the variables with a confidence interval of 95% and p value of $< .05$ as level of significance. The variable considered in this study were patient satisfaction as a dependent variable and hospital environment, level of training, availability of supervisors, number of students per ward, quality of care, student interaction as independent variables.

2.11 Ethical considerations

The University of Zambia Research Ethics Committee approved conduction of the main study. Participation of subjects was on a voluntary basis and written informed consent was obtained from all respondents prior to participation in the study. All the relevant hospital authorities including the ward in-charges were informed of the research and requested for permission for the research to proceed. Anonymity and confidentiality was observed during the interviews ensuring that the codes are were instead of names and that each respondent was interviewed separately from others in a private room. Participants were also assured that no information collected shall be used against them. The questionnaires were kept under lock and key to avoid unauthorized access to the information.

3. RESULTS

3.1 Demographic characteristics of the sample

As shown in Table 1 demographic characteristics, showed that, 29% ($n = 29$) of the respondents were aged 35-45 years while 10% ($n = 10$) were aged above 55 years. Majority of the respondents 65%, ($n = 65$), were male while 53% ($n = 53$), were married. Only 43% ($n = 43$) of the respondents, had reached secondary school.

3.2 Patient satisfaction

As shown in Table 2, majority of the respondents 79% ($n = 79$) were not satisfied with nursing care provided by student nurses while only 21% ($n = 21$) were satisfied.

3.3 Factors influencing patient satisfaction

As seen in Table 3 majority 85% ($n = 85$) of respondents reported the hospital environment as being conducive for training. Majority 60% ($n = 60$) of the respondents reported non availability of supervisors to guide students. Majority 75% ($n = 75$) of the reported being well cared by the final year students. Notable also was the number of students per

ward, majority 76% (n = 76) of the respondents reported the number to be too much also respondents almost half 49% (n = 49) of the respondents poor student interaction and poor quality of care.

3.4 Student supervision in the clinical area

As seen in Table 4 majority of the respondents 60% (n = 60) reported that student nurses were not guided when attending to patients. However, majority of the respondents 97% (n = 97) reported that student are guided only by qualified nursing staffs on duty. Furthermore majority of the respondents 93% (n = 93) reported shortages of qualified nurses/clinical teachers supervising students in the ward are enough.

3.5 Association of patient satisfaction

As shown in Table 5 Chi square tests revealed that there was no significant association between patient’s satisfaction and the hospital environment (p = .097). However, there was a significant association with availability of supervisors (p = .010), level of training (p = .002), number of students per ward (p = .011) and student interactions (p = .001).

4. DISCUSSION

Patient satisfaction with nursing care provided by student nurses at Ndola Teaching Hospital in Ndola, Zambia was investigated in this study. Key findings of this study revealed that patients are not satisfied with the care provided by student nurses. The results showed that 79% of the respondents were dissatisfied and reported the cause of not being satisfied as low quality of care provided (48%) by student nurses, lack of student clinical supervision (60%) by clinical instructors

and qualified nurses, poor student patient interactions (68%) due to overcrowding and level of training (75%) as senior students provide better care than junior. Patient satisfaction had a significant association with availability of supervisors (p = .010), level of training (p = .002), number of students per ward (p = .011) and student interactions (p = .001).

Table 1. Social demographic characteristics (n = 100)

Characteristic	Frequency	Percentage
Age		
18-24 yrs.	15	15
25-34 yrs.	27	27
35-44 yrs.	29	29
45-54 yrs.	19	19
55 and above	10	10
Total	100	100
Gender		
Male	65	65
Female	35	35
Total	100	100
Marital Status		
Married	53	53
Single	34	34
Widowed	7	7
Divorced	10	10
Total	100	100
Education		
Never been to school	9	9
Primary	19	19
Secondary	43	43
Tertiary	29	29
Total	100	100

Table 2. Patient’s satisfaction with care provided by student nurses (n = 100)

