Journal of Experimental Research

March 2019, Vol 7 No 1

Email: editorinchief.erjournal@gmail.com editorialsecretary.erjournal@gmail.com

Received: Jan., 2019
Accepted for Publication: March, 2019

Are Medical Students Satisfied with Medical Training? A Study Among Students of College of Health Sciences, Ebonyi State University Abakaliki, Nigeria

Ossai EN,[1*] Alo AT,[1] Onwe BC,[1] Okoro DO,[1] Ezeagu NE,[1] Ogbonnaya LU[1]

[1]Departent of Community Medicine, College of Health Sciences, Ebonyi State University Abakaliki, Nigeria

***Author for Correspondence:** ossai_2@yahoo.co.uk

Abstract

Undergraduate medical training is considered the most important stage in medical education. The study was designed to determine whether medical students of Ebonyi State University Abakaliki, Nigeria were satisfied with their training in Medicine. This was a descriptive cross-sectional study. All medical students of the institution who have spent one full academic session in the university were included in the study. Information was obtained using a self-administered questionnaire. Three hundred and eighty five students participated in the study representing a response rate of 83.7%. The mean age of respondents was 23.2±3.4 years and majority, 64.2% were males. Majority, 62.6% were satisfied with quality of lecturing. A minor proportion, 19.5% were of the opinion that the university library was well equipped. Also, 27.3% opined that medical training obtained in the university matches international standards. Majority, 57.4% were satisfied with their training in Medicine. Predictors of satisfaction with medical training included being willing to study Medicine again, (AOR= 2.8, 95% CI: 1.8- 4.3) and having good interactions with lecturers during classes, (AOR= 2.0, 95% CI: 1.1- 3.4). Majority of the respondents were not satisfied with the state of infrastructure in the institution. Perhaps, this prompted the students to infer that their training does not meet international standard. However majority of the students were satisfied with their medical training. There is need to improve on the state of infrastructure/amenities in the medical school. A supportive academic staff especially during academic activities is invaluable in the training of medical doctors and should be encouraged.

Keywords: Satisfaction, medical training, medical students, Ebonyi State, Nigeria

INTRODUCTION

Undergraduate medical training is reputed to be the most important stage in medical education (Kim et al. 2016). In Nigeria, undergraduate medical training spans through a period of six years. The first year of study is regarded as a preliminary year and lectures are received at the Faculty of Science. The second and third academic years are referred to as the pre-clinical study years while the fourth to the final year belong to the clinical period of training. Nigeria at present has 41 accredited medical schools including seven that are privately owned (Bentenblog, 2018), and it is expected that the number will increase in the coming years. It is in line with this observation that the country is regarded as having one of the largest concentration of human resource for health in Africa (WHO, 2008).

In university education, the satisfaction of students is an important indicator of the quality of education programmes in any university. Thus the opinion and satisfaction of students are very important in the assessment of teaching and may be of relevance in identifying positive and deficient areas in the educational programme that may require revisions (Masic, 2013, Serwah et al. 2015). For example, in the United States, the Graduate Exit Questionnaire is a part of the routine educational process during which the medical graduates in that country evaluate the educational programme and this is utilized for quality assurance and curriculum revision (Bandaranayake, 1989).

There is evidence that medical students who are satisfied with their clinical training have better academic performances hence higher grade point averages than those who were not satisfied (Ziaee et al. 2004). Also, the medical students of today form the physician workforce

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of tomorrow and the satisfaction of physicians have been found to be associated with the satisfaction of their patients (Haas et al. 2000), and this has been linked to good patient outcomes (Katz, 1999).This brings to the fore the relevance of satisfaction with medical training among medical students. Furthermore, medical students who are satisfied with medical training have been found to be twice less likely to be stressed during the period of training when compared with those who were not satisfied (Ossai et al. 2019). Undoubtedly, stress has been found to be associated with the training of health professionals including medical students (Sreeramareddy et al. 2007), and high academic stress among the medical students lead to poor academic performance (Asani et al. 2016). However, satisfaction with medical training has been interpreted as the state of well-being among the students during the period of training (Ossai et al. 2019). This study was designed to determine the satisfaction levels with medical training among students of College of Health Sciences, Ebonyi State University Abakaliki, Nigeria.

