FACTORS AFFECTING CLINICAL MEDICAL EDUCATION AND LEARNING AT THE UNIVERSITY OF NIGERIA TEACHING HOSPITAL, ENUGU, NIGERIA.

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ABSTRACT

Background: Assessment of factors affecting clinical medical education and learning at the University of Nigeria Teaching Hospital Enugu.

Aim: The aim of this study was to assess the factors affecting clinical medical education and learning in University of Nigeria Teaching Hospital Enugu, Nigeria from the perspective of the clinical medical students.

Methods: A cross-sectional study was conducted with clinical medical students (400L,500L and 600L) of the University of Nigeria Teaching Hospital Enugu, five research objectives were formulated in carrying out the study. Data were collected using well-structured questionnaires and analyzed using statistical package for social sciences(SPSS) version 27.

Results: There were 393respondents with a mean age 23-25. The majority (217 or 55.2%) of respondents had good attitude and commitment towards clinical postings and attendance to it, 56.7% (223) indicated that patients were not always cooperative, 51% (200) indicated that their monthly allowance are not enough and it has affected their clinical learning, 87.4% (343) also agreed that the lack of accommodation options within the hospital affect their clinical education and learning, 55.4% (218) of the respondents reported that there were not enough medical doctors to teach students during clinical rotations and smaller groups of students will be more effective for clinical learning,.

Conclusion: This study found out good attitude and commitment among the student respondents towards clinical posting, but socio-economic factor, lack of adequate accommodation, low doctors to students ratio, and difficulty patients were noted to negatively affect students' clinical medical education and learning.

Keywords: Clinical education, factors, learning, doctors, students, affecting

INTRODUCTION

Clinical medical education is a pivotal component in the training of future healthcare professionals. It bridges the gap between theoretical knowledge acquired in the classroom and the practical skills needed in a clinical setting. Effective clinical education ensures that medical students are not only knowledgeable but also capable of providing high-quality patient care upon graduation.

The University of Nigeria Teaching Hospital (UNTH) Enugu, as a leading medical training institution, plays a significant role in shaping the competencies of medical students in Nigeria. However, like many medical schools worldwide, UNTH Enugu faces various challenges and influencing factors that impact the quality of clinical education.

Investigation of factors related to the academic performance of medical students becomes a topic of growing interest in the higher educational circle. Many recent studies were carried out to explore factors affecting medical students' academic performance.[1] Research report showed that students' performance is affected by many factors. Among these factors, facility-related factors such as classroom facilities and environment, internet access, overcrowding, dormitory environment, availability of library, and reference books are identified.[2]

Clinical education is a cornerstone in the training of healthcare professionals, ensuring they possess the skills and knowledge necessary to provide quality patient care. Clinical medical education, in particular, provides the student with the opportunity to translate theoretical knowledge into a variety of psychomotor skills needed to care for the patient.[3] Clinical teaching does not limit to teaching alone, rather it actually deals with the process wherein students are supported in their learning process while interacting with real patients during clinical settings. The purpose of the current review was to explore the factors that impact clinical teaching and then propose the potential recommendations to overcome them.[4]

Medical students experience a variety of learning activities in the environs of the medical college, which are usually complex and unique[5] its most important determinant is the curriculum[6.] Students' perceptions of their educational environment have a significant impact on their behavior, academic progress and achievements[7.] Understanding students' perceptions of their educational environment is also useful for improving the quality of learning.[8]

There is a critical need for further research to assess the factors affecting clinical medical education and learning in Nigerian institutions more particularly at the University of Nigeria Teaching Hospital Enugu.

Hence, this study aims to assess these factors affecting effective clinical education from the perspective of clinical medical students of University of Nigeria Teaching Hospital, Enugu Nigeria, so as to bring them to bare and propose potential recommendations to overcome them.

METHODOLOGY

Study Area And Design

This study was conducted in the University of Nigeria Teaching Hospital Ituku Ozalla, Enugu State. This is a cross-sectional study to assess factors affecting clinical medical education and learning amongst clinical medical students at the University of Nigeria Teaching Hospital Enugu, Nigeria.

Study Population

The study population consists of clinical medical students enrolled in the College of Medicine, University of Nigeria. This includes students in the classes of 2026 and 2025 (400 Level A and B), 2024(500 Level) and 2023(600 level) of the faculty of medical sciences, University of Nigeria. The clinical medical students who at the time of study and data collection were critically ill or were on temporal suspension by the academic authority were excluded from the study.

