



## Surgery as a Career Choice among Rotatory Interns in North Central Nigeria – A Multi-center Study

B. A. Eke<sup>1\*</sup>, B. A. Ojo<sup>2</sup>, A. Adekwu<sup>1</sup>, I. O. Ochola<sup>3</sup> and D. Gyenger<sup>2</sup>

<sup>1</sup>Department of Surgery, College of Health Sciences, Benue State University, Makurdi, Nigeria.

<sup>2</sup>Department of Anatomic Pathology, College of Health Sciences, Benue State University, Makurdi, Nigeria.

<sup>3</sup>Faculty of Clinical Science, College of Health Sciences, Benue State University, Makurdi, Nigeria.

### Authors' contributions

This work was carried out in collaboration between all authors. Author BAE designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors BAO and AA managed the analyses of the study and wrote the final draft of the manuscript. Authors IOO and DG managed the literature searches. All authors read and approved the final manuscript.

### Article Information

DOI: 10.9734/AJMAH/2017/32497

#### Editor(s):

(1) Nicolas Padilla-Raygoza, Department of Nursing and Obstetrics, Division of Health Sciences and Engineering, Campus Celaya Salvatierra, Mexico.

#### Reviewers:

(1) Jose Francisco de Sales Chagas, São Leopoldo Mandic College, Catholic University Campinas, Brazil.

(2) Alfred A. Onua, University of Port Harcourt, Nigeria.

(3) Ibrahim Kalle Kwaifa, Usman Danfodiyo University (Udu), Sokoto, Nigeria.

(4) Reda M.Nabil Aboushady, Maternal And Newborn Health Nursing, Egypt.

(5) S. M. Moslehuddin Ahmed, Uttara Adhunik Medical College, Bangladesh.

Complete Peer review History: <http://www.sciencedomain.org/review-history/20282>

Received 28<sup>th</sup> February 2017

Accepted 15<sup>th</sup> June 2017

Published 29<sup>th</sup> July 2017

Original Research Article

### ABSTRACT

**Background:** The future specialty of choice of interns determine the composition of medical practitioners workforce and the factors that underline this choice needs to be explored to help in healthcare planning and policy formulation for an economically poor country like Nigeria.

**Aim:** The study aims to examine the factors that influence rotatory interns on their specialty choice with special reference to surgery with the hope that the information obtained might be of help in improving any imbalances in distribution of medical manpower in our country.

**Materials and Methods:** This is a survey of 126 interns, using an objective pre tested semi structured questionnaire which explores factors influencing specialty choices among interns in three tertiary hospitals in North Central Nigeria, namely, Federal Medical Center, Makurdi, Benue State University Teaching Hospital, Makurdi and Jos University Teaching Hospital, Jos.

\*Corresponding author: E-mail: barnseke@gmail.com;  
E-mail: amaliadekwu@yahoo.com;

**Results:** The three most popular specialties were Surgery (30.2%), Pediatrics (14.3%) and Obstetrics and Gynecology (14.3%). The least preferred specialty of choice was Family Medicine and Community Medicine at 1.6% each. These choices are determined by natural interest (38.1%), job satisfaction (38.1%), personal convenience (19%), financial rewards (3.2%) and personal aptitude (1.6%). Among the female interns, a possibility of job satisfaction is the most important determinant of specialty choice. Majority of the respondents consider surgery as important and interesting with 32% saying it's difficult to understand.

**Conclusions:** Our findings have implication for provision of specialty health care for Nigerians. Health care service delivery planners have to devise means of attracting interns to the less preferred specialty choice.

*Keywords: Surgery; interns; specialty choice; North Central Nigeria.*

## 1. INTRODUCTION

The distribution of medical manpower among the various specialties should be of concerns to government, health care planners and medical educators of any nation [1,2]. This is because the medical specialties chosen by medical graduates is an important determinant of future supply of doctors in different specialties and it is important for the planning of the workforce of health care services [3]. Medical students' career choices have a direct impact on the availability of medical practitioners in different specialties and can result in a shortage in some specialties or locations and oversupply in others [4]. Sound vocational theory also explained that you are more likely to be satisfied in your professional life if your career matches your personal and environmental characteristics like interests, values, personality and skills [5].