MATERIALS AND METHODS

Description of study area

Ebonyi State University, Abakaliki, Nigeria was founded in 1999. This followed the creation of Ebonyi State from the old Enugu and Abia States in 1996. Thus the Abakaliki campus of the then Enugu State University of Science and Technology was upgraded to Ebonyi State University College by the State Edict of 1998 and it remained affiliated to its parent university until 1999 when it became a full-fledged university. The medial school of the university like others in Nigeria has 6 classes regarded as levels. The second and third year study periods belong to the pre-clinical school while 400 to 600 levels are regarded as the clinical period of training. The university admits an average of one hundred students each year to study Medicine in the College of Health Sciences of the institution.

Study design and population

This was a descriptive cross sectional study. The study population were medical students of Ebonyi State University Abakaliki, Nigeria. For inclusion in the study, the student must have completed one full academic session in the university. Medical students who refused to give consent to participate in the study and those not available during the period of data collection were excluded from the study.

Sample size determination and study instrument

This was a total population study of all medical students in Ebonyi State University from the second to final year. A total of three hundred and eighty five students participated in the study representing a response rate of 83.7%. The study instrument was a pre tested, semi-structured questionnaire which was developed by the researchers. The questionnaire was self-administered. The perception of the quality of medical education was assessed using a five point Likert scale that included strongly agree, agree, disagree, strongly disagree and don't know. The responses of the respondents were categorized into two, Yes and No.

Statistical Analysis

Data entry and analysis were done using IBM Statistical Package for Social Sciences (SPSS) version 22. Frequency tables and cross-tabulations were generated. Chi square test of statistical significance and multivariate analysis using binary logistic regression were used in the analysis and the level of statistical significance was determined by a p value of < 0.05.

Satisfaction with medical training was assessed using a single variable, Are you satisfied with medical training? Any respondent whose response was in the affirmative was regarded as being satisfied with medical training.

Multivariate analysis using binary logistic regression was used to determine the predictors of satisfaction with medical training among the students. Variables that had a p value of less than 0.2 on bivariate analysis (educational attainment of fathers and mothers, place of family residence, location of secondary school, willingness to study Medicine again, good relationship with lecturers and goof interaction with lecturers during classes) were entered into the logistic regression model to determine the predictors of satisfaction with medical training (willingness to study Medicine again and good interactions with lecturers during classes). The

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results of the logistic regression analysis were reported using adjusted odds ratio and 95% confidential interval and the level of statistical significance was determined by a p value of <0.05.

In determining the predictors of satisfaction with medical training, the age of respondents was categorized into two, those <24 years and those ≥ 24 years. The basis for this was the mean age of the respondents which was 23.2±3.4 years. Also, the educational attainment of fathers and mothers of the respondents were categorized into two, tertiary education and secondary education and less.

Ethical consideration

Ethical approval for the study was obtained from the Research and Ethics Committee of Ebonyi State University Abakaliki, Nigeria. The students were required to sign a written informed consent form before participating in the study. The nature of the study, its relevance and the level of participation of the students were explained to them. The students were informed that participation in the study was voluntary. They were also assured that all information as provided in the questionnaire will be treated confidentially and anonymously.

RESULTS

Table 1: Socio-demographic characteristics of respondents

Variable	Frequency (n=385)	Percent (%)
Age of respondents		
Mean ±(SD)	23.2±3.4	
Age of respondents in groups		
<20 years	49	12.5
20-24 years	222	57.7
=25 years	114	29.6
Academic level		
200 level	86	22.3
300 level	79	20.5
400 level	79	20.5
500 level	79	20.5
600 level	62	16.1
Gender		
Male	247	64.2
Female	138	35.8
Ethnic group of respondent		
Igbo	371	96.4
Yoruba	4	1.0
Minority groups	10	2.6
Marital status		
Single	369	95.8
Married	16	4.2

Table 1 shows the socio-demographic characteristics of the respondents. The mean age of the respondents was 23.2±3.4 years and majority of the respondents, 57.7% were in the age group, 20-24 years. The highest proportion of the respondents, 22.3% were in the 200 level class. Majority of the respondents, 64.2% were males.