Sample Size Determination

The sample size was calculated and determined using the Cochrane's formula. The minimum sample size used was to be 420.

Sampling Technique

Simple random sampling was used in selecting our respondents. Proportional allocation of samples was done to ascertain the number of students was recruited from each academic level of study using the class list as a frame, and within each class random selection was done to pick our respondents until the sample size was reached.

Data Collection Instruments

A self-administered, structured questionnaire was used to collect data from clinical medical and dental students (400 to 600 level) of the University of Nigeria, Old UNTH and Ituku-Ozalla campuses. The questions were asked to reflect the various objectives of the study.

Data Collection

Data collection was done by members of the research group. Informed consent was sought and obtained before the data collection.

Data Analysis

Data analysis was done using the software Statistical Product and Service Solutions(Version 27). The socio-demographic characteristics of the participants were summarized using descriptive statistics, such as mean and corresponding percentages. Quantitative data was presented using tables and bar charts to provide a visual representation of the findings. Measures such as mean, frequency, percentage, proportion, and standard deviation were used to describe the quantitative data. To assess the significance of data comparisons, the Chi-square test was employed, which is a statistical test used to determine if there is a significant association between categorical variables. By employing these methods, the study aimed to collect and analyze data effectively, ensuring proper representation of participants' characteristics and providing statistically meaningful insights into the relationship between variables of interest.

Ethical Consideration

Ethical clearance was obtained from the Health Research and Ethics Review Committee at the University of Nigeria Teaching Hospital (UNTH). The study was conducted in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its subsequent amendments. Students who agreed to participate in the research provided informed consent. They were assured of the confidentiality of the data they provide for the study. It was made clear to the respondents that they have every right to refuse to participate in the study to ensure their voluntary participation.

RESULTS

We had a response rate of 93.57% as 420 questionnaires were distributed, 393 were returned and properly filled.

	FREQUENCY	PERCENTAGE (%)
GENDER:		
Male	195	49.6
Female	198	50.4

AGE:		
20 – 22	116	29.5
23 – 25	237	60.3
26 – 29	32	8.1
30 and above	8	2.0
MARTIAL STATUS		
Single	373	94.9
Married	17	4.3
Divorced	3	0.8
ETHNICITY		
Igbo	361	93.4
Yoruba	5	1.3
Hausa	3	0.8
Essan	1	0.3
Urhobo	3	0.8
Ibibio	5	1.3
Igala	2	0.5
Ogoni	1	0.3
Nga	1	0.3
Ukwani	1	0.3
Annang	1	0.3
Ebira	1	0.3
Ijaw	2	0.5
RELIGION		
Christianity	384	97.7
Islam	6	1.5
Others	3	0.8
ACADEMIC LEVEL		
400	93	23.7
500	155	39.4
600	145	36.9

The age of the participants ranged between 18 – 42, with a mean age of 23.57 ± 2.22, median age of 23 years and majority between the age of 23-25(60.3%). Majority of the participants were females (50.4%), single (94.9%). Majority of them identified as Christians (97.7%). Participants were drawn from different levels, with most from 500 level (39.4%). Majority of the participants were of the Igbo tribe (93.4%).

SECTION B: TO ASSESS STUDENT'S ATTITUDE AND COMMITMENT AND ITS EFFECT ON THEIR CLINICAL EDUCATION AND LEARNING

Table 2: Student's attitude and commitment

	FREQUENCY	PERCENTAGE (%)
1. Attendance to clinical postings is key toobtaining clinical knowledge and skills		
- **Strongly disagree**	16	4.1
- **Disagree**	13	3.3
- **Neither agree nor disagree**	18	4.6

- **Agree**	139	35.5
- **Strongly agree**	205	52.4
2. I enjoy attending clinical postings		
- **Strongly disagree**	13	3.3
- **Disagree**	41	10.5
- **Neither agree nor disagree**	88	22.5
- **Agree**	204	52.2
- **Strongly agree**	45	11.5
3. How often do you miss clinical postings in a month?		
- **Once**	128	32.9
- **Twice**	137	35.2
- **Thrice**	68	17.5
- **More**	56	14.4
4. I'll go for clinical postings even if attendance was not mandatory?		
- **Strongly disagree**	25	6.4
- **Disagree**	71	18.2
- **Neither agree nor disagree**	69	17.6
- **Agree**	181	46.3
- **Strongly agree**	45	11.5
5. I participate actively and ask questions on concepts I do not understand?		
- **Always**	72	18.4
- **Often**	128	32.7
- **Sometimes**	176	45.0
- **Never**	15	3.8

