Original Research Article

ATTITUDE OF FINAL YEAR MEDICAL STUDENTS AND HOUSE OFFICERS TO OTORHINOLARYNGOLOGY SURGERY TRAINING

Abstract:

Background

A good proportion of medical students and house officers will consider specialization in different aspects of medicine following graduation. However, there are still portions who at this stage are undecided both in the question of specialization as well as on what area to pursue a career on. In a developing and resource poor country such as our environment where the doctor-patient ratio is very poor, proper distribution of physicians to meet the health demands of the people becomes of utmost importance.

Aim

This study is aimed at determining the attitude to and what informs the choice of otorhinolaryngology (ORL) surgery as a specialty amongst final year medical students and house officers.

Patients and methods

A descriptive questionnaire based study. A semi structured self- administered questionnaire was distributed to final year medical students and house officers all in the university of Port Harcourt/teaching hospital from January 2019 to March 2019. Only the house officers that did rotation in the ORL surgery department and final year medical students who gave their consent were recruited into the study. The data obtained was analyzed using SPSS version 20.0 and results presented in simple statistical tables.

Comment [Office1]: Replace portions with individuals

Comment [Office2]: Replace on with in

Comment [Office3]: Study area not clear
Is it at the university of Portharcort or is it at the university of Portharcourt teaching hospital or both

Comment [Office4]: Replace with - Had rotated through the department of ORL

Comment [Office5]: IBM SPSS

Introduction

There is low doctor-population ratio in Nigeria with funding of health services often done by out of pocket expenses hence there is need for proper distribution of the health workforce. The choice and preferences of both the medical students and house officers invariably affect the composition of this workforce and therefore could affect the health care provision, policy and planning.

Some of these students already have certain specialty preferences even before the commencement of their medical training .[1] However some as they progress through their training and rotations sometimes do change in their preferences of specialty.[2]The sub-Sahara African region has the lowest doctor-patient ratio of 2.5/10,000 population.[3] In Nigeria, there are 4 doctors per 10,000 patients compared to UK with 30 doctors per 10,000.[4] In terms of medical education, Nigeria has 37 medical schools, 31 fully accredited for undergraduate training while there are 2 colleges for postgraduate training; national postgraduate medical college of Nigeria (NPGMCN) established in 1979 and West African post graduate medical college comprising of college of physicians and college of surgeons some years earlier.[5]The NPGMC has 52 centers accredited while West African college has 46 centers accredited for postgraduate training. Owing to the increase globally in the standard of medical practice there is a need for optimizing the training of the doctors through specialization and sub-specialization. The NPGMCN since its inception in 1979 has by the end of 2013 produced about 3286 consultants through residency training out of which 55% belong to the core clinical disciplines; surgery, medicine, pediatrics, obstetrics and gynaecology. ~~while~~ Obstetrics &gynaecology ~~are~~ has the highest number of consultants ~~with~~ (15% of the consultants) while ~~,~~ ORL was the least with 2%.[6]

It is known that the specialty preferences of the medical students determine the composition of the physician workforce of the nation[7], therefore there is a need to regularly carryout surveys amongst this population so as to tailor these preferences to the Health needs of the people, hence planning of health services and policy formulations.[8] One of such surveys carried out in 2009 by Fagan through PAFOS highlighted the paucity of training facilities and specialized services in sub-Saharan Africa. It was noted from this survey that Nigeria despite the 37 fully accredited medical schools has just 19 centers for ORL training and 4 ORL surgeons qualify annually.[9] some of the factors noted that can affect training in a specialty include , training institution, age, marital status, availability of facilities.[10]

The interest of these students and young doctors in a particular specialty can also be stimulated because of the dedication and innovative teaching styles of the lecturers they meet during their clinical rotations.[11] It is possible that close interactions with these teachers in various specialties who also act as their mentors can influence the choices[11]

Patients and methods

A descriptive study carried out among final year medical students and house officers in the university of Port Harcourt/teaching hospital using a semi structured self-administered questionnaire from January 2019 to March 2019. Data sought included but not limited to age, sex, decisions on specialization and reasons for the choice, perceptions of ORL and the training. Only the house officers that did rotation in the ORL surgery department and final year medical students who gave their consent were recruited into the study. Approval was ~~-~~sought and obtained from the hospital ethical committee. The data was analyzed using IBM SPSS version 20.0 and results were presented in simple statistical tables.

