



WESTERN NIGERIA JOURNAL OF MEDICAL SCIENCES (WNJMS)

**CHALLENGES FACED BY NURSING STUDENTS DURING PRACTICE OF NURSING
PROCEDURES IN CLINICAL POSTING IN A TERTIARY INSTITUTION IN NIGERIA**

CHALLENGES FACED BY NURSING STUDENTS DURING PRACTICE OF NURSING PROCEDURES IN CLINICAL POSTING IN A TERTIARY INSTITUTION IN NIGERIA

Ojo IO¹, Aloyinlapa TL¹, Oyediran OO², Afolabi E², Adejumo PO¹

1. Department of Nursing, University of Ibadan, Ibadan, Nigeria
2. Department of Nursing, Obafemi Awolowo University, Ile Ife, Osun State, Nigeria

Correspondence to: Ojo IO, Department of Nursing, University of Ibadan, Ibadan, Nigeria. Email: adubiiyanu@gmail.com; Telephone: +234-8032797187

ABSTRACT

Introduction: This study evaluated the challenges faced by Nursing Students in the implementation of nursing procedures in clinical areas.

Methods: Descriptive cross-sectional research design was used for the study. Using purposive sampling method, 187 nursing students from two nursing institutions participated in the study. A structured self-administered questionnaire was used for data collection. Data were analyzed using frequencies, and percentages while associations and relationships between variables were tested using chi-square test and regression analyses at $p < 0.05\%$ level of significance.

Results: The mean age of the respondents was 21.5 ± 2.9 yrs. About 74.9% of the respondents found clinical postings to be highly challenging. Inadequate physical resources ($p = 0.009$) and inadequate personal protective equipment to work with during clinical postings ($p = 0.003$) had a significant influence on the challenges faced by respondents.

Conclusion: Clinical postings were found to be highly challenging for most respondents as they could not implement certain procedures easily. This could be due to inadequate physical resources and inadequate personal protective equipment to work with. Therefore, it is important to put all available resources in place and get competent and experienced

preceptors to guide the students during clinical postings.

Keywords: Challenges, Nursing Students, Nursing Procedures, Clinical Postings, Practice

INTRODUCTION

Nursing is a discipline that is grounded on practice. Nursing education is divided into two complementary sections: the theoretical section which is meant to allow students acquire knowledge in the classroom and the practical session which concentrates on developing clinical skills and the preparation of nursing students to utilize clinical principles in practice. Both components encourage nursing students to develop critical thinking in solving.¹

Globally, more than fifty percent of the nursing curriculum is made up of clinical nursing education.² Nursing clinical education is not only focused on theoretical content discussed in the classroom but also calls for enough clinical experiences to enable the development of skills and the application of theory to practice.³ The goal of nursing clinical education is to ensure professional clinical competencies and to improve quality nursing care among student nurses.

The standard of clinical education that student nurses receive determines the quality of nursing care that they offer.⁴ More successful and qualified students will graduate from nursing school if they receive higher-quality

clinical education.⁵ The clinical placement experience is widely considered as the cornerstone of nursing practice worldwide.³ Therefore, in order to become self-sufficient, capable, and accountable professionals who can function within the parameters of professional practice, nursing students require inspiration and direction.

Clinical placement experiences let nursing students exercise their newly acquired abilities in real-world settings and deliver safe and effective nursing care.⁶ Student Nurses can successfully navigate some of the obstacles they will probably encounter in the clinical settings through supportive clinical posting environments. Because of these challenges, students are less able to learn successfully, which is detrimental to the nursing profession.

Clinical setting for students participating in clinical postings depends on preceptors' involvement and academic nurse teachers' work.⁶ Several factors, such as availability of placement support systems like supervision, mentorship, preceptorship and interactions among the instructors, student nurses, and clinical staff affect the creation of suitable and motivating learning environments for student nurses⁷. Crowded wards, lack of equipment, brief placements, lack of orientation and delegation, low self-esteem, absenteeism, ineffective supervision, lack of preparation, and the use of cellphones during evaluations pose serious challenges to nursing students' clinical postings^{8,3}.