Variables	Frequency	Percent
Un satisfied	79	79
Satisfied	21	21
Total	100	100

Table 3. Factors influencing patient satisfaction with care given by student nurses (n = 100)

Variable characteristics	Frequency	Percentage %
Hospital Environment		
Is the hospital environment conducive for training student nurses?		
No	15	15
Yes	85	85
Availability of Supervisors		
Not Available	60	60
Available	29	29
Not sure	11	11
Level of Training		
Who attends to you well?		
First year	14	14
Second year	11	11
Final year	75	75
Number of Students Per Ward		
What do you think about the number of student nurses found in one ward attending to one patient?		
Too much	76	76
Not too much	20	20
Not sure	4	4
Student Interactions and quality of care provided		
Describe the your interaction with students and the care rendered to you		
Poor	49	49
Fair	36	36
Good	15	15

Table 4. Student supervision in the clinical area (n = 100)

Characteristic	Frequency	Percentage (%)
Are student nurse's guided by clinical instructors when attending to patients?		
Yes	29	29
No	60	60
Not sure	11	11
Total	100	100
Who guides student nurse's when attending to patients?		
Clinical teachers	3	3
Qualified nursing staff on duty	97	97
Total	100	100
Are qualified nurses /clinical teachers supervising students enough		
Yes	4	4
No	93	93
Not sure	3	3
Total	100	100

Table 5. Association of patient satisfaction with quality of nursing care and selected variables

Variable characteristics	Patients satisfaction		p-value
	Not satisfied n (%)	Satisfied n (%)	
Hospital Environment			
Yes	7 (8.5)	78 (91.5)	.097
No	8 (53)	7 (46.6)	
Availability of Supervisors			
Available	0	40 (100)	.010
Not available	54 (90)	6 (10)	
Level of Training			
First year	8 (78)	3 (27)	
Second year	7 (50)	7 (50)	
Final year	0	75 (100)	.002
Number Of Students Per Ward			
Too many	76 (84.4)	14 (15.6)	.011
Good	3 (30)	7 (70)	
Student Interactions			
Poor	68 (74.7)	23 (25.3)	.001
Good	5 (56)	4 (44)	

Patient evaluations of the care offered provide valuable input on students' professional performance, assist students in recognizing how they might affect patients' situations, and help patients achieve better results.^[25] The findings of this study contradict those of Oskay, Ü. Güngör, I., and Başgöl, S., who conducted a study on patient satisfaction with nursing students' care in a Perinatology ward in Turkey and found that patients were extremely satisfied with the care provided by student nurses. They came to the conclusion that a high degree of satisfaction with nursing students' care suggests that

the students were able to meet the patients' demands, which could be an indicator of the quality of nursing education and the quality of care the future nurses would provide.^[26]

A similar study was conducted on oncology patients by Can, G et.al 2008, they equally reported high patient satisfaction. The researchers reported patients being pleased with the respect they were shown, the way students answered their questions, the sincere interest they were shown and the knowledge of nurses about their condition.^[27] Indeed

patients' satisfaction with the care provided by nursing students is important as it ensures that student nurses, who will have primary responsibility for patient care in the future, receive a good clinical and theoretical education. The use of a hybrid curriculum model in the school of nursing sciences at the University of Zambia ensures that students build on the knowledge acquired from previous years of practice. With use of a hybrid model the nursing students in senior classes are more likely to perform better in clinical practice as compared to the junior ones due to the exposure, experiences and skills acquired through training as each level has specific competences to be attained.