Comment [Office6]: What does this mean

Comment [Office7]: How did you determine your sample size or was it all the students and doctors that were recruited

Comment [Office8]: See earlier comment

Comment [Office9]:

Results

The number of questionnaire shared was 85 but 70 was recovered and met the inclusion criteria. This gave a recovery rate of 82.4%. There were 45 males and 25 females with a ratio of 1.8:1. The age ranged from 20 to 39 years. Majority of the respondents were in the age range 25-29 (58.57%) and least in age range 35-39(4.29%) see table1. The final year medical students constituted 57.14% of the study population and about 60% (n=42) did not want to specialize while only about 31.43% will like to specialize. Most assessed their exposure during rotation especially in the clinic to be excellent 57.14% while the rating of the trainer`s method was mainly average. (table 2). ORL will not be the choice of specialization for majority of the respondents; (74.3%)while 14.3% were undecided about it and only 11.4% will like to choose ORL as a specialty. (figure 1)

Comment [Office10]: Rephrase – suggestion - Of the 85 individuals that met the inclusion criteria, only 70 responded.

Because you only administer the questionnaire to individuals that met the inclusion criteria

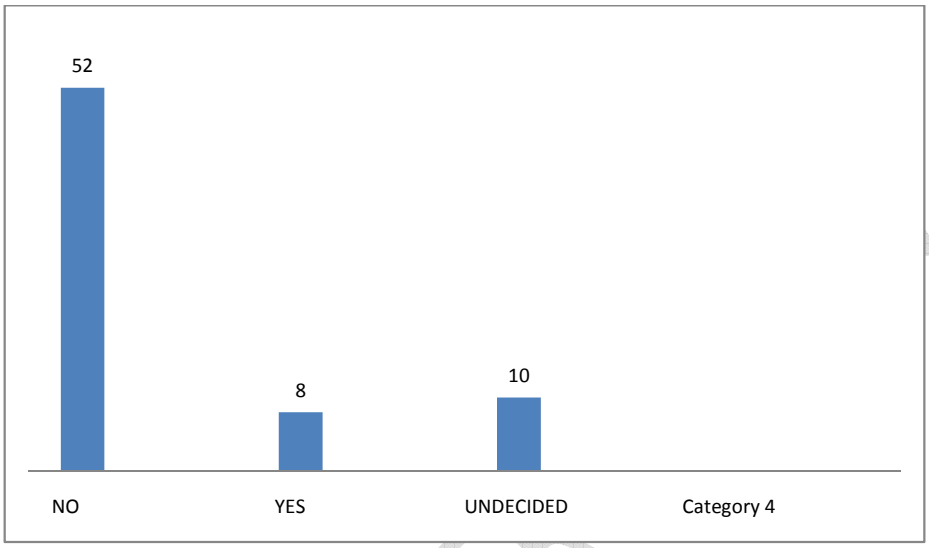
Comment [Office11]: This should read response rate

Comment [Office12]: Would

Table 1: demographic characteristics of the study population

Variables (N=70)	Frequency	Percentage(%)
Age		
20-24	19	27.14
25-29	41	58.57
30-34	7	10.00
35-39	3	4.29
sex		
Male	45	64.29
Female	25	35.71
Level of training		
Final year medical students	40	57.14
House officers	30	42.86

FIGURE 1: Choice of ORL



Among those that will like to specialize in ORL, exposure to the specialty during their clinical rotation and posting was the main reason for this choice while mentorship from the teachers as a reason was seen in 25%. None of the respondents will choose ORL due to financial rewards. Table 3

Comment [Office13]: What does category 4 represent

Table 2: Training characteristics

Variables	Frequency	Percentage(%)
CHOOSING TO SPECIALIZE		
Yes	22	31.43
No	42	60.0
Undecided	6	8.57
ASSESSMENT OF EXPOSURE		
Clinic		
Average	10	14.29
Good	20	28.57
Excellent	40	57.14
Theatre		
Average	55	78.57
Good	10	14.29
Excellent	5	7.14
In-patient management		
Average	48	68.57
Good	16	22.86
Excellent	6	8.57
RELATIONSHIP WITH TRAINERS(MENTORSHIP)		
Cordial	25	35.71
Good	25	35.71
Excellent	20	28.57
TRAINER`S METHOD OF TRAINING		
Poor	5	7.14
Average	35	50.0
Good	20	28.57
Excellent	10	14.29