Clinical nurses seem to be unsupportive in assisting nursing students during their clinical attachments. Perhaps the students' behaviors' such as lateness to work, use of cellphones while on clinical postings, lack of dedication to one's clinical practice and absenteeism influence the staff nurses' reaction to the students.⁹

Studies in developed and developing countries are numerous at discussing the challenges faced by nursing students in their clinical postings; these challenges have been said to have negative consequences on the students.¹⁰⁻¹⁵ However, in Nigeria, limited studies have been carried out on the subject

matter with little to no attention at assessing the procedural challenges they encounter at performing those procedures they come in contact with during the clinical postings.^{1,15}. In addition, there are deficiencies that are responsible for decline in acquisition of skills during clinical postings which widen the gap between taught classroom theories and real-life applications.¹ These complaints can be seen in their lackluster performance during the objective structured clinical examination (OSCE). Students performed poorly during the OSCEs because they lacked confidence and clinical skills. Therefore, the aim of this study is to identify challenges faced by nursing students during clinical placement, factors that influence the challenges and identify some procedures that Nursing Students find challenging in the course of their implementation on the wards

METHODS

Descriptive cross-sectional design was used for this study involving nursing students of the University of Ibadan and School of Nursing, University College Hospital (UCH), Ibadan. The Department of Nursing, University of Ibadan, was founded in the year 1965. It is the first-degree awarding nursing programme in Nigeria. It functions under the Faculty of Clinical Sciences, University of Ibadan. The duration of the nursing degree programme is for a period of five years where students graduate as Registered Nurses and Registered Midwives with Bachelor's degree. University of Ibadan nursing students' population in the various years 300, 400, 500 were 42, 37 and 36 respectively during data collection.

The School of Nursing, University College Hospital, Ibadan was established in July 1952. The temporary location was at Eleyele. It then relocated to its current site in 1957, following the opening of the first Nigeria College, which accommodated approximately 340 students in a well-equipped, modern classroom block with facilities for practical demonstrations, group tutorials, a science laboratory, and a library. The nursing school is a distinct educational establishment in which student

nurses reside within the premises throughout their period of training. Nursing students' population in the various years 200 and 300 were 68 and 30 respectively during the period of data collection.

The sample size was calculated using Taro Yamane formula: $n = \frac{N}{1+N(e)^2}$. Where N=population size, e=margin of error (0.05) at 95% Confidence level. n=required sample size. One hundred and seven participants formed the sample size. Undergraduate Nursing students in their third, fourth and fifth year of study in University of Ibadan and Nursing students in their second and third year of study in the School of Nursing, UCH, Ibadan was selected purposively to participate in this study because of their more exposure to practicing in clinical postings. Ninety-nine (99) participants were recruited from University of Ibadan and Eighty-eight (88) participants were recruited from School of Nursing, UCH, Ibadan. Each participant was selected randomly using balloting method at each year until the proportion allocated for each level and year were reached.

The inclusion criteria in this study were the all consenting full time nursing students in their third to fifth years of study at the University of Ibadan and nursing students in their second and third years of study at the School of Nursing, UCH, Ibadan. Nursing students who were on part time study, nursing students in their first and second year of study in UI and nursing students in their first year of study at the School of Nursing, UCH, Ibadan respectively, were excluded.

A Self-structured questionnaire with 27 test items was used to obtain information from the respondents. Section A: contained 5 test items that were used to collect sociodemographic data of the respondents. Section B: contained 8 test items (1-8) that were used to identify the challenges faced by the nursing students. Level of challenges they face were further categorized into high challenging and less challenging; the scores ranged from 0-8 on the items list. The minimum obtainable score was 0, while the maximum obtainable score was 8 with mean of 5.87 ± 1.99 . Values from mean score and above were categorized under high

challenges while values below the mean score were categorized under less challenges. Section C: contained 7 test items (1-7) that identified the factors that influenced the challenges faced by nursing students. Section D: contained 7 test items (1-7) which were used to identify some of the procedures that Nursing students found challenging in the course of their implementation.

