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Teaching approaches among nurse educators and preferred teaching methods among student nurses in southeast Nigeria: A cross-sectional study

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Abstract

This cross sectional study was aimed to identify the prevalent teaching approaches among nurse educators and preferred teaching methods among student nurses in south east Nigeria. Multistage sampling was used to randomly select eleven nursing education institutions in south east Nigeria. A self-administered questionnaire was used for data collection from 328 students and 178 nurse educators. Data was analysed using the Statistical Package for Social Science (SPSS) version 21. Hypotheses were tested using the Mann-Whitney U and Kruskal-Wallis tests at the 0.05 level of significance. The respondents were 85.0% female and 15.0% male educators, while the nursing students were 83.2% and 16.8% female and male, respectively. While brainstorming (96.6%) was the most commonly used method of teaching, there was 82.4% agreement with the enumerated approaches used by nurse educators. Regarding students and nurses, 87.3% preferred all the teaching methods used by the lecturers in the selected institutions in south east Nigeria, and the most appreciated was team based learning (95.4%). There was no significant relationship between the demographic variables of the nurse educators and the prevailing approaches. Similarly, there was no demographic influence on the student's preferences. There is a need for greater training to comprehend and effectively use the game method while teaching for the benefit of the students since, aside from the introduction of games during instruction, nurse educators demonstrate high proficiency in the use of other methods.

Keywords: Nurse educators; Student nurses; Teaching approaches; Preferred methods

1. Introduction

In a developing country like Nigeria, education serves as a social process and a vehicle for acquiring the knowledge, abilities, and attitudes necessary for survival. The importance of teaching and learning in accomplishing academic goals and objectives in any environment cannot be overstated. However, only when learning occurs can instruction be said to be effective (Coe, Aloisi, Higgins, and Major, 2014). Teaching also assist others in acquiring information, abilities, and attitudes. The teacher's actions or behaviours are what cause changes in the students' behaviour. At all stages of education, teaching refers to all procedures and actions intended to transfer information. Adepeju and Mbali (2019) posited that effective teaching strategy are the cornerstone of the future of general nursing and nursing practise. Teaching motivates people to learn. Therefore, when instructing students in the classroom, teachers must employ appropriate innovative teaching practices and tactics. They must train nurses who can take on new challenges and have an innovative, curious mind that has been cultivated via learning practices (Cucha, 2019).

A "teaching strategy" is an educational approach, method, or plan of actions or interactions in the classroom intended to accomplish specific teaching objectives, (Ayua, 2017). An excellent strategy for fostering learning is to create a generalised lesson plan that includes structure, an instructional goal, and an outline of planned approaches (Giridharan and Raju, 2016). Teachers use teaching methods, teaching techniques, and teaching (instructional) strategies to affect

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learning environments and represent their different professional views of teaching and learning (Okpokwasili and Oladipupo, 2019).

Unarguably, in order to meet contemporary nursing roles and care, nursing education requires experienced nurse teachers, clinical supervisors, infrastructure, equipment, and qualified students to meet the challenges in nursing practice. Where these are lacking, lapses and incompetence in the acquisition of nursing skills are bound to occur, which will be translated into practise (Afurobi, Izuagba, Obiefuna, and Ifeagbuo, 2015). Some existing teaching methods include teacher-centered (lecture, simulation, direct teaching), student-centered (role play, project, problem solving, and inquiry method), and teacher-student-centered (discussion, demonstration, and field trip) (Olatunde-Aiyedun and Ogunode, 2021).

Similarly, irrespective of the teaching methodologies employed in imparting knowledge, they influence the performance of students and the future use of the knowledge gained (Carpenter, Delugach, Etzkorn, and Utley, 2013). Given this, there is no one teaching strategy that is sufficient for effective teaching and learning; rather, the optimum teaching approach is the combination of all teaching methods, taking into account the learners' aptitude, strength, and willingness (Obi, 2020). There is no one commonly accepted teaching approach, but all approaches should be student-centered, learning-oriented, and meet the requirements for abilities and expertise for a given professional skill (Babu and VinjayaLakshmi, 2019). It has been proposed that mixing various teaching strategies could improve students' performance.