Table 3: Reasons for choice of ORL

Variables (N=8)	frequency	Percentage (%)
Exposure during rotation	3	37.5
Mentorship	2	25
Uncommon specialty	1	12.5
Personal interest	1	12.5
Financial reward	0	0
Grasp of head and neck anatomy	1	12.5

Discussion

In this study there is a response rate of 82.4% which is lower than the 86.7% and 97.4% obtained by Ossai et al and Adoga et al respectively.[12],[13] There is a male preponderance observed which is in tandem with some other studies [13] however, Rosenberg et al in their 2011 survey had 27.4% increase in females. [14] Adoga had a male to female ratio of 4.7:1 ~~ratio~~, in this study it was 1.8:1, despite an apparent increase in the females in the medical schools, the males still dominate.

Comment [Office14]: Source of information

In this study, majority of the respondents were in the age range of 25-29 agreeing with the study by Ossai et al(ref) but differs from 30-34 range obtained by Adoga et al (ref), possibly because the study was on those who were already residents in the ORL training. It has also been observed that the age of commencement of specialization differs in different nations and it is relevant since it could determine how easily others such as friends and family can influence the ~~making of~~ choice of specialty.[14]

Comment [Office15]: Which studt]y

The percentage of those that will like to pursue specialist medical education was only 31.43% while 60% will not want to specialize. In a similar study, the percentage of those choosing not to specialize was just 10.5% while 89.5% will like to specialize.[12]This finding is out of tune with the global trend amongst students which is to pursue specialist medical education after graduation[15] At this level of their education, 8.57% were~~was~~ still undecided concerning specialization and this included a few of the house officers. The present economic state of the nation could play a role in this decision. There is difficulty in getting a placement for residency training and poor remuneration warranting a continuous exodus of medical doctors in search of greener pastures outside the nation. It is also possible that some at this stage may not have decided perhaps because they had no career guidance which could have helped in this area. In addition, aside from those undecided about whether to specialize or not, a percentage; 14.3% were not decided on what specialty to choose.it was also observed by other researchers.[16] This

Comment [Office16]: Information not clear

percentage is higher when compared with the study by Ossai et al that had 11.2%. This finding could still be due to lack of formal career counselling of these medical students. Generally in Africa, career counselling amongst medical students does not seem to be formalized or integrated into the curriculum.[15],[17] There is therefore need to emphasize institutionalization of career guidance especially ~~at~~ just before the final year of these students. Some other studies has rightly ear marked this stage of training as appropriate to institute career guidance so as to help them make a choice in specialization[18]

Comment [Office17]: Is this information supported or just the opinion of the author

Amongst the 70 respondents studied, only 8(11.4%) will like to pursue ORL as a specialty. This score is still low but compared with a previous study with 0.2% there appears to be an improvement even though they studied a larger population.[12] Most of the medical students when left to make a choice will rather choose from any of the core specialties; surgery, paediatrics, obstetrics and gynaecology or ~~,~~ internal medicine. [19] This choice was seen typically in the number of consultants produced by both West African colleges of physicians/surgeons and the National postgraduate medical college. These colleges conduct fellowship exams that produce consultants twice a year; April-May and October-November. In 2017 October examination, West African colleges produced a total number of 175 consultants while the national college in the same year november had 131. Out of this total of 306 consultants, ORL produced ~~was~~ only 4(1.31%) specialists .[20],[21],[22] This may give credence to the fact that the specialty preference of the medical students determine the composition of the physicians work force.[7] it could appear as though the various training centers prioritize some specialties over others resulting in disparity in the number of consultants produced.[23] In the study by Fagan et al ~~t~~(ref) that involved 18 countries including Nigeria, the number of ORL surgeons compared to UK is below the 0.1 mark, for Nigeria it is about 0.05 ~~mark~~ per 100,000 people. In Nigeria with a population of about 130 million, there are only 70 ORL surgeons. when you compare this to another African country; South Africa with 48 million population and 200 ORL surgeons and ratio of 0.47 per 100,000 people[9], Nigeria is obviously way below the mark. In this study only 11.4% are ready to choose ORL as their specialty laying credence to the result of the above survey. Number of surgeons who qualify annually as at 2009 is about 4.[9] A repeat survey similar to that of Fagan in 2017 showed an apparent increase of 43% in the specialists when all the countries are put together however, population increase of 23% was also noted therefore when this apparent increase is considered per 100,000 of the population, there was actually a decrease in some countries.[24] Nigeria in 2009, had 70 ORL surgeons but in 2015 the number increased to 140 but with per 100,000 ratio, it is 0.076, increased but still below the 0.1 mark. Judging from the 2017 ORL fellowship examination pass rate, what was the pass rate it does not seem to have increased much since then.