The content validity of the questionnaire was ensured by giving it to experienced nurse clinicians to review viz-a-viz the specific objectives and necessary corrections were made. Before any data was actually collected, the questionnaire was pre-tested among students in their 3rd year at Lead City University, Ibadan. Test re-test reliability was done by administering 19 questionnaires (10% of the questionnaire) to the respondents and also administering the same questionnaire to the same set of respondents two weeks after. To ascertain the instrument's internal consistency, the test-retest score was statistically tested using Cronbach's alpha reliability coefficient. The instrument's reliability was shown in the obtained Cronbach's alpha coefficient value of 0.70.

Method of Data Analysis

The data obtained was entered, cleaned and coded in spreadsheet for easy analysis using SPSS version 25. The data were analyzed using descriptive statistics and inferential statistics. Categorical variables were presented using frequency (n) and percentage (%) and pie chart. Chi square and Multiple regression analysis were used to test the association between variables. P-value of <0.05 was considered statistically significant.

Ethical considerations

Ethical approval was obtained from the UI/UCH ethical committee with the assigned number of UI/EC/23/0252 and Registration number of NHREC/05/01/2008a before the commencement of the research. Official letter of introduction and permission to collect data was obtained from the Head of the Nursing department, University of Ibadan. Informed consent was signed by all participants with the assurance of anonymity and confidentiality of all information provided by the respondents.

Personal information such as names, home address, phone number was not being collected to ensure the data obtained are as anonymous as possible. Participation in this study did not incur pain or discomfort; time of about 10-15 minutes for each participant was required. Participants were informed of their freedom to withdraw their participation at any point without prejudice.

RESULTS

Socio-demographic Characteristics of Respondents

The mean age of the respondent was 21.5 ± 2.9 years. More than one-fifth (35.3%) of the respondents were in 200 level, majority (82.9%) of them were females, 94.7% of them were single, and majority (80.7%) were from Yoruba ethnic group (Table 1).

Table 1: socio-demographic characteristics of respondents

Variables	Frequency	N=187	Percentage (%)
Age group (21.5 ± 2.9 yrs)			
<20 years	45		24.1
20-24 years	122		66.2
25-29 years	18		9.6
>30 years	2		1.1
Level			
200 level	66		35.3
300 level	60		32.1
400 level	30		16.0
500 level	31		16.6
Gender			
Female	155		82.9
Male	32		17.1
Tribe			
Yoruba	151		80.7
Igbo	27		14.4
Hausa	8		4.3
Marital status			
Single	177		94.7
Married	10		5.3

Challenges Faced by Respondents During Clinical Placement

These are set out in Table 2 and categorized into 'high challenge' and 'less challenge' in Figure 1.

Distribution of respondents according to level of challenges they face

The distribution of the respondents according to level of challenges they face is set out in figure 1. More than half (74.9%) of the respondents found clinical postings to be highly challenging.

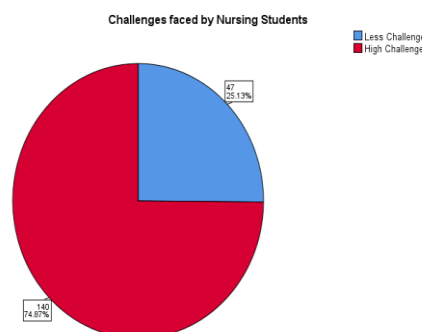


Figure1: Challenges faced by respondents using categorization

Factors that influenced the challenges faced among respondents

Table 3 reveals that inadequate personal protective equipment to work with during clinical placement (92%) and inadequate physical resources to work with on the ward (86.1%) as the major factors that influenced the challenge respondents faced during their clinical placements. Also, fear of making mistakes among students Nurses during clinical placement (54.5%), lack of communication between clinical Nurses and Student Nurses (53.5%) and improper clinical supervision (51.3%) contributed fairly to the challenges faced by the respondents during their placement.