The distribution of medical manpower has been a subject of considerable debate and interest as both the physicians and students have a stake in the issue of specialty choice [6]. Available works on specialty choice among doctors in training within and outside Nigeria have shown a relatively high preference for obstetrics and gynecology, pediatrics, surgery and internal medicine as the four most popular choices of specialty [7-9].

It is widely known that the choice of specialties for house officers varies from country to country making it possible that each country has its own mix of specialist doctors [10]. It is a fact that the specialty preferences of house-officers in training determine the compositions of medical workforce.

With this in view the study aims to examine the factors that influence rotatory interns on their specialty choice with special reference to surgery

with the hope that the information obtained might be of help in improving any imbalances in distribution of medical manpower in our country.

The importance of this study is to avoid shortage of specialist in certain fields and the abundance in others. There has to be a balanced production of specialist through career guidance and giving of incentives in certain rare fields.

## 2. SUBJECTS AND METHODS

The study was a multicenter work, a descriptive type of cross sectional study carried out among rotatory interns at Benue State University Teaching Hospital, (BSUTH), Makurdi, Federal Medical Centre, Makurdi and Jos University Teaching Hospital, Jos. Convenience non probability sampling was used for selection of respondents. Study population were the interns in the selected hospitals. Those at their final rotatory posting were included in the study while those who did not consent were excluded. This study was carried out from August 2016 to January 2017. Data was collected with structured self-administered questionnaire. The questionnaires were developed by the researchers and pretested among interns in Ahmadu Bello University Teaching Hospital, Zaria a tertiary health facility in north west Nigeria.

The first part of the questionnaire detailed the demographic characteristics of the intern. The second part asked about their impression of surgery as a specialty choice, the specialty they would like to take after finishing house job and reasons for the choice.

The answers were then collected and analyzed using simple statistical methods like means, percentages and presented with charts.

### 3. RESULTS

A total of 150 questionnaires were distributed with a response rate of 84%. The highest proportion of the interns (42.9%) were in the age group 30-34 years followed by those between 25-59 years (34.9%) (Fig. 1). A higher proportion of the interns were male (76.2%) which 23.8% were female.

Fig. 2 shows the specialty of preference for future career in medicine. Overall surgery was the specialty of choice among the majority of the interns (30.2%). This was followed by pediatrics and Obstetrics and Gynecology with 14.3%, each. The least preferred specialty of choice was community Medicine and Family Medicine at 1.6% each. When the data were adjusted for the sex by stratification, the first 3 preferred

specialties were still Surgery, Pediatrics and Obstetrics and Gynecology for both sexes (Fig. 3). Fig. 4 shows the reasons for preferred specialty of choice for postgraduate medical training. Natural interest and possibilities of job satisfaction at 38.1% each, determined the choice of specialties in majority of the interns followed by personal convenience (19.0%). When this is adjusted for sex, majority of the female responders think possibilities of job satisfaction is the overriding reason as compared to natural interest by males (Fig. 5).

Fig. 6 shows the interns assessment of surgery and its specialties. 93.7% of them consider surgery as important and interesting while 1.6% thinks it's boring.