It was noted in a study by Burch et al (ref) that career plans of medical students in Africa rarely aligns with the man power needs of the health sector of the region.[25] This was reflected as well in the above survey. In Nigeria for instance, there is no regular assessment of the personnel needs in the health sector and therefore no projections in this area so as to plan proper health policies and programs. There is need therefore to tailor the choices of these young doctors to meet the national health needs. The trainers have a great role ~~lot of part~~ to play in this regard. In this study, majority of the respondents, more than 50%, have very good relationship with the trainers therefore affording them adequate

opportunity to influence them appropriately. However the respondents' rating of the ORL trainer`s method was deemed average by 50% .while only 21.43% rated it excellent. Therefore, there is need to work at improving the training of these students possibly by employing more innovative methods during the short time of their exposure to ORL. Most found their exposure to ORL in the clinic to be excellent, possibly ~~e~~ due to the practical patient –doctor experience and they are able to see and learn directly from the patients and not just the text books. The theatre exposure was rated lowest obviously because the surgeries are on the head and neck hence operation is on a small space therefore without provision of audiovisuals or streaming on the screens there will be limited appreciation on the part of the trainees. Few had opportunity of having a hands-on exposure on some minor procedures, generally however, many rated their ORL training as good.

In this study, majority decided to choose ORL because of their exposure to the specialty during their rotation; 37.5%. Incidentally, in Nigerian medical education, ORL is ranked among the special postings in surgery, usually done towards the end of senior surgery posting for the medical students while the house officers may or may not be posted to ORL during their rotation in surgery. This could mean that the exposure during the clinical rotation gave them better understanding of the specialty. In contrast Adoga et al ref found personal interest to be the highest reason among residents 89.5%, while in the study ~~that~~ by Ossai et al ref this ranked second; 19.7%, it was the third commonest reason with 12.5% in the present study. The exposure to the specialty both for the final year medical students and the house officers is very short. The medical student does only 2months of rotation while the house officers except they are posted to this specialty, will not have any further exposure unlike other major specialties where they have to compulsorily pass through during their internship. This may explain why majority do not choose ORL as their area of specialization.

Role of mentorship ranked as the second highest reason for a choice in ORL with25%. This shows that there is need for even more intentional and deliberate effort at mentoring and encouragement on the part of the teachers. In a similar study, it was found that dedication of the trainers to these trainees during the clinical exposure can help to make their choice in a particular specialty.[26] It is of note that the understanding of the complex anatomy of the head and neck was a reason in another 12.5%. So also the specialty being rare was a reason in 12.5%. It is interesting to note that none of the respondents that were ready to make a choice for ORL was going to do it because of financial rewards. ORL surgery was therefore not deemed to be very lucrative among these trainees.

It is therefore highlighted from this study that there is a paucity of interest in ORL among the final year medical students and house officers and a lot is required on the part of trainers to kindle and build interest in this specialty.

Limitation

The studied population was small and it was based on one institution. There is room therefore for a study that should be wider involving students from other institutions and other regions.

Only those among the house officers that did rotation in ORL were recruited while those that didn't were excluded, there could be some among this last group that may have decided to specialize in ORL.

Conclusion

Very few medical students and newly graduated doctors are interested in ORL~~ol~~. The highest reason for pursuing a specialization in ORL~~ol~~ is clinical exposure.

There is therefore need to use better methods in training, be more innovative with these trainees during their clinical exposure to the specialty. Mentor them more so as to change their perspective of the specialty for the better.