Factors that influenced the challenges faced by respondents

The study revealed that inadequate physical resources to work with on the wards has a significant influence on the challenges faced among respondents ($b = 0.278$, $p = 0.009$) (Table 4). Further deficiency is associated with 0.278 increased additional challenges after controlling other variables in the model. P-value of 0.009 suggests significant influence. The odds of having more challenges are increased by 26.34% with further depletion of physical resources to work with on the ward. Inadequate personal

Table 2: Challenges faced by Respondents during Clinical Placement N=187

Variables	Yes f(%)	No f(%)
Using gloves hand to pack cotton wool into the orifice of a dead patient instead of using artery forceps.	142(75.9)	45(24.1)
Using of a pair of clean gloves when performing catheterization instead of using a pair of clean gloves and a pair of surgical gloves	141(75.4)	46(24.6)
Using of one large sheet instead of two large sheets, a drawing sheet and a drawing mackintosh when making unoccupied bed	157(84.0)	30(16.0)
Dressing wound with one dressing and dissecting forceps instead of using a pair of dressing forceps and a pair of dissecting forceps	129(69.0)	58(31.0)
Using 1 flannel instead of using 8 flannels when tepid sponging patient	145(77.5)	42(22.5)
Not delegated to activities base on the objective of the Clinical placement	111(59.4)	76(40.6)
Only observations that student Nurses do almost all the time during clinical placement	121(64.7)	66(35.3)
There is huge difference between the theory learnt in the classroom and actual clinical placement practice	152(81.3)	35(18.7)

Table 3: Factors that influenced the challenges faced among respondents

Variables	Yes f(%)	No f(%)
Absenteeism of student Nurses from clinical placement from time to time	79(42.2)	108(57.8)
Lack of self confidence among student Nurses.	92(49.2)	95(50.8)
Inadequate physical resources to work with on the ward.	161(86.1)	26(13.9)
Lack of communication between clinical Nurses and Student Nurses.	100(53.5)	87(46.5)
Fear of making mistakes among students Nurses during clinical placement.	102(54.5)	85(45.5)
Improper Clinical supervision.	96(51.3)	91(48.7)
Inadequate personal protective equipment to work with during clinical placement.	172(92.0)	15(8.0)

protective equipment to work with during clinical placement has significant influence on the challenges faced among respondents ($b = 0.213$, $p = 0.003$). Further deficiency is associated with 0.213 increased additional challenges after controlling other variables in the model. P-value of 0.009 suggests significant influence. The odds of having more challenges are increased by 18.85%. $R^2 = 0.705$ depicts that 70.5% of the variables did not significantly influence the challenges.

Common Challenging Procedures

The common procedures respondents found challenging are set out in Table 5. About 56.1% found Last office challenging, 71.8% found Surgical wound dressing challenging, 62.0% found catheterization procedure challenging, and 50.2% found suctioning a patient challenging.

Analysis of Socio-Demographic variables and Factors that Influenced the Challenges faced During Clinical Placement

As shown in Table 6, the study reveals that age is a significant factor that influences challenges faced by students during clinical placement ($b=0.147$, $p=0.008$). Every increase in age is associated with 0.147 increases in ability to face challenges. The

odds of facing more challenges are increased by 26.89% with further increase in age. $R^2 = 0.403$ depicts that 40.3% of the variables are not significantly associated with factors that influence challenges. Sex ($b=0.102$, $p=0.245$) and tribe ($b=0.027$, $p=0.673$) do not have any significant relationship with factors that influence challenges.