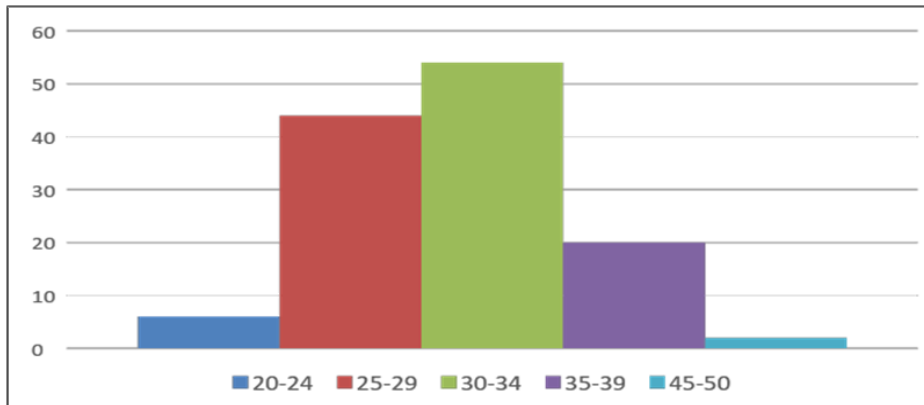


Fig. 1. Age distribution of the study participants

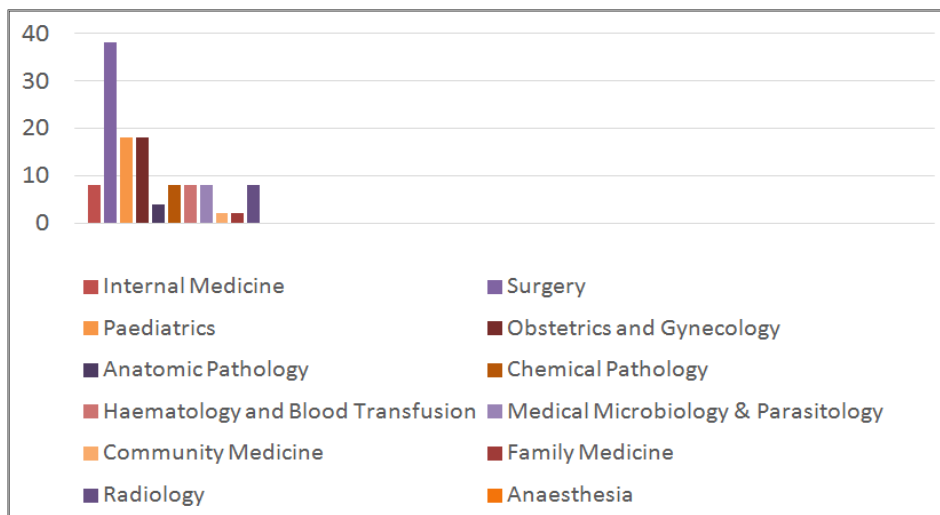


Fig. 2. Specialty of preference for future career in medicine

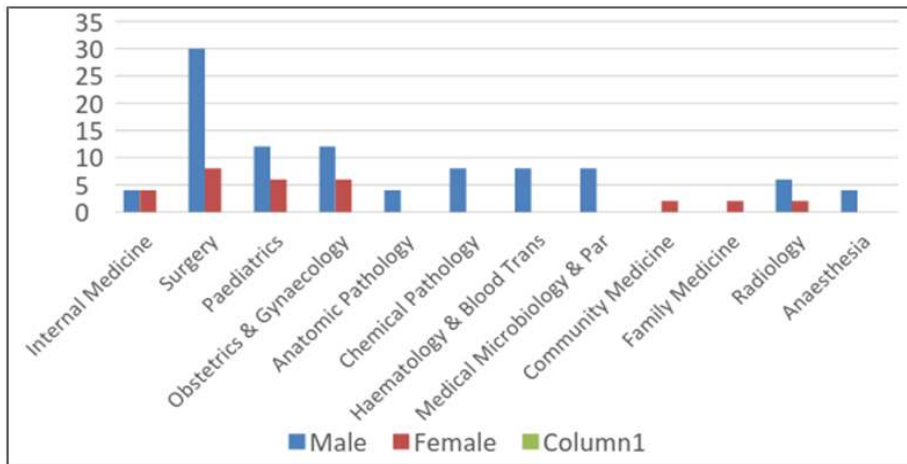


Fig. 3. Sex of respondents adjusted for specialty of preference for future career in medicine