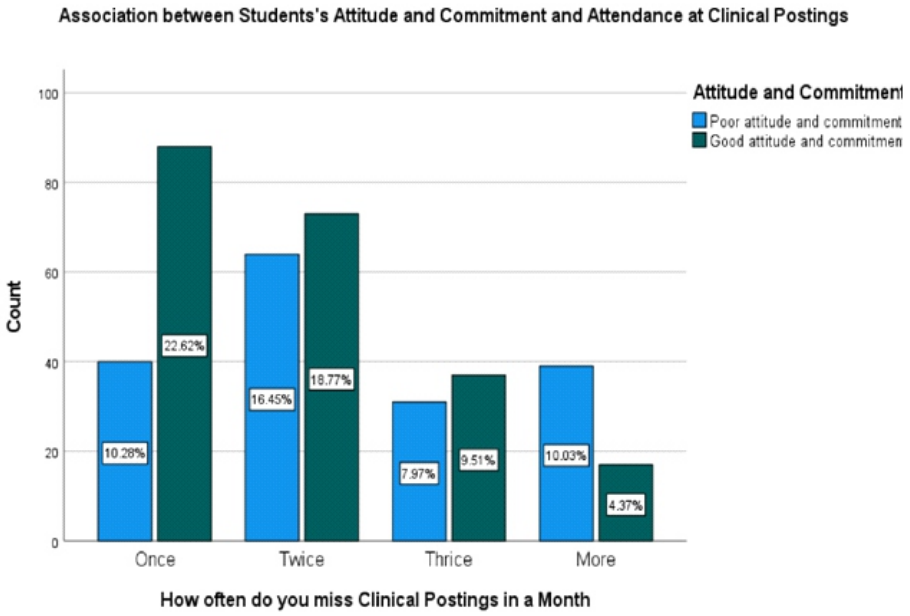
The overall attitude and commitment of students was calculated using 3 questions. A scoring system was used to determine their attitude and commitment, the more positive responses were given a score of 5 and 4, 'I don't know' a score 3 and the more negative answers were assigned 2 and 1. The scores ranged from 4 – 15, those who scored from 12 and above were taken to have good attitude and commitment and below 12, poor attitude and commitment. Majority of the students (55.2%) have good attitude and commitment on their clinical education and learning.

Table 3: Students' Attitude and Commitment to their Clinical Education

	FREQUENCY	PERCENTAGE (%)
Poor attitude and committment	**175**	**44.8**
Good attitude and committment	**216**	**55.2**

****significant p-value (<0.05)**

Table 4: Association between Students' Attitude and Commitment on Clinical Education and Attending Clinical Postings (Monthly)



Variables	Attitude and Cooperations Poor (%)	Good (%)	Chi-square	P-value
How much do you miss clinical postings?			23.706	<0.001*
- **Once**	40 (31.3)	88(68.8)		
- **Twice**	64 (46.7)	73 (53.3)		
- **Thrice**	31 (45.6)	37 (54.4)		
- **More**	39 (69.6)	17 (30.4)		

The Chi square test shows there is a statistically significant association between students' attitude and commitment on clinical education and attending clinical postings ($p<0.05$).

FIGURE 2: A simple bar chart showing the association between students' attitude and commitment on clinical education and attending clinical postings.

SECTION C: ASSESSMENT OF THE EFFECTS OF PATIENTS ATTITUDE AND EXTENT OF COOPERATION ON CLINICAL EDUCATION AND LEARNING

Table 5: Patient's attitude

	FREQUENCY	PERCENTAGE (%)
1. Patients are always cooperative with me?		
- **Yes**	167	43.3
- **No**	219	56.7
2. Have you ever experienced any form of harassment or abuse from patients?		
- **Yes**	69	18.0
- **No**	314	82.0
3. Have you ever resorted to tipping patients off for the sole purpose of getting them to cooperate?		
- **Yes**	191	49.5
- **No**	195	50.5