According to Edeh, Ezegbe, Onwurah, Dike, and Uzodimma (2018) individual nurse educators often use one preferred teaching strategy (lecture method), which may reduce their efficacy of their instruction. This study aimed to pinpoint the preferred teaching approach among student nurses in south-east Nigeria as well as the prevalent approaches used by nurse educators. The study findings could be used by nursing education stake holders for policy decisions and basis for recommendations for use of teaching strategies for better educational outcome. It will also be a valuable addition to the literature in the area of nursing education and teaching-learning methodologies.

Aim of the Study

The aim of the study was to:

- Identify the prevalent teaching approaches among nurse educators in South East Nigeria.
- Ascertain the preferred teaching methods among student nurses in South East Nigeria.

Hypotheses

- There is no significant influence between the socio-demographic variables of nurse educators (gender, age, educational qualification, and years of teaching experience) and their prevalent teaching approaches in South East Nigeria.
- There is no significant influence between the socio-demographic variables (gender, age, and year of study) of nursing students and their preferred teaching approaches among nurse educators in South East Nigeria.

2. Material and methods

A descriptive cross-sectional design was used to survey students of post secondary institutions in the south-east geopolitical zone of Nigeria. A census survey was used for nurse educators because of their small population. A multistage sampling technique was used for the selection of the students from the south east zone nursing institutions for the study.

The instruments that was used for data collection is a researchers developed questionnaire titled "Utilization of Teaching Strategies among Nurse Educators" (UTSANE) for nurse educators and "Preferred Strategies among Students in Nursing Education Institutions" (PSASNE) for student nurses. Each of the questionnaires has two parts. (UTSANE) has Section A, which comprises the respondent's demographic characteristics, and Section B, which contains 14 items that address the prevailing teaching strategies among nurse educators. The students' questionnaire (PSASNE), which has 14 items, was employed to ascertain the teaching methods preferred by students Items of the questionnaire were constructed on a four-point Likert scale, which the respondents rated according to their own dispositions. The items were rated by using 4, 3, 2, and 1, which was interpreted as follows: 4: "Strongly agree," 3: "agree," 2: "disagree," and 1: "strongly disagree."

The instruments were carefully scrutinized for face and content validity by experts. Face and content validity determined the lucidity, appropriateness, precision, and relevance of the content of the instrument to the objectives of the study. The Cronbach's Alpha coefficient was used to determine the reliability index for prevalent teaching approaches used by nurse educators in southeast and the preferred teaching method among students were 0.838 and 0.78, respectively.

The questionnaire was distributed to the respondents in their various schools and offices, where some answered it on the spot and returned, while others were given and collected on a predetermined date for the nurse educators. During the break period, students completed their own survey in their classes. All the distributed questionnaire were returned. Four months were spent for data collection

Descriptive and inferential statistics were used for the analysis. The Statistical Package for Social Science (SPSS) version 21 was used to analyse the collated data. The result was presented in pie charts and tables, while Mann-Whitney U and Kruskal-Wallis tests were used to test all the hypotheses in this study at 0.05 level of significance.

3. Results

Table 1 Socio-demographic variables of the Nurse Educators and students

Variables	Class	Frequency	Percentage
Nurse Educators			
Gender	Male	26	15.0
	Female	151	85.0
Age (years)	21-30	19	10.7
	31-40	86	48.6
	41-50	53	30.0
	>50	19	10.7
Highest education Qualification	Registered nurse/ registered midwife	31	17.5
	B.Ed.	92	52.0
	BSc	36	20.3
	MSc	18	10.2
Years of teaching experience	1-5	73	41.2
	6-10	60	33.9
	11-15	21	11.9
	16-20	11	6.2
	21 and above	12	6.8
Students			
Gender	Male	55	16.8
	Female	272	83.2
Age (years)	16-20	82	25.1
	21-25	178	54.4
	26-30	50	15.3
	31 and above	17	5.2
Year of study	Year 2	172	52.6
	Year 3	155	47.4

Table 1.1 shows the demographic characteristics of the respondents. The study revealed more female nurse educators (85.0%) than male nurse educators (15.0%). In terms of age, (48.6%) were between the ages of 31 and 40, (30.0%), (41-50 years), (21-30 years), and (10.7%) were under the age of 50. In terms of education, the majority (52.0%) had a

B.Ed., 20.3% had a B.Sc., 17.5% had an RN/RM, and 10.2% had an M.Sc. Regarding teaching experience, 1–5 years was 41.2%, 6–10 years was 33.9%, 11–15 years was 11.9%, 21 and above was 6.8%, and 16–20 years was 6.2%.