References

1. McManus IC, Lefford F, Furnham AF, Shahidi S, Pincus T. career preference and personality difference in medical school applicants. Psychol Health Med.1996;1:235-248
2. Sierles FS, Taylor MA. Decline of United States medical student career choice of psychiatry and what to do about it. Am J Pschiatry. 1995; 152:1416-1426
3. World Health Organization. Global Health Workforce statistics. Update. Geneva: world Health Organization; 2013
4. The World Bank. Working for a world free of poverty. Physicians(per 1000) Data available at http://www.data.worldbank.org/indicator/SP.RUR.TOTL.ZS Accessed 30th September 2016
5. Medical and Dental council of Nigeria. Accredited medical schools, medical and dental schools in Nigeria. Available at https://www.mdcn.gov.ng/page/accredited.medical-schools. Accessed 30th September 2016
6. Asuzu MC. Millenium development goals. Nigeria now and beyond 2015. The Isaac Ladipo Oluwole memorial lecture. 2015; For Public Health Doctors in Nigeria. Delivered at Makurdi, Nigeria 2015.(Google scholar)
7. Khader Y, Al-Zoubi D,Amarin Z, Alkafagei A, Khasawneh M, Bargar S et al. Factors affecting medical students in formulating their specialty preference in Jordan . BMC Med Educ. 2008; 8:32
8. Avegerinos ED, Msaouel P, Koussidis GA, Keramaris NC, Bessas Z, Gourgoulianis K. Greek medical students` career choices indicate strong tendency towards specialization and training abroad. Health policy2006;79:101-106
9. Fagan JJ, Jacobs M. Survey of ENT services in Africa: need for a comprehensive intervention. Glob Health Action.2009;2:1932-1939

10. Sharaf FK. Qassim medical graduates: factors influencing choice of medical specialty. Ann Aluds Med. 2015;11:17-26
11. Ohaeri JU, Akinyinka OO, Asuzu MC. The specialty choice of clinical year students at the Ibadan medical school. Afr J Med Med Sci. 1993;21(2):101-108
12. Ossai EN, Uwakwe KA, Anyanwagu UC, Ibiok NC, Azuogu BN, Ekeke N. Specialty preferences among final year medical students in medical schools of southeast Nigeria: need for career guidance. BMC Med Educ. 2016;16:259
13. Adoga SA, Ma`an ND, Adekwu A, Kodiya AM, Nwaorgu OB, Ozoilo KN. Otorhinolaryngology postgraduate training in Nigeria :trainees perspective. J Health Res Rev. 2018;5:48-56
14. Rosenberg TL, Kelley K, Dowdall JR, Replogle WH, Liu JC, Raol NP et al. section for residents and fellows-in-training survey results. Otolaryngol Head Neck Surg 2013;148:582-588
15. Azu OO, Naidu E, Naidu J. Choice of specialty amongst first year medical students in the Nelson R Mandela School of medicine, university of KwaZulu- Natal. Afr J Prim Healthcare Fam Med. 2013;5:1
16. Mwachaka PM, Mbugua ET. Specialty preferences among medical students in a Kenyan university. Pan Afr Med J. 2010;5:8
17. Bittaye M, Odukogbe AT, Nyan o, Jallow B, Onigbodun AO. Medical students` choices of specialty in The Gambia:the need for career counselling. BMC Med Educ. 2012;12:80
18. Weissman C, Zisk-Rony RY, Schroeder JE, Weiss YG, Avidan A, Elchalal U et al. Medical specialty considerations by medical students early in their clinical experience. Isr J Health Policy Res. 2012;1:13-22
19. Egbi OG, Unuigbe EI. Choice of medical specialties among final year medical students in two universities in south-south Nigeria. West Afr J Med. 2014;33(1):44-50
20. West African college of surgeons. Pass list for part 2 fellowship examination October 2017. Available at https://www.wacscoac.org/download . Accessed on 19 July 2019.
21. West African College of Physicians. Wacp 2017 October exam results-Part2. West African College of Physicians. Available at https://wac-physicians.org. Accessed on 19 July 2019.
22. National postgraduate medical college. Pass list for part 2 fellowship examination September 2017. Available at https://npmcn.edu.ng>pass-list . accessed on 19 July 2019
23. Ogbonnaya LU, Agu AP, Nwonwu EU, Ogbonnaya CE. Specialty choice of residents in the university of Nigeria hospital, Enugu 1989-1999. Orient J Med. 2004;16(3&4):7-12
24. Mulwafa W, Ensink R, Kuper H, Fagan J. Survey of ENT services in Sub-Saharan Africa: little progress between 2009 and 2015. Glob Health Action. 2017;10:1-7
25. Burch VC, McKinley D, VanWyk J, Kiguli-Walube S, Cameron D, Gilliers FJ et al. Career intentions of medical students trained in six Sub-Saharan African countries. BMC Educ Health. 2011;24:3
26. Wadhwa V, Nagy P, Chhabra A, Lee CS. How effective are your mentoring relationships? Mentoring quiz for residents. Curr Probl Diagn Radiol. 2017;46:3-5