4.Does this affect your clinical learning?		
- Yes	198	53.8
- No	170	46.2

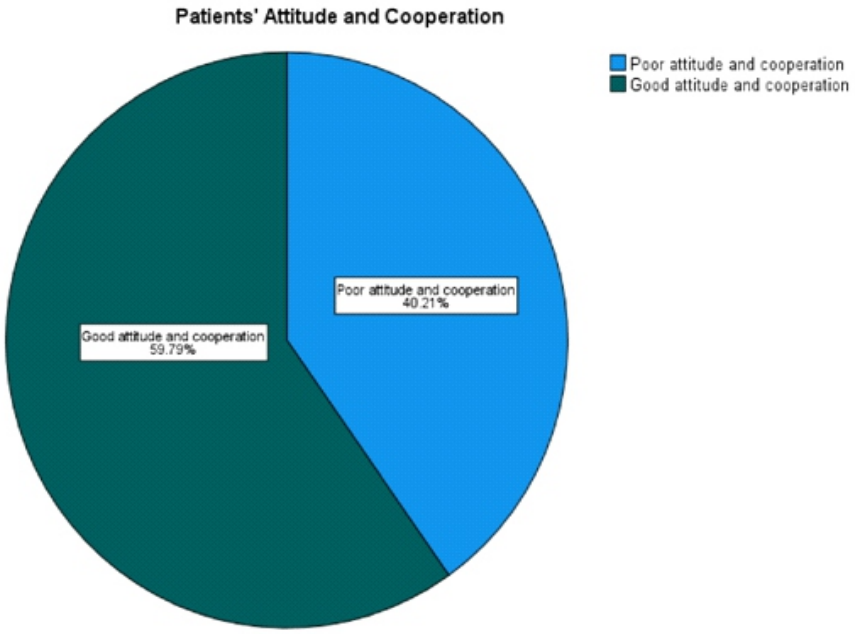
The patients' attitude and cooperation were calculated using 3 questions. A scoring system was used to determine their attitude and cooperation, the positive answer was given a score of 1 and the negative answer a score of 0. The scores ranged from 0 – 3, those who scored from 2 and above were taken to have good attitude and cooperation and below 2, poor attitude and cooperation. Majority of the patients (59.8%) have good attitude and cooperation on students' clinical education and learning.

Table 6: Patients' Attitude and Cooperation

	FREQUENCY	PERCENTAGE (%)
Poor attitude and committment	**175**	**44.8**
Good attitude and committment	**216**	**55.2**

FIGURE 3:a simple pie chart showing patients' attitude and cooperation.

Table 7: Association between Patients' Attitude and Cooperation and Clinical Education and Learning



Variables	Attitude and Cooperations Poor (%)	Good (%)	Chi-square	P-value
Does this affect your clinical learning?			81.818	<0.001*
Yes	122 (61.9)	75 (38.1)		
No	26 (15.4)	143 (84.6)		

Significant p-value (<0.05)

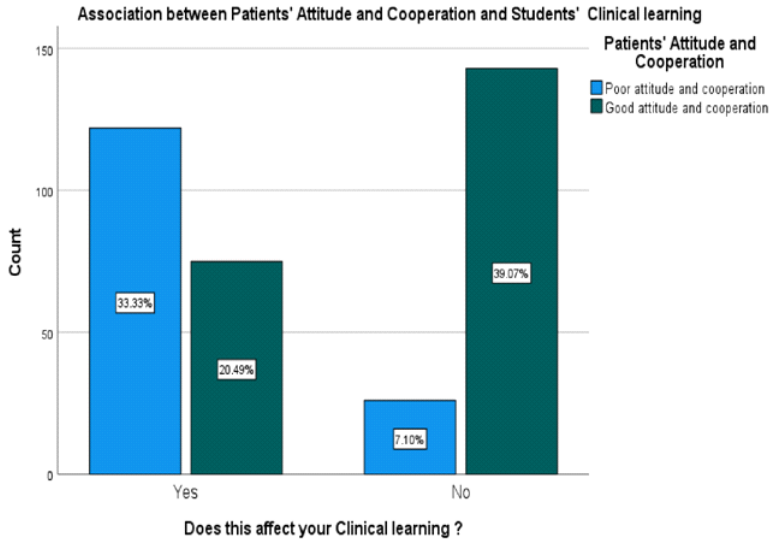
The Chi square test shows there is a statistically significant association between patients'attitude and cooperation and students' clinical education ($p<0.05$).

FIGURE 4: A simple bar chart showing the association between patients' attitude and cooperation and students' clinical education.