Turning to students, a greater percentage (83.2%) were females (272), while the males were 55 (16.8%). Their ages were 54.4% (21–25 years), 25.1% (16–20 years), 15.3% (26–30 years), and 5.2% (31 and above). Finally, looking at their year of study, 172 (52.6) were in their second year, whereas 155 (47.4) were third year students.

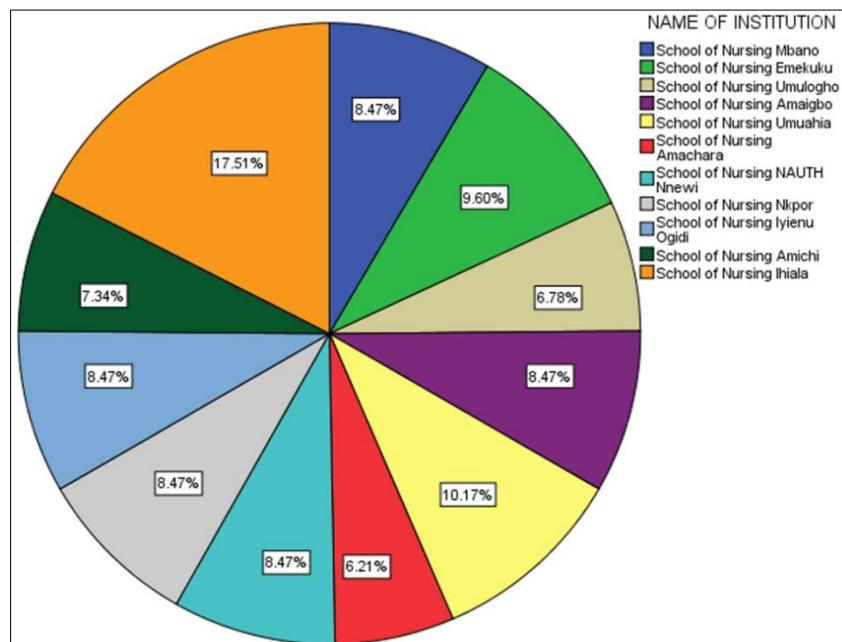


Figure 1 Proportion of participants (Nurse Educators) from Nursing Education Institutions

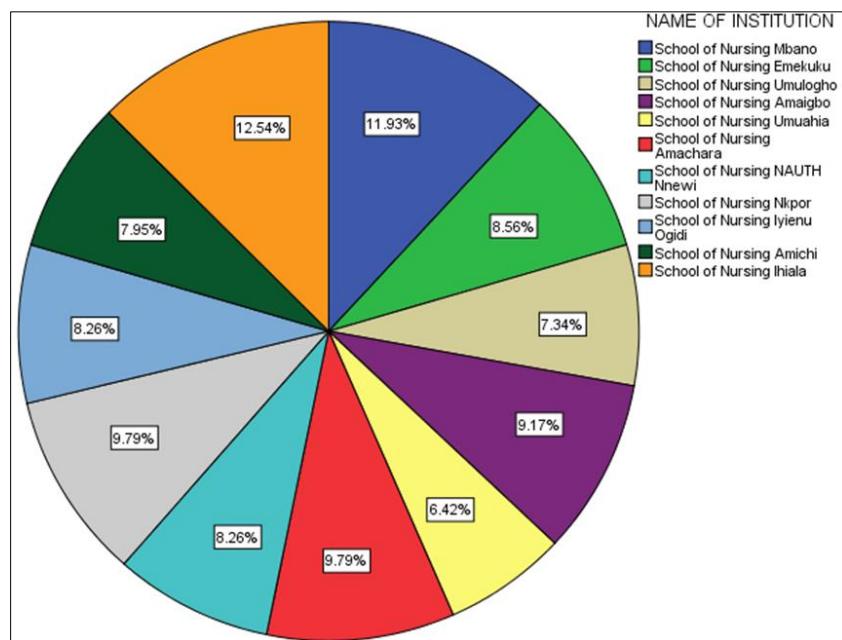


Figure 2 Proportion of participants (students) from Nursing Education Institutions

3.1. Research question 1

What are prevalent teaching approaches among nurse educators in South East Nigeria.