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Table 2: Perception of quality of medical education

Variable	Frequency (n=385)	Percent (%)
Satisfied with quality of lecturing		
Yes	241	62.6
No	144	37.4
Academic workload is much		
Yes	290	75.3
No	95	24.7
Multiple method of assessment improves knowledge		
Yes	291	75.6
No	94	24.4
School fees is appropriate		
Yes	124	32.2
No	261	67.8
University hostel is comfortable		
Yes	59	15.3
No	326	84.7
University library is well equipped		
Yes	75	19.5
No	310	80.5
Medical education matches international standard		
Yes	105	27.3
No	280	72.7

Table 2 shows the perception of medical education among the respondents. Majority of the respondents, 62.6% were satisfied with the quality of lecturing at the medical school. Less than a third of the respondents, 32.2% were of the opinion that the school fees was appropriate for the medical training. A minor proportion of the respondents, 27.3% were convinced that the education received matches international standards. Majority, 74.3% had good interactions with lecturers during classes.

Table 3: Suggestions on how to improve medical training in the university by the respondents

Variable	Frequency (n=385)	Percent (%)
Suggestions on how to improve medical training		
Improve infrastructure/amenities	209	54.3
Good time management by authorities (to avoid/minimize delays)	83	21.6
Good relationship/guidance by lecturers	59	12.2
No comment	39	10.1

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Table 3 shows the suggestions by the respondents on how to improve medical training in the university. The three suggestions by the students on how to improve medical training included, improvements in infrastructure and amenities, 54.3%, good time management by authorities to avoid or minimize delays, 21.6% and good relationship/guidance by lecturers, 12.2%.

Table 4: Satisfaction with medical training

Variable	Frequency (n=385)	Percent (%)
Satisfied with medical training		
Yes	221	57.4
No	164	42.5
Academic level	**(n=221)**	
200 level	52	60.5
300 level	39	49.4
400 level	55	69.6
500 level	44	55.7
600 level	31	50.0

Table 4 shows the satisfaction of the students with medical training. Majority of the respondents, 57.4% were satisfied with medical training. The 400 level class had the highest proportion of respondents, 69.6% who were satisfied with medical training while the 300 level class, 49.4% had the least, 49.4%

Table 5 shows the factors associated with satisfaction of the students with medical training. The respondents who were willing to study medicine again were about three times more likely to be satisfied with medical training when compared with those who were not willing, (AOR; 2.8, 95%C1=1.8-4.3). Also, the respondents who had good interaction with lecturers during classes were twice more likely to be satisfied with medical training when compared with those who did not have such good interactions, (AOR; 2.0, 955C1=1.1-3.4)

DISCUSSION

Majority of the respondents, 62.6% were satisfied with the quality of lecturing in the medical school. In a study among medical students in Malaysia, a higher proportion of the respondents, 88.5% considered the current method of teaching in that institution as being satisfactory (Al-Nagger & Bobryshev, 2013). However in a study in a medical school in Pakistan, majority of the students, 57.2% were dissatisfied with the quality of teaching in the school (Manzar & Manzar, 2011). Similarly, in another study in Cape Verde, a minor proportion of the students were satisfied with the quality of lecturers (Delgado et al. 2017). This may be an indication that medical students in various regions of the world have different perceptions of the quality of their lectures and lecturers.

Majority of the students, 75.3% were of the opinion that the academic workload is high in the medical school. This finding is similar to that from other studies (Al-Naggar & Bobryshev, 2013; Delgado et al. 2017). This was expected from the students as it has been established that the level of stress among health professionals in training is very high (Sreeramareddy et al. 2007), and this includes the medical students whose stress emanate mainly from their academic activities (Oku et al. 2015; Gazzaz et al. 2018). Irrespective of the perception of the students of the academic workload in the medical school, majority of the students, 75.6% opined that the multiple method of assessment in the medical school improves the knowledge of the students. In a similar study in Malaysia, majority of the respondents, 83% affirmed that the many methods of assessing the students helps them to excel (Al-Naggar & Bobryshev, 2013).