Table 4: Factors that influenced the challenges faced by respondents

Variables	Beta coefficient	R2	F	t-value	p-value	Remarks
Absenteeism of student Nurses from clinical placement from time to time	0.038	0.705	2.088	0.604	0.574	No influence
Lack of self confidence among student Nurses	0.053	0.705	2.088	0.849	0.397	No influence
Inadequate physical resources to work with on the ward	0.278	0.705	2.088	2.634	0.009	Significant influence
Lack of communication between clinical Nurses and Student Nurses	0.097	0.705	2.088	1.079	0.282	No influence
Fear of making mistakes among students Nurses during clinical placement	0.011	0.705	2.088	0.531	0.596	No influence
Improper Clinical supervision	0.018	0.705	2.088	0.487	0.627	No influence
Inadequate personal protective equipment to work with during clinical placement	0.213	0.705	2.088	1.885	0.003	Significant influence

Table 5: Procedures that Were Found Challenging by Respondents During the Course of their Implementation

Variables	Yes f (%)	No f (%)
Found Last office challenging	105(56.1)	82(43.9)
Found Surgical wound dressing Challenging	135(71.8)	53(28.2)
Found Catheterization procedure Challenging	116(62.0)	71(38.0)
Found Bed making Procedure Challenging	39(20.9)	148(79.1)
Found Tepid sponging procedure Challenging	21(11.2)	166(88.8)
Found Bed bath procedure Challenging	73(39.0)	114(61.0)
Found suctioning a patient Challenging	94(50.2)	93(49.8)

Table 6: Multiple Regression Analysis of Socio-Demographic variables and Factors that Influenced the Challenges faced During Clinical Placement

Variables	Beta coefficient	R ²	F	t-value	p-value	Remarks
Socio-demographic variables	1.294	0.403	2.750	7.609	0.000	Statistically Significant
Age	0.147	0.403	2.750	2.689	0.008	Statistically Significant
Sex	0.102	0.403	2.750	1.166	0.245	Not significant
Tribe	0.027	0.403	2.750	0.423	0.673	Not significant

DISCUSSION

The findings from this study revealed that more than half of the participants are between 20-24 years with a mean age of 21.5 ± 2.9 years indicating that majority of the students are young. Fewer of the respondents are in 500 levels. More than two-third of the participants are females, with most of them still single. The dominant tribe is the Yoruba ethnic group. These groups of people are in the stage of active learning who are more willing to acquire skills. However, they might be constrained by certain factors and experience conflicts in the course of training. This study found out that there is no relationship between the factors that influenced the challenge faced and the sex of the respondents. In contrast to this, Gemuhay et al. found that there are differences in the ability to face challenges among respondents in relation to sex.³ The study found that male student nurses are more able to face challenges compared to female student nurses in clinical postings.

This study showed that inadequate equipment to work with on the wards has contributed massively to the challenges faced by Nursing students. More than two-third of the respondents found clinical placement to be highly challenging, this could be due to poor practice and undue exposure of the students to infection. Majority of the respondents used gloved hands to pack cotton wool into the orifices of a dead patient instead of using

artery forceps. This can predispose the students to have direct contact with infectious secretion, posing more danger to their health. At most times, catheterization is done using a pair of clean gloves instead of a pair of surgical gloves. This practice can expose the patient to infection and prolong patient's stay in the hospital. This study is in line with study conducted by Amoo et al. found that non-availability of equipment or requirement for complete procedure will create knowledge practice gap leaving the learner confused.¹⁴ Inadequate equipment to work on the ward has created a discrepancy between theory taught in the classroom to the actual practices on the ward.

Furthermore, in bed making, sheets are always improvised instead of using the complete requirement for the procedure. This is also applicable in wound dressing and tepid sponging. This can lead to confusion, frustration and loss of interest in the career. Atakro et al. and De-Swardt, also noted that observed gaps between theory and clinical practice could be attributed to the conflict between the ideal versus actual situations in the clinical environment.^{16,17} A nursing student may not acquire the necessary competencies during clinical postings due to the poor application of theory into practice. Improvising some equipment while working on the ward can lead to confusion and failure on the part of the student especially in the Objective Structured Clinical Examination

(OSCE). Similarly, Moyimane et al.,¹⁸ in their study observed that lack of equipment and frequent improvising affects skill acquisition among students. More than half of the respondents argued that there is huge difference between the theory learnt in the classroom and actual clinical placement practice which was in accordance with the study carried out by Odetola et al.¹ This can be due to lack of adequate resources to carry out the standardized procedures or that clinical nurses tend to use short cuts in carrying out procedure in order to have more times for themselves.