In the current study, patients reported poor quality of care as exhibited with different levels of competencies by student nurses as they were practicing. Patients reported that senior students provided better care than junior students in the lower levels of training. This could be so, because the first year nursing students had not gained experience and competence they need to satisfy the patient. The majority of students cited anxiety as one of the main reasons affecting their performance related to fear of making mistakes and a lack of experience Gemuhay H. M. et al, 2019 in their study on factors affecting performance in clinical practice among preservice diploma nursing students in northern Tanzania reported that clinical supervision and assigning appropriate patients to students, as well as case presentations of clinical cases, may help to alleviate anxiety.^[28] These findings are similar to a study by Mukumbang Ferdinand C., & Adejumo Oluyinka^[29] in South Africa on patient experiences of being nursed by student nurses at a teaching hospital. The findings of the study revealed that there was great difference in the degree of confidence during practices among student nurses in relation to their level of training, the findings revealed that in terms of quality of the care delivered, patients perceived different levels of the care process. The level of quality of care was found to depend on, those student nurses who were in their final year showed high level of confidence in their practice while those in their first year showed less competence.^[29] Several studies have found that, despite having a strong knowledge background, nursing students struggle in clinical situations. Consequently as more incompetent students are admitted to clinical settings, the quality of care offered in these settings continues to deteriorate.^[21] The importance of having a well-educated nursing workforce cannot be overemphasised. As a result, having a well-educated nursing workforce leads to better patient care.^[19]

Furthermore patients in the current study reported absence or inadequate clinical supervisors to provide the needed guidance to the students. Some students were performing tasks which were not in line with their level. This is in contrast to

the Nursing and Midwifery Council of Zambia's (NMCZ) rules of practice for student nurses, which state that "it is vital that the nursing student's knowledge and skill be sufficient to provide the assigned nursing care under proper supervision.^[30] Nursing students follow the guidelines as outlined in the placement objectives with a focus on the competencies to be achieved. The level of procedural performance ranges from basic procedure to advanced procedure. Basic procedures are simple non-invasive procedures like checking vital signs, bed making, dusting, bathing and feeding patients mostly done by junior student in their first year. Advanced procedures are those that include invasive procedures like injection giving, venepuncture, blood collection, wound dressing, drug administration and are done by senior students in their second and third years. According to a study conducted in Botswana, nursing students are unable to adapt theory to practice because they lack proper supervision in the clinical setting, resulting in poor clinical performance.^[31] The ratio of tutors and clinical instructors that correspond to the number of students could make supportive supervision more effective. In resource-poor environments, however, where there is a shortage of human resources for health, both in terms of numbers and motivation, and this is not the case.^[27] However, irrespective of the level of training, student nurses are expected to provide quality nursing care throughout their training in relation to the outlined clinical objectives for that particular level.^[32] Nursing students require help and guidance in order to develop into responsible, accountable, and independent professionals capable of working within the limits of their profession.^[33] The need for constant presence of supervisors to guide their practice in the clinical area cannot be over emphasised.^[9] Availability of supervisors in clinical areas is important as it gives chances for students to be guided in their day to day clinical practice. Unguided training may lead to provision of care that dissatisfy the patient^[9,10] Patients require proper diagnosis and treatment of their problems, as well as restoration of function and/or relief of symptoms. It is the responsibility of every student nurse to be able to identify patient's problems, make proper nursing diagnosis, draw a proper nursing care or treatment plan in order to meet the patient's needs or restore health. If patient's needs are not met accordingly, it may lead to dissatisfaction and poor image of the institution. Patients who are content with their care, on the other hand, are more likely to adhere to medically suggested regimens, resulting in a favourable impact on their health.^[11-13] According to reports, satisfied patients are more likely to refer their family and friends to the hospital.^[14,15] Patients' opinions, according to many experts, are the finest source for informing clinicians about what is essential, which is why

this information can be used in nursing education, healthcare planning, and evaluation.^[3, 16, 17]

The quality of nursing care delivered to a client is affected by the number of staff and their level of expertise. It is well known that students are an important resource both for patients and for healthcare organizations. Hence the need to ensure that student nurses are allocated task according to their competence and level of training as maintenance of quality of nursing care is vital to patient outcomes and patient satisfaction. Topcu et al.^[33] showed the importance of student support in the care process and stressed that level of satisfaction with care increases in patients with a low level of education. The current study reported no significant association between patient satisfactions with any of the demographic variables.