Less than one third of the respondents, 32.2% considered the school fees paid in the

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Table 5: Factors associated with satisfaction with medical training among the students

Variable	Satisfaction with medical training (n=385)		p value on bivariate analysis	***AOR (95%CI) on multivariate analysis
	Yes N (%)	No N (%)		
Age of respondents				
<24 years	117 (55.2)	95 (44.8)	0.331	NA
=24 years	104 (60.1)	69 (39.9)		
Gender				
Male	142 (57.5)	105 (42.5)		
Female	79 (57.2)	59 (42.8)		
Marital status				
Single	211 (57.2)	158 (42.8)	0.674	NA
Married	10 (62.5)	6 (37.5)		
Fathers educational attainment				
Tertiary	144 (54.1)	122 (45.9)	0.053	0.9 (0.5- 1.7)
Others**	77 (64.7)	42 (35.3)		**1**
Educational attainment of Mothers				
Tertiary	137 (54.2)	116 (45.8)	0.074	0.9 (0.5- 1.9)
Others**	84 (63.6)	48 (36.4)		1
Place of family residence				
Urban	155 (52.9)	138 (47.1)	0.001	0.6 (0.3- 1.1)
Rural	66 (71.7)	26 (28.3)		**1**
Location of secondary school				
Urban	157 (54.5)	131 (45.5)		0.8 (0.5 1.4)
Rural	64 (66.0)	33 (34.0)		**1**
Period of training				
Pre-clinical	91 (55.2)	74 (44.8)	0.439	NA
Clinical	130 (59.1)	90 (40.9)		
Willingness to study Medicine again				
Yes	161 (68.2)	75 (31.8)	<0.001	2.8 (1.8- 4.3)
No	60 (40.3)	89 (59.7)		1
Academic workload is much				
No	54 (56.8)	41 (43.2)	0.899	NA
Yes	167 (57.6)	123 (42.4)		

** Secondary education and less
*** Adjusted odds ratio, 95%Confidence Interval
NA Not applicable

owned universities charge more fees than those that belong to the Federal Government of Nigeria. It is obvious that the students may be comparing the school fees in the university with that charged by federal universities in Nigeria the hence the observed level of dissatisfaction. It is important to note that the fees charged by the university though higher than that charged by federal universities is still very low when compared with what is charged outside the

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country for studying Medicine. Only a minor proportion of the respondents, 15.3% rated the university hostel as comfortable and 19.5% of them were of the opinion that the university library was well equipped. This may be an indication of poor state of infrastructures in the medical school. That could explain why majority of the respondents, 54.3% wanted an improvement in the infrastructure and amenities in the school as a way of improving medical training in the institution. Improving infrastructure in a medical school may not be limited to Nigeria as same result was obtained from a study in India (Adlakha et al. 2018). Interestingly, in the same Indian study, the students suggested interdepartmental planning as a short term reform (Adlakha et al. 2018). In this study also, one of the suggestions of the students was good time management by the faculty authorities mainly to minimize or avoid delays in the academic calendar of the students.

A minor proportion of the respondents, 27.3% were of the opinion that the medical training obtained in the university matched international standards. This finding is almost similar to that obtained from Pakistan where a higher proportion of the respondents, 57% concluded that the current standard in that medical school was not at par with what was obtained in international medical universities (Manzar & Manzar, 2011). Surprisingly, medical education has been in existence in Nigeria and Pakistan for decades and these results are at variance with what was obtained from the University of Cape Verde. The country, Cape Verde has a unique experience in medical training as pre-graduate medical education started in that country by October 2015 and this was fully supported by a university in Portugal ((Delgado et al. 2017). In a study among the first class of students of that university, 72% of the respondents rightly inferred that the medical training they were receiving prepares them to function as doctors anywhere in the world (Delgado et al. 2017). Even though this finding may be attributed to the linkage of the university to that in Portugal, it is commendable.