A large percentage of the respondents are of the view that they are not delegated to activities based on the objective of the Clinical placement, and most of the procedures they perform almost all the time is observation of patients. This could lead to loss of interest in the clinical placement as they keep on doing one thing over and over without being exposed to other varieties. In order to motivate the learner, there is need to expose them to varieties of activities in a conducive environment.

The study revealed that inadequate physical resources to work with on the ward have a significant influence on the challenges faced among respondents. Insufficient equipment in Clinical postings lead to more difficulty in getting works done on the ward. This depicts that the odds of having more challenges are increased as physical resources decreases. This is in accordance with the study by Addisie et al. who observed that lack of equipment in clinical practice has significant influence on implementation of procedures.¹³ Similarly, Amoo et al.,¹⁴ and Kadhila et al.⁸ reported that lack of equipment is one of the extrinsic factors that influence challenges faced in clinical practice. Unavailability of physical resource on the wards prevents students from the acquisition of most skills leading to frustration and less interest in the performance of some procedure. In addition, inadequate personal protective equipment (PPE) to work with during clinical placement has significant influence on the challenges faced among respondents. The odds of having

more challenges are increased as availability of PPE decreases. Provision of sufficient PPE to work with during clinical placement would facilitate the active participation of Nursing students in the care of patients and motivate them to learn more during their stay.

Atakro et al.,¹⁶ observed that poor communication between staff nurses working on the ward and student nurses on clinical placement affects students' skill acquisition. However, this study found that absenteeism of student Nurses from clinical placement, lack of self-confidence, lack of communication between clinical Nurses and Student, and Fear of making mistakes do not have significant influence on the challenges faced by nursing students during clinical placement. This can be due to the fact that most students have been to the ward frequently and have become familiar with the Clinical nurses. Similarly, Addisie et al.,¹³ and Baraz et al.,¹⁹ observed that poor communication affects performance of procedure among nurses and this contributes to their challenges. Hence, there is need for strengthening the interactions between clinical staff supervisors, clinical instructors and students to enhance appropriate skill acquisition during clinical placement.

More than half of the respondents found implementing certain procedures to be highly challenging and more than half have difficulty performing last office on dead patients which could be attributed to fear. Greater percentage found it difficult to perform surgical wound dressing; half of them were not able to perform suctioning, while it was a difficult task for majority of them to catheterize the patients. Nursing is practice-based and acquisition of skills occurs over time through regular exposure and experience. This shows that the respondents need to be frequently exposed to these skills for easy mastery. This is in accordance with the findings of Atakro et al.,¹⁶ in Ghana among 35 undergraduate nursing students in two different hospitals who experienced challenges in wound dressing and catheterization. In addition to the identified challenges, Kaliyangile and Ngoma opined that the learning environment has a significant impact in skill acquisition and

competency.²⁰ Hence, a supportive clinical setting is necessary to develop competence. However, greater percentage of the respondents demonstrated competency in bed making Procedure, tepid sponging procedure and Bed bath procedure as these procedures were found to be less challenging which could be due to frequent exposure of the students to such procedures which makes them to have mastery of the procedures.