Table 2 Prevalent Teaching approaches among nurse educators in South East Nigeria

Teaching methods	Agree f(%)	Disagree f(%)	Remark
I allow students to contribute ideas spontaneously during teaching (brain storming).	171(96.6)	6(3.4)	Mostly utilized
I discuss topics with students during lectures.	168(94.9)	9(5.1)	Mostly utilized
I do practicals with my students after teaching them theories.	160(90.4)	17(9.6)	Mostly utilized
I introduce games during teaching in my school.	53(29.9)	124(70.1)	Hardly utilized
I use lecture as a method of teaching during class.	137(77.4)	40(22.6)	Mostly utilized
I imitate representation of the functioning of one system by means of functioning of another during lectures.	126(71.2)	51(28.8)	<i>Mostly utilized</i>
I allow students to connect ideas to existing knowledge by creating a visual map of the connection.	160(90.4)	17(9.6)	Mostly utilized
I ask students to dramatize an event or situation during teaching.	137(77.4)	40(22.6)	Mostly utilized
I give content of many topics to my students to teach during lectures in my school.	141(79.7)	36(20.3)	Mostly utilized
I present realistic patient scenarios, ask questions and require students to search for holistic answers during teaching.	157(88.7)	20(11.3)	Mostly utilized
I ask all students to research on topic and after they will debate on the same topic.	154(87.0)	23(13.0)	Mostly utilized
I make my students to feel as a part of a team to achieve the same goal.	169(95.5)	8(4.5)	Mostly utilized
I organize clinical conferences and make sure that all students are present during the conferences.	160(90.4)	17(9.6)	Mostly utilized
I ask students to go online to get information about the topic I want to discuss	150(84.7)	27(15.3)	Mostly utilized
Total	1154.2	245.8	
The mean percentage score	82.4%	17.6%	Mostly utilized

Decision Rule:> 50% utilized,<50% not utilized.

Table 1.3 shows the prevalent teaching methods among nurse educators in southeast Nigeria. Data showed that all 178 nurse educators who took part in the study used effective teaching methods. The mean percentage score is 82.4%, showing that nurse educators mostly used all the teaching methods enumerated except the introduction of games (17.6) during teaching.

3.2. Research question 2

What are the preferred teaching methods among student nurses in South East Nigeria

Table 3 Teaching methods Preferred by nursing students in South East Nigeria

Teaching Methods	Agree f(%)	Disagree f(%)	Remark
I would have preferred my teacher to allow me to contribute ideas spontaneously during lectures.	302(92.4)	25(7.6)	Mostly preferred
I would have preferred if my teacher discusses topics with me during lectures.	307(93.9)	20(6.1)	Mostly preferred
I would have preferred my teacher to do practical with me after teaching theories.	306(93.6)	21(6.4)	Mostly preferred
I would have preferred my teacher to introduce games while teaching in class.	250(76.5)	77(23.5)	Mostly preferred
I would have preferred my teacher to teach me instead of contributing during lectures.	231(70.6)	96(29.4)	Mostly preferred
I would have preferred my teacher to imitate representations of functioning of one system by means of functioning of another during lectures.	268(82.0)	59(18.0)	Mostly preferred
I would have preferred my teacher to allow me to connect ideas to existing knowledge by creating a visual map of the connection.	293(89.6)	34(10.4)	Mostly preferred
I would have preferred my teacher to ask me to dramatize an event or situation during lectures.	262(80.1)	65(19.9)	Mostly preferred
I would have preferred my teacher to give me a content of many topics to teach during lectures	258(78.9)	69(21.1)	Mostly preferred
I would have preferred my teacher to present realistic patient scenarios, ask questions and require me to search for holistic answers during teaching	297(90.8)	30(9.2)	Mostly preferred
I would have preferred my teacher to allow me to research on a topic and after, all students will debate on the same topic.	303(92.7)	24(7.3)	Mostly preferred
I would have preferred my teacher to make me feel as a part of a team to achieve the same goal.	312(95.4)	15(4.6)	Mostly preferred
I would have preferred my teacher to organize clinical conferences and make sure that I am present during the conferences.	304(93.0)	23(7.0)	Mostly preferred
I would have preferred my teacher to ask me to go online to get information about the topics.	301(92.0)	26(8.0)	Mostly preferred
Total	1222	179	
Mean percentage score	87.3%	12.7%	Mostly preferred

Decision Rule:> 50% preferred,<50% Not preferred.