These observations make it imperative that the faculty authorities of Ebonyi State University should take seriously the suggestions of the students on how to improve medical training in the university. Perhaps their perception of the poor state of infrastructure in the medical school may have affected their opinion of the poor standard of their training even when majority of the respondents were satisfied with the quality of lecturing in the medical school. Also, it is the duty of the lecturers/ trainers to make the students understand this important aspect of their training that the degree in view is of international standard. Perhaps when this information is well appreciated by the students, their understanding of appropriate school fees for medical education may change for good. Interestingly, majority of the respondents, 63.4% had good relationship with the lecturers 63.4%, and also had good interaction with lecturers during classes, 74.3% thus making this assignment an easy one to carry out.

A higher proportion of the respondents, 57.4% were satisfied with medical training. This is an indication that notwithstanding the experiences of the students, they were aware of the relevance of the Medical degree which will be awarded by the university upon graduation in the Nigerian society. It is important to note that this finding is similar to that obtained from the University of Cape Verde where 56% were satisfied with their medical programme (Delgado et al. 2017). Similarly in a study in Egypt, majority of the respondents who were final year medical students, 86.8% were satisfied with their medical education (Salama & Nour-Eldein, 2016). Also, in a study in Saudi Arabia, a higher proportion of the respondents, 53.4% had overall satisfaction with medical training received (Serwah et al. 2015). However in a study that involved three medical schools in Iran, majority of the students, 59% rated the quality of their medical education as fair and poor (Lafta et al. 2018). Similarly, in another study in Iran, only a minor proportion of the respondents, 28.4% were satisfied with the medical training received upon graduation (Jalili et al. 2008). In yet another Iranian study, only a minor proportion, 38.8% had overall satisfaction with clinical education (Ziaee et al. 2004). This may be an indication that a lot of factors may be responsible for the satisfaction of medical students with their training. Even though this satisfaction with medical training has been adjudged as subjective

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there has been a call for adequate attention to this concept (Ossai et al. 2019).

From the results of this study, the respondents who were willing to study Medicine again were about three times more likely to be satisfied with medical training than those who were not willing. This concept of willingness to study Medicine again has been described as the inner resolve of the students to become doctors thus perceived as a very important factor in the pursuit of the medical career (Ossai et al. 2019). Suffice it to say that students who were willing to study Medicine again have been found to be twice less likely to be stressed when compared with those who did not show such willingness (Ossai et al. 2019). This may invariably mean that it will be better if individuals decide on their own or are positively influenced to study Medicine instead of being forced into the profession.

Similarly, the respondents who had good interactions with lecturers during classes were twice more likely to be satisfied with their training than those who were not satisfied. The relevance of a healthy teacher-student relationship in a medical school has long being acknowledged (Ciraj et al. 2013). Furthermore, there has been a suggestion for more research on this relationship (Haidet & Stein, 2006). It has also been found that the relationship the teachers develop with medical students during the period of training serve as the store of experience for the students when they eventually play the role of a teacher with their patients (Haidet & Stein, 2006). This points to the fact that the teachers should be effective in their communication with the students and teachers who are effective have been identified to being supportive of the students (Sutkin et al. 2008). Already the need for mentoring of students by lecturers has been advocated (Ossai et al. 2019), and satisfaction with medical training has been portrayed as same as the promotion and state of well-being among the medical students during the period of training (Ossai et al. 2019). Furthermore, students who are satisfied with their clinical training have better academic performances that those who are not satisfied (Ziaee et al. 2004). Consequently, there is the need for greater attention to the satisfaction of medical students during their stay in the medical school.

CONCLUSION

Majority of the students were satisfied with the quality of lecturing in the institution, Also, majority of the respondents were not satisfied with the state of infrastructure in the institution. Perhaps, based on this observation the students inferred that their training does not meet international standard. However majority of the students were satisfied with their medical training. There is need to improve on the state of infrastructure/amenities in the medical school. A supportive academic staff especially during academic activities is invaluable in the training of medical doctors and should be encouraged.

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