In recent years, the number of student nurses in clinical practice has been increasing due to increase in the number of student enrolments in government schools and the increase in number of new private nursing schools in Zambia. This increment in number of enrolments of students and new private nursing school has led to overcrowding of hospital wards and other departments with students. For example, it was observed that in 2017, most of the wards at NTH were occupied by more than 40 students per shift.^[34] This is far much beyond the recommendation of the Nursing and Midwifery Council of Zambia (NMCZ) on the number of students per ward. Furthermore the NMCZ recommends a student-patient ratio of 1:10. With the huge numbers of students in wards with inadequate patients, Students have limited patients to conduct procedures consequently the poor acquisition of key competences. Without acquisition of competences during training, nursing care provided graduation is limited and patient satisfaction reduced.

As reported in the current study overcrowding in the wards makes patients uncomfortable and insecure as they feel their privacy is invaded by these unqualified health workers. This may compromise patient satisfaction. Furthermore communication between patients and nurses may also be ineffective. Similarly, in a study by Karaca, A., and Durna, Z., they stated that nurses should tell patients about each application and procedure, as well as provide required explanations about sickness, diagnosis, and therapy, in order to ensure patient satisfaction and high-quality nursing care.^[1] This can only be done if there is adequate student patient interaction. In this study 68% of the Patients reported poor interactions with students and also reported poor feedback provision by students.^[35] Some students were seen not doing anything as they didn't have patients to interact with as reported by patients. Previous research have found that appropriate su-

perision is a facilitator of effective clinical practice which may promote patient satisfaction. Through a variety of learning opportunities, Hand and Schalge concluded that good clinical practice encouraged learning and assisted students in achieving learning outcomes and competences.^[36]

5. CONCLUSION

The outcomes of this study has shed light on patients' satisfaction in teaching hospitals as they are being cared for by student nurses. The study revealed that patients are not satisfied with the care provided by student nurses. Factors contributing to low levels of satisfaction included, low quality of care provided by student nurses, lack of student clinical supervision by clinical instructors and qualified nurses, poor student patient interactions due to overcrowding and level of training as senior students provide better care than junior. These study further revealed inadequate clinical supervision of students. As student nurses learn how to care, there is need for constant presence of the supervisors to guide and mentor them. Clinical supervisors and educational institutions will be informed by the findings about parts of student nurse training that need to be improved and enforced. Therefore it is recommended that training institutions should strengthen clinical supervision of student nurses by faculty members and senior nurses to enhance the quality of care. Further recommendations are made to training institutions have a well structured preceptorship programme with incentives to motivate and retain them in the system. New modalities of skills training should be adopted like use of simulation laboratories for students to practice in cases of overcrowding clinical places. Quality of care influences patient satisfaction and also boost the morale of the care givers.

The current study has added to the body of knowledge by revealing the levels of patient satisfaction with care provided by student nurses and the related factors contributing to patient satisfaction. Patients still remain important in nursing education. Patients' satisfaction with student nurse care implies that students are capable of meeting their needs, which could also be an indicator of the quality of care provided by future nurses and quality of nursing education students are receiving. Getting information from the client's views on the quality of care they receive from student nurses will help nurse educators and clinical staff identify areas of improvement more especially in this era where research has primarily focused on student nurse learning from a student or supervisor perspective; few studies have investigated patient perspectives. Further studies to investigate student's satisfaction with the care they provide to clients should be done.

Limitation

Although the goal of this study was to create valuable evidence about patient satisfaction with nursing care provided by student nurses, some limitations must be addressed. The findings reflect a picture of reality and could be relevant to the study context and similar settings because the study was cross-sectional and descriptive in nature. The study was prone to response bias because all data was collected through a structured questionnaire which could be easily

manipulated to suit the interviewers choice. Furthermore, participants' perspectives on the study issue may differ, resulting in the possibility of bias in questionnaire responses. The sample size of 100 was also a small proportion and not representative of the wider population, therefore the study cannot be generalized to the entire Zambia.

CONFLICTS OF INTEREST DISCLOSURE

The authors declare that there is no conflict of interest.

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