Table 1.3 indicates the preferred teaching methods of nursing students in south-east Nigeria. Data indicated that students preferred all the teaching methods. The mean percentage was 87.3%, which is greater than 50%, showing that students most preferred all the teaching methods enumerated.

3.3. Hypotheses

3.3.1. H_01

Table 4 Mann-Whitney U and Kruskal-Wallis Tests assessing the influence of socio-demographic variables of nurse educators on their prevalent teaching approaches.

Variables	Class	Mean rank	U/K	P
Gender	Male	92.35	1876.00	0.72
	Female	88.42		
Age (years)	21-30	96.29	4.34	0.23
	31-40	83.76		
	41-50	87.60		
	>50	109.32		
Highest education Qualification	Registered nurse/ registered midwife	66.37	11.71	0.01*
	B.Ed.	87.13		
	BSc	103.86		
	MSc	107.81		
Years of teaching experience	1-5	103.37	16.9	<0.01*
	6-10	73.88		
	11-15	70.17		
	16-20	84.45		
	21 and above	114.29		

KEY: *= Significant p<0.05

Table 1.4 compares nurse educators' socio-demographic variables (gender, age, education qualification, and years of teaching experience) and their prevailing teaching methods

3.3.2. H_02

Table 5 Mann-Whitney U and Kruskal-Wallis Tests assessing the influence of socio-demographic variables of nursing students on their preference of the teaching methods utilized by their teachers

Variables	Class	Mean rank	U/K	P
Gender	Male	158.32	7064.50	0.66
	Female	164.53		
Age (years)	16-20	158.30	1.42	0.70
	21-25	167.92		
	26-30	166.27		
	31 and above	143.74		
Years of study	Year 2	163.27	13205.00	0.88
	Year 3	164.81		

KEY: *= Significant p<0.05

Table 4.8 shows comparison of socio demographic profile of nursing students (gender, age and years of study) and their preferred teaching methods utilized by nurse educators.

4. Discussion

4.1. What are prevalent teaching approaches among nurse educators in south east Nigeria?

The study clearly revealed agreement with 82.4% of the prevalent teaching approaches used by the nursing educators, which implies an effective application of the enumerated methods except for exposure to games (29.9%) during teaching by the nurse educators in the selected institutions in the south-east of Nigeria. In addition, 96.6% of nurse educators in these institutions employed brainstorming techniques. This finding is surprising because over the years educators often employ lecture as a predominant instructional strategy. This finding is similar to the findings of Sanda and Mazila (2017), Basheer, Hugerat, Kortam, and Hofstein (2017), and Norseha (2016), whose studies showed that teachers utilised all the teaching methods, especially brainstorming, which increases confidence, participation, motivation and student-centeredness during teaching. The finding differs from that of Edeh et al. (2018), who discovered that teachers primarily rely on the lecture method when teaching, Wege and Shuana (2020), discovered that simulation and the lecture method were the primary teaching methods used by teachers. However, the majority of the approaches were more than 50% effective, which shows their efficacy. Even so, ineffective use of teaching approaches was attributed to the insufficient facilitation skills of the teachers, resource constraints, a lack of incentives, and misconceptions about teaching practices (Adepeju and Mbali, 2019) Although the introduction of games during teaching has been posited to be rare because its place in teaching and learning is not yet understood, (Aina, 2013).