SECTION D: TO MEASURE THE EFFECTS SOCIOECONOMIC FACTOR ON CLINICAL EDUCATION AND LEARNING

Table 8: Effect of socioeconomic conditions

	FREQUENCY	PERCENTAGE (%)
1. How much do you receive monthly as allowance in naira (monthly)?		
- **Less than 5,000**	13	3.4
- **5,000 – 10,000**	6	1.5
- **10,000 – 20,000**	31	8.0
- **20,000 – 50,000**	162	41.8
- **Above 50,000**	176	45.4
2. Is the stated amount sufficient for the stated period?		
- **Yes**	126	32.6
- **No**	260	67.4
3. Im still able to forward adequate meals?		
- **Yes**	268	68.9
- **No**	121	31.3
4. I have missed postings/lectures because I didn't have enough money for transportation		
- **Yes**	150	38.7
- **No**	238	61.3
5. I do not have all the necessary clinical equipment because I don't have enough money for transportation?		
- **Yes**	171	44.2
- **No**	216	55.8
6. I have missed clinical postings/lectures because I was too hungry to attend		
- **Yes**	88	22.6
- **No**	302	77.4
7. Has this in any way affected my clinical learning experience?		
- **Yes**	196	51.0
- **No**	188	49.0



The socioeconomic condition of students was calculated using 5 questions. A scoring system was used to determine their socioeconomic conditions, the positive answer was given a score of 1 and the negative answer a score of 0. The scores ranged from 0 – 5, those who scored from 3 and above were taken to have good socioeconomic conditions and below 3, poor socioeconomic conditions. Majority of the students (59.7%) have good socioeconomic conditions.

Table 4.9: Socioeconomic Conditions of Students

	FREQUENCY	PERCENTAGE (%)
Poor attitude and committment	**153**	**40.3**
Good attitude and committment	**227**	**59.7**

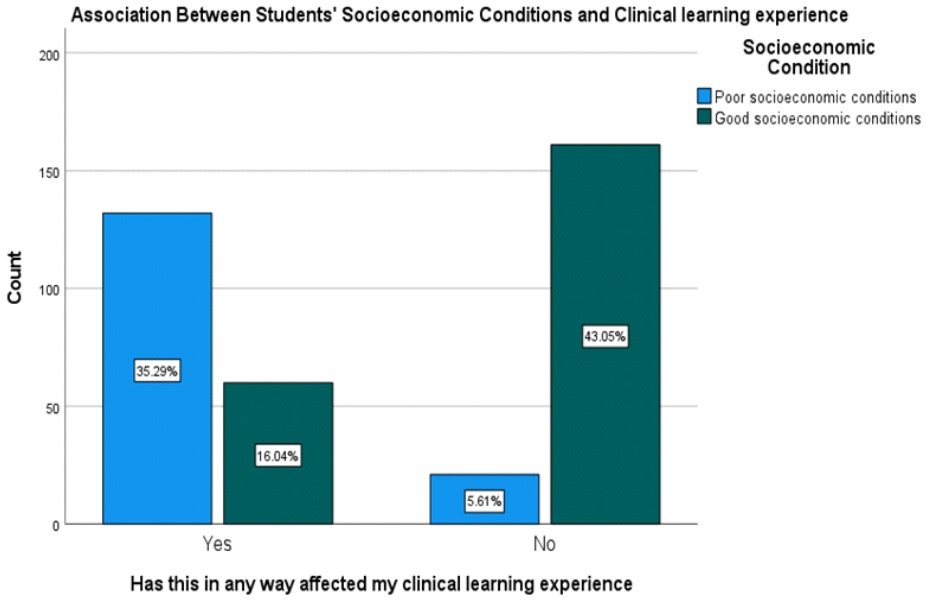
Table 4.10: Association between Students' Socioeconomic Conditions and Students' Clinical Education and Learning

VARIABLE	Attitude and Cooperations Poor (%)	Good (%)	Chi-square	P-value
Does this affect your clinical learning?			126.511	<0.001*
Yes	132 (68.8)	60 (31.3)		
No	21 (11.5)	161 (88.5)		

**significant p-value (<0.05)

The Chi square test shows there is a statistically significant association between students' socioeconomic conditions and students' clinical education (p<0.05).

FIGURE 6: A simple bar chart showing the association between students' socioeconomicconditions and students' clinical education.