Implications of Findings to Nursing

Nursing procedures are standardized methods that nurses employ to provide excellent patient care that speeds up the patient's recuperation and enhances their quality of life. However, Nurses face challenges while providing care for patients. Therefore, as frontline health workers, Nurses should be provided with sufficient equipment to work with and adequate PPE to protect themselves against infections. Nursing staff in the clinical settings need to guide the younger ones to acquire sufficient skills that will help to provide Evidence Based Practice. There is need to regularly expose the nursing students to varieties of learning opportunity in order to develop skills in those areas instead of limiting them to only few procedures. Provision of adequate physical resources and complete requirements for procedures helps to promote skill acquisition and competency. Therefore, staff nurses working in clinical settings need to promote competency by ensuring that requirements for procedures are complete and procedures are carried out according to laid down guidelines. Furthermore, the preceptors should work in collaboration with the clinical nurses to ensure that students gain adequate practical knowledge that will align with the ones taught in the classroom. Also, the clinical instructors should work together with the clinical nurses to ensure that the ideal things taught in class correspond to what is being learnt on the ward and there should be regular visits to the clinical placement centres to affirm that what has been taught in the classroom are practiced regularly on the ward.

Limitation of the Study

This study was conducted among federal tertiary institution-based nursing schools in south west Nigeria. This might not be the experience among the state-owned school of nursing, which might hinder its generalization. Despite this limitation, the study provides empirical data on the theory-practice gap among nursing students in a low middle-income country. It is therefore suggested that similar study should be carried out among Nursing students in tertiary institutions in different states.

CONCLUSION

The study revealed that most respondents found clinical placement to be highly challenging. Inadequate physical resources to work with on the ward and inadequate personal protective equipment during clinical placement were the major factors that have significant influence on the challenges faced by the nursing students. Therefore, there is need for the provision of sufficient physical resources and personal protective equipment. Frequent monitoring of the students by the preceptors and clinical instructors is essential to ensure that the procedures carried out on the wards are in line with the ones taught in the classroom.

RECOMMENDATIONS

There is need to provide needed materials in the hospital for successful implementation of nursing care. The government and Hospital management also need to employ more workers into the healthcare system to reduce the workload of nurses to give them room to educate the younger ones. Also, there is need for the development of policy to mandate the implementation of standardized procedures and appropriate teaching methods in clinical placements. Furthermore, nurses working in the clinical setting should ensure that procedures are correctly and properly done to enhance competence.

Acknowledgements

The authors express appreciation to the participants and the organizations in which the study was conducted.

Source of funding

The study did not receive any financial support from any institution or person.

Conflict of Interest

The authors declare that there is no conflict of interest that is capable of influencing our judgments, whether it be financial, personal, political, or academic.