4.2. What are the preferred teaching method among student nurses in south east Nigeria

The study revealed that 87.3% of the students preferred all teaching methods and teaching approaches used by lecturers in the selected institutions in south-eastern Nigeria. The use of team based learning (95.4%) during lecturing was mostly appreciated, followed by the use of discussion (93.9%). This finding is similar to the findings of Leela, Latt, Afrose, and Khaing, (2018), whose findings revealed that the majority of students (70%) preferred team based learning during teaching. It was also discovered that every other preferred method exceeded the 50% rule: practical demonstration (93.6%), clinical conference (93.0%), debating (92.7%), brainstorming (92.4%), online (92.0%), problem based learning (90.8%), visual map (89.6%), simulation (82.0%), dramatisation (80.1%), jigsaw based learning (78.9%), games (76.5%), and lecture method (70.6%). This finding is consistent with Nyarko and Torto (2014), where it was revealed that the majority of students (95.4%) preferred their teachers to utilise all teaching methods during teaching. Also the finding is similar to that of Akinyemi, Uyanne, Udeojo, and Oladele (2021), Oyibe, and Nnamani (2014), where students and their lecturers preferred a teacher-student centered strategy using discussion and demonstration. It might be of interest to note that some educators in some of the selected schools rely on note taking methods as the only instructional methods for classroom interaction. (Oyibe and Nnamani, 2014). Therefore, it is crucial that lecturers endeavour to make their classes interesting and more interactive by using appropriate methods to teach particular concept (Olatunde-Aiyedun and Ogunode, 2021). Teachers using different teaching methods and approaches could help learners to know their preferred learning methods and bring about better educational outcomes. On the other hand, this finding contradicts that of Wege and Shauna (2020), study where they discovered that simulation and lecture methods as the most preferred teaching methods by nursing students.

4.3. Hypothesis 1

There was no significant influence between socio demographic variables of nurse educators (gender, age, educational qualification and years of teaching experience) and their level of utilization of teaching methods in nursing education institutions in south East Nigeria.

The relationship between the socio-demographic variables of nurse educators (gender, age, education qualification, and years of teaching experience) and their prevalent teaching methods shows that there is no relationship between the demographic characters and the main variable.

The findings revealed no significant relationship between the gender of the educators and the teaching methods they used. This implies that no specific techniques are associated with either the male or female teachers in the schools selected in south-east Nigeria. It was also indicated that the lecturers age posed no influence on the methods of teaching. Similar to their teaching experience, their educational qualifications had no influence on the prevalent teaching methods in the selected schools. This finding corroborates the findings of Amadi and Allagoa (2017), whose study revealed that age, educational qualification, years of teaching experience, and gender of the teachers had no significant influence on how they imparted knowledge in class. On the other hand, the findings contradict Dea and Negassa, (2019) findings. The study revealed that teachers' educational qualifications and years of teaching experience have implications for instructional practices.

4.4. Hypothesis 2

There is no significant influence between socio demographic profile of nursing students and their preference on the teaching methods utilized by nurse educators.

The study found no significant relationship between nursing students' socio-demographic variables (gender, age, and year of study) and their preferred teaching methods used by nurse educators. The null hypothesis was accepted.

The findings revealed that neither the genders nor the ages of the students influence their preferred method of teaching as used by the nurse educators. The females' mean score was 164.53, higher than the males' 158.32, demonstrating female dominance in the nursing profession ab initio (Akinwale, and George 2020). and despite the fact that the student's age has no influence on the student's preference for the method used in teaching by the lecturers, the student within the age bracket of 21–25 had the highest mean among its categories, which can be inferred that their impact is felt negatively. Comparably, the student year of study registered no influence on their preferred teaching methods. Inasmuch as the researchers could not lay hands on empirical studies that could be used to compare the hypothesis, the student opted for the use of team-based learning (95.4%) techniques as the most preferred teaching technique used by their lecturers.

5. Conclusion

Except for the introduction of games during teaching, the nurse educators show high prowess in the use of other methods, and there is a need for more training to understand and apply the game method while teaching for the benefit of the students. The student nurses preferred all the teaching methods and the most preferred was brainstorming. There is no significant relationship between the sociodemographic variable and the prevalent teaching methods used by nurse educators. There is no statistically significant relationship between sociodemographic variables and nursing students' preferred teaching methods used by nurse educators.

Recommendation

It is recommended that school staff obtain expertise in the use of games as a teaching method, and also step down the training for other lecturers on how to use games as a teaching-learning strategy in schools. To improve the use of teaching methodologies, the government and other nursing education stakeholders as a matter of necessity should recommend and approve in-service programmes, update courses, seminars, and workshops for nursing teachers.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors of this paper declare that there are no conflicts of interest.

Statement of informed consent

The Human Research and Ethics committee of the Faculty of Health Sciences and Technology, Nnamdi Azikiwe University, Nnewi Campus, granted ethical approval for this study after receiving a working outline of the work that included the study's goals and instruments. The administrators of the selected institutions for the study gave their permission, and the respondents gave their informed consent.

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