SECTION E: EFFECT OF ACCOMMDATION INADEQUACIES ON STUDENT'S CLINICAL EDUCATION AND LEARNING

Table 4.11: Effect of accommodation inadequacies

	FREQUENCY	PERCENTAGE (%)
1. Are you currently living in the hostel?		
- Yes	279	72.7
- No	105	27.3

2. If no, how has the lack of accommodation space affected your student's clinical education/ learning?		
- **Has not affected it**	66	33.2
- **Moderately affected it**	98	49.2
- **Severely affected it**	35	17.6
3. If yes, how would you rate the current accommodation facilities for medical education?		
- **Poor**	127	37.4
- **Fair**	153	45.0
- **Good**	47	13.8
- **Very good**	9	2.6
- **Excellent**	4	1.2
4. How proximal is the hostel to the hospital?		
- **Near**	107	29.3
- **Far**	44	12.1
- **Very far**	214	58.6
5. Is there an available school but that transports you to the hospital?		
- **Yes**	193	51.9
- **No**	179	48.9
6. Do you think you will learn better if the hostel is located within the hospital?		
- **Yes**	345	93.2
- **No**	25	6.8
7. Have you ever considered skipping clinical postings because of the far location of the hospital?		
- **Yes**	291	77.8
- **No**	83	22.2

27.2% of respondents don't currently live in the hostel. Majority (49.2%) believe the lack of hostel has moderately affected them, 17.6% says it has severely affected them while 33.2% says it has not affected them. Majority of students (58.6%) said the hostel is very far from the hospital. There is an available school bus that transports students to the hospital according to 51.9% of respondents.

Majority of students (93.2%) believe they will learn better if the hostel is located within the hospital and 77.8% of students have considered skipping postings because of the far location.

	Agree (%)	Strongly Agree (%)	Disagree (%)	Strongly Disagree (%)
I am satisfied with current accommodation facilities for clinical education	107 (28.1)	22 (5.8)	155 (40.7)	107 (28.1)
The far distance between the hospital and the hostel has greatly affected my clinical learning experience	141 (37.3)	163 (43.1)	56 (14.8)	141 (37.3)
The lack of accommodation options within the hospital has caused me stress or inconvenience during my clinical postings	158 (42.2)	169 (45.2)	30 (8.0)	17 (4.5)

1-Strongly Disagree (SD), 2-Disagree(D), 3-Agree(A), 4-Strongly Agree (SD)

Majority of students (80.4%) agree that the far distance between the hospital and hostel has greatly affected their clinical learning experience.

SECTION F: TO ASCERTAIN THE EFFECT OF STUDENT TO TEACHER RATIO ON STUDENTS' CLINICAL EDUCATION AND LEARNING

Table 4.12: Effect of student to teacher ratio

	FREQUENCY	PERCENTAGE (%)
1. Are there enough teachers (doctors)accessible to you during your clinicalpostings?		
- **Yes**	204	55.6
- **No**	163	44.4
2. How often do you interact with your teachers (doctors) during clincal postings?		
- **Frequently**	124	32.5
- **Occasionally**	197	51.7
- **Rarely**	60	15.7
3. How many are you in your current postinggroup?		
- Below 10	36	9.7
- **10 – 20**	188	50.4
- **21 – 30**	48	12.9
- **31 – 40**	41	11.0
- **41 – 50**	10	2.7
- **Above 50**	50	13.4
4. Do you have an academic adviser?		
- **Yes**	182	48.9
- **No**	190	51.1

Majority of students (55.6%) agree there are enough teachers (doctors) accessible to students during clinical postings. Majority of respondents (51.7%) occasionally interact with teachers (doctors) during postings. About half of the students (50.4%) are between 10 – 20 in their posting group. A good number of students (51.1%) do not have an academic adviser.

Almost all the students (98.7%) agree smaller groups with more individualized attention (doctors) during clinical postings would be preferable. 91.9% of respondents agree they would be more likely to participate in clinical postings if there were fewer students.

	Agree (%)	Strongly Agree (%)	Disagree (%)	Strongly Disagree (%)
There are no enough medical doctors to teach students during clinical rotations	151 (39.3)	62 (16.1)	151 (39.3)	20 (5.2)
Smaller group sizes with more individualized attention from teachers (doctors) during clinical postings would be preferable	110 (28.7)	268 (70.0)	4 (1.0)	1 (0.3)
I would be more likely to participate in clinical postings if there were fewer students	133 (34.9)	217 (57.0)	29 (7.6)	2 (0.5)

1-Strongly Disagree (SD), 2-Disagree(D), 3-Agree(A), 4-Strongly Agree (SD)

DISCUSSION

The respondent population for this research were undergraduate clinical students attending training at UNTH, Ituku-Ozalla. They comprise 50.4% (198) female and 49.6% (195) male students selected from the clinical class groups (400, 500, and 600 level), with an average age range of 23-25 years, 94.9% (373) single and the remaining 5.1% (20) married or divorced. The majority of them were of Igbo ethnicity and Christian religion.