REFERENCES

1. Odetola TD, Oluwasola O, Pimmer C, Akande SO, Dipeolu IO, Olaleye OS, et al. Theory-Practice Gap: The Experiences of Nigerian Nursing Students. *Afr J Nurs Midwifery*. 2018; 20(1):13. <https://doi.org/10.25159/25205293/3694>
2. Arkan B, Ordin Y, Yilmaz D. Undergraduate nursing students' experience related to their clinical learning environment and factors affecting to their clinical learning process. *Nurse Educ Pract*. 2018; 29: 127-132. doi: 10.1016/j.nepr.2017.12.005
3. Gemuhay HM, Kalolo A, Mirisho R, Chipwaza B, Nyangena E. Factors Affecting Performance in Clinical Practice among Preservice Diploma Nursing Students in Northern Tanzania. *Nurs Res Pract*. 2019; 2019:3453085. <https://doi.org/10.1155/2019/3453085>
4. Fadana FP, Vember HF. Experiences of undergraduate nursing students during clinical practice at health facilities in Western Cape, South Africa. *Curationis*. 2021; 44(1): e1-e10. doi: 10.4102/curationis. v44i1.2127
5. Bazrafkan I, Kalyani MN. Nursing students' Experiences of the Clinical Education: A Qualitative study. *Invest Educ Enferm*. 2018; 36(3). doi: 10.17533/udea.iee.v36n3e04.
6. Ekstedt M, Lindblad M, Löfmark A. Nursing students' perception of the clinical learning environment and supervision in relation to two different supervision models—a comparative cross-sectional study. *BMC Nurs*. 2019; 18:49. doi: 10.1186/s12912-019-0375-6.
7. Abdulmutalib IAM, El Seesy NAM, Yousuf SAH. Nursing Students' Opinions on Facilitating and Hindering Factors in the Clinical Training Setting. *American Journal of Nursing Science*. 2019; 8(1):1-8. <https://doi.org/10.11648/j.ajns.20190801.11>
8. Kadhila JG, Pretorius L. Clinical Learning Experiences of Nursing degree Students at the public training hospitals: Khomas Region, Namibia. *Research Square*. 2022; doi.org/10.21203/rs.3.rs-2277663/v1
9. Asirifi M, Ogilvie L, Barton S, Aniteye P, Stobart K, Bilash O, et al. Assessing challenges of clinical education in a baccalaureate nursing program in Ghana. *Journal of Nursing Education and Practice*. 2017; 7(10):109-118. <https://doi.org/10.5430/jnep.v7n10p109>.
10. Azu TD, Druye AA, Owusu-Acheampong E. Clinical Placement: Experiences, School and Hospital-based Gaps and Challenges of Undergraduate Nursing Students of the University of Cape Coast. *Journal of Education and Practice*. 2020; 11(5):24-31. doi:10.7176/JEP/11-5-04.
11. Saara Kertu H, Nuuyoma V. Theory – Practice Gap: Challenges Experienced by Nursing Students at the Satellite Campus of a Higher Education Institution in Namibia. *International Journal of Higher Education*. 2019; 8(5):21-28. doi.org/10.5430/ijhe.v8n5p21
12. Berhe S, Gebretensaye T. Nursing students challenges towards clinical learning environment at the school of nursing and Midwifery in Addis Ababa University. A qualitative study. *International Journal of Africa Nursing Science*. 2021; 15:100378 doi.org/10.1016/j.ijans.2021.100378
13. Addisie A, Cherie A, Gela D, Ataro B. Challenges faced during clinical placement among nursing students. A mixed study conducted at highest institutions in Addis Ababa city, Ethiopia. 2022. Available at Research square: <https://doi.org/10.21203/rs.3.rs-1376645/v1>
14. Amoo SA, Aderoju YBG, Sarfo-Walters R, Doe PF, Okantey C, Boso CM, et al. Nursing Students' Perception of Clinical Teaching and Learning in Ghana: A Descriptive Qualitative Study. *Nursing research and practice*. 2022; 2022:7222196. <https://doi.org/10.1155/2022/7222196>

15. Ugwu NS, Ogbonnaya NP, Chijioke VC, Esievo JN. Causes and effects of theory-practice gap during clinical practice: The lived experiences of baccalaureate nursing students. *International journal of qualitative studies on health and well-being*. 2023; 18(1):2164949.
<https://doi.org/10.1080/17482631.2023.2164949>
16. Atakro CA, Armah E, Menlah A, Garti I. Clinical placement experiences by undergraduate nursing students in selected teaching hospitals in Ghana. *BMC Nursing*. 2019; 18(1):1-20.
<https://doi.org/10.1186/s12912-018-0325-8>
17. De Swardt HC. The clinical environment: A facilitator of professional socialization. *Health SA Gesundheit*. 2019; 24(a):1188.
<https://doi.org/10.4102/hsag.v24i0.1188>
18. Moyimane MB, Mantlala SF, Kekana MP. Experiences of nurses on the critical shortage of medical equipment at a rural district hospital in South Africa: A qualitative study. 2017; 28:100.
doi:10.11604/pamj.2017.28.100.11641
19. Baraz S, Memarian R, Vanaki Z. Learning Challenges of nursing students in clinical Environments: A qualitative study in Iran. *Journal of Education and Health promotion*. 2015; 4(1):1-9.
<https://doi.org/10.1016/j.nepr.2017.12.005>
20. Kaliyangile B, Ngoma CM. Factors Influencing Student Nurses' Clinical Learning during their Clinical Practice at Rusangu University, Monze campus, Zambia. *Curationis*. 2019; 48(1):a1812. DOI: <https://doi.org/10.4102/curationis.v42i1.1812>