This study found that the majority (more than 80%) of the respondents agreed that attendance at clinical postings is key to obtaining clinical knowledge and skills. Also, 63.7% (250) of the respondents reported that they enjoy attending clinical postings, and about 68.1% (268) of them only missed posting once or twice in a month with 57.8% (227) of them reporting that they would go for clinical postings even if the attendance was not mandatory and the majority of them would always, often or sometimes participate actively and ask questions on concepts they did not understand during postings. The overall attitude and commitment of students to attendance to clinical postings was measured at 55.2% (217) which represents a good attitude and commitment to clinical postings among the respondents, although the self-reporting feature of the questionnaire could affect the generalization and reliability of this data.

Also from the analysis, an association between the students' attitude and commitment to clinical education and attending clinical postings was established, with a statistically significant p-value of <0.001, stating that the attitude and commitment of the student to clinical posting will affect their attendance to same. There have not been enough empirical research around these objectives and therefore the findings can't be discussed alongside findings from other studies.

Also from this study, it was discovered from 56.7% (223) of the respondents that patients are not always cooperative with them. However, the majority of them had never experienced any form of harassment or abuse from patients (82%=322) and had never resorted to tipping the patients off for the sole purpose of getting them to cooperate (50.5%=198). It was reported by 53.8% (211) of the respondents that the patients' attitude affected their clinical learning. The majority of the patients were reported to be cooperative and show a good attitude towards the students on clinical posting. From the analysis, an association between the patients' attitude and cooperation to clinical education and attending clinical postings was established, with a statistically significant p-value of <0.001, stating that the attitude and cooperation of patients to students on clinical posting will affect their attendance to same.

Contrary to this finding, a study done by Onotai L. et al, aimed to determine the overall attitude and perception of patients toward medical students' involvement in their hospital care revealed that there was a high acceptance rate for medical students' involvement in the care delivery among patients[9]. Also, in another study by Izadi P et al, it was found that the total score of patients' attitudes toward the presence of the students was above average. In addition, the total score of patients' feelings toward the presence of the students was also above average[10]. However, these findings do not address the direct objective of our research and cannot be used to compare the findings of our research.

The study found that the majority of the students received more than #50,000 as a monthly allowance. It was also noted that 87.2% (343) of the respondents did not receive less than #20,000 as a monthly allowance. Although the majority of them: (68.9%=271) could afford an adequate meal, (61.3%=241) had not missed lectures/postings because they didn't have enough money for transportation, (55.8%=219) had all the necessary clinical equipment, (77.4%=304) never missed lectures/postings because they were too hungry to attend, it was however noted that the majority (67.4%=265) of the respondents still reported that their monthly allowance was not sufficient for the month, and these factors had affected the clinical learning experience of the majority (51%=200). It was noted generally that 59.7% (235) of the respondents had good socioeconomic conditions. A statistically significant association between students' socioeconomic conditions and students' clinical education was established with a p-value <0.001, stating that students' socioeconomic condition has a significant impact on the student's clinical education.

In a study by Kencie Ely et al, it was found that medical students in the disadvantaged group (lower socioeconomic status) scored significantly lower in their exams than their counterparts with higher socioeconomic status[11]. Contrarily, another study revealed that medical students who receive(s) less than ten thousand naira (≈US$27) every month as upkeep allowance had better academic performance than students who received much more[13]. However, these studies centered on academic performance and not focused on attitude towards clinical education.

Also, from the findings of this study, 72.7% (286) of the students were living in the hostel, of which 82.4% (324) rated the accommodation poor and at most, fair. The majority (70.7% =278) of the respondents reported that the hostel was far from the hospital, although 51.9% (204) reported that there was school bus to transport students to the hospital. 93.2% (366) of the respondents submitted that they would learn better if their hostel was located within the hospital.

It was also noted that 77.8% (306) of the respondents had considered skipping clinical postings because they lived at a far location from the hospital. 66.2% (260) of the respondents were not satisfied with their current accommodation facilities, 80.4% (316) of the respondents agreed the far distance between the hospital and the hostel had greatly affected their clinical learning experiences, and 87.4% (343) also agreed that the lack of accommodation options within the hospital had caused them stress/inconvenience during their clinical postings. It is therefore concluded from these findings that accommodation inadequacies affect the respondents' clinical education and learning.

A study by Salmani et al that the number of students in each department (47.3%) and the attitude of staff and lack of facilities and equipment (47%) were reported as barriers to clinical education.[15] In another descriptive, it was found that shortage of students' accommodation depleted students' performance in that it encouraged truancy and poor concentration of student in their academic work[14]. It is also noted that these findings do not address the direct objectives of our research. Although these findings are related to the objectives of our study, they were all carried out outside Nigeria, none has been done within the country.

The majority (55.6% =219) of the respondents in this study reported that there were enough teachers (Doctors) accessible to them during their clinical postings. Also, only 32.5% (128) of them reported that they often had frequent interactions with their teacher during clinical posting, the others occasionally (51.7% =203) or rarely (15.7% =62) interacted. The majority (60.1% =236) of the respondents reported being 20 and below in a group, but it was also noted that 16.1% (63) of the respondents were more than 40 in their posting group. 51.1% (201) of the respondents did not have an academic adviser. It was noted that 55.4% (218) of the respondents reported that there were not enough medical doctors to teach students during clinical rotations. 98.7% (388) of the respondents agreed that smaller group sizes with more individualized attention from teachers (doctors) during clinical postings would be preferable, and 91.9% (361) of the respondents agreed that they would be more likely to participate in clinical postings if there were fewer students in the posting groups. These responses infer that the student to-teacher ratio affects the students' clinical education and learning.

In a cross-sectional study done by Ofei-Dodoo S et al, majority of their respondents had good clinical experiences which were attributed to interaction with the attending physician supportive residents[15]. However, those who had undesirable clinical experiences attributed it to not having enough patient exposure, the group size of clinical learners, and not having enough time with the attending physicians. In another cross-sectional descriptive study done by Gemuhay HM et al, the majority (60%) of nursing students reported that clinical placement did not provide them with adequate opportunity for effective clinical learning and they mentioned shortage of nurse tutors in clinical areas as the main reason for inadequate clinical learning[16]. Although these findings are related to what this project wants to achieve, it does not directly address the objectives of our study.

Study limitation

1. The participation of the respondents will be voluntary, and the questionnaire will be completed by the students who chose to fill it out. However, the data obtained from the students will be self-reported. This reliance on self-reported data could potentially compromise the accuracy of the study, as the researchers are unable to verify its validity.

2. Due to the busy schedules of the students, they may not be able to give the required attention and time to participate in the research, particularly considering their approaching examinations. This may affect the response rate and potentially introduce bias in the data collected. We were able to avert this by meeting them at their various hostels during the weekends, we also delayed data collection from the 400 level class till they were done with their third professional examination.

CONCLUSION

This study found out good attitude and commitment among the student-respondents towards clinical posting. This was portrayed by the majority of them enjoying clinical posting, not missing posting deliberately, participating actively and asking questions during posting. It was also found from this study that patients' cooperation was not a challenge among the majority of the respondents as the majority had never been harassed by a patient, and had not bribed a patient to be treated.

A significant association was found between patients' and students' attitudes to clinical education and students attending clinical.

It was also found from this study that the socioeconomic condition of students significantly affects students' clinical education. Still from this study, It is concluded that accommodation inadequacies affect the respondents' clinical education and learning as the majority of the respondents reported that they had considered skipping clinical postings because they lived at a far location from the hospital, far distance between the hospital and the hostel had greatly affected their clinical learning experiences, lack of accommodation options within the hospital had caused them stress/inconvenience during their clinical postings. Also, the majority of the respondents reported that there were not enough medical doctors to teach students during clinical rotations, smaller group sizes with more individualized attention from teachers (doctors) during clinical postings would be preferable and that they would be more likely to participate in clinical postings if there were fewer students in the posting groups.

This strengthened the fact that the student-to-teacher ratio affects the students' clinical education and learning.

The paucity of related publications limited the discussion of the findings of this study. There have not been enough studies addressing the direct objectives of this study and it made it difficult to compare the findings of this work to other researchers' findings.

However, these findings will serve as a foundation/ pioneer in this area of research.

RECOMMENDATIONS

From inferences drawn from working on this project and the findings made, we recommend that;

Efforts should be made to locate the students' hostels within or close to their training facilities in order to reduce the stress of them coming from a far place and other risks associated with it.

Their posting group population should be minimized in order to foster more interactions and participation of the students during clinical postings. Attention be given to the environment of training of health workers in the areas of where they live, student-to-patient interactions and vice versa, and bridging the wide gap in student-to-teacher population found in most training institutions.

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