Fig. 4. Factor that majorly determined specialty choice

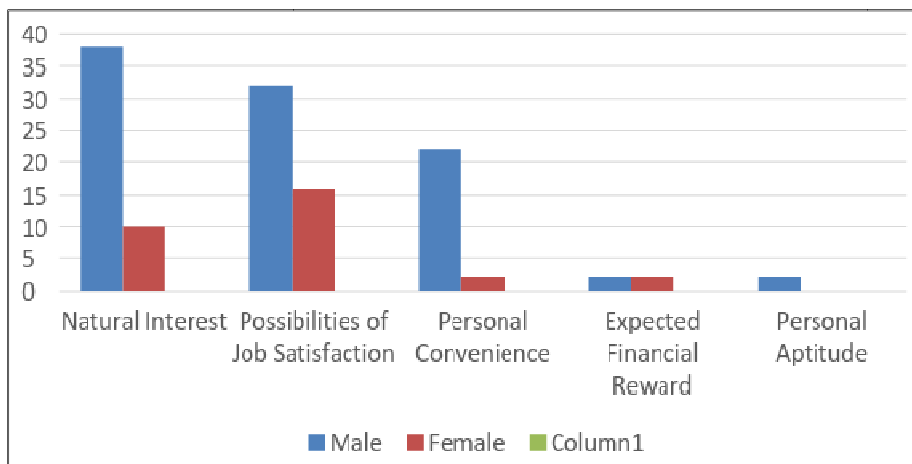
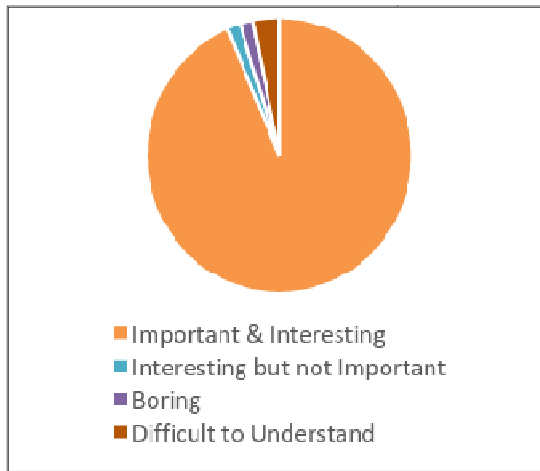


Fig. 5. Sex of respondents\* and factor that majorly determined specialty choice-a cross-tabulation



**Fig. 6. How would you rate surgery and its subspecialties?**

#### 4. DISCUSSION

Choosing a medical specialty is important for both the interns and the healthcare system.

In this work, we report that the top choices of the interns were surgery (30.2%) pediatrics (14.3%), obstetrics and gynecology (14.3%). Internal medicine, chemical pathology, hematology and blood transfusion, medical microbiology and parasitology were 6.3% each. In most studies in Nigeria, the top choices have always been core-clinical areas – surgery, medicine, pediatrics and obstetrics and gynecology [7-12]. It is interesting to note that in this study, other specialties like chemical pathology hematology and medical microbiology shared the 4<sup>th</sup> position with internal medicines. This probably represents a new trend among interns in Nigeria. Pathology and its subspecialties have always been among the least preferred specialty among medical students and interns in Nigeria [9-11]. When the data is adjusted for sex, the core clinical specialties still represent the preferred choice among the studied group in the same proportion (surgery, pediatrics, obstetrics and gynecology and internal medicine in that order and in both sexes.

It is also pertinent to say that the most preferred specialty of choice among the interns in both sexes was surgery and this has remained a consistent findings in Nigeria and Africa [7,10,13-16]. In contrast to other works which show gender differences in choice of specialty with high proportions of male students and interns preferring to specialize in surgery and female students and interns in pediatrics [9,13,17], no

appreciable differences was noticed on gender basis in our work. This study is in consonance with Eke B. A et al. [2] which recorded no gender difference in specialty of choice.

Anatomic pathology, anesthesia, community medicine and family medicine are the least represented specialty of preference in this study. On personal discussion with some of the students, apathy towards autopsy practice is often cited as their reason for discrimination for choosing anatomic pathology. In most Nigerian medical schools, medical students do not rotate through family medicine department and have no contact whatsoever with family physician.

In this work, natural interest and possibilities of job satisfaction at 38.1% each are the overriding reasons that determine the specialty of preference. Work done by Odusanya OO and Nwawolo CC [11] in Lagos among interns found that interest accounted for 72.9% and job satisfaction for 69.0%. Madu et al. [12] in Eastern Nigerian study found interest (78.9%) as the overriding reason for choice of specialty. When adjusted for sex differences, natural interest followed by possibilities of job satisfaction are the main reasons for specialty choice among male and possibilities of job satisfaction followed by natural interest accounted for the major reasons for specialty choice among females in this work. These findings among females are in contrast to a Saudi study [4] with females giving "personal interest" more weight. Personal convenience was the third most important reason for selecting preferred specialty. Expected financial reward and personal aptitude are the least reasons given for specialty selection in this work. Financial reward was not a significant indicator of career choice in this work. These findings tally with Ko HH, et al. [18] but contrast sharply with other studies [10,19,20] when financial reward was a main motivating factor for career choice.

The limitation of the study included relatively small number of the respondent since not all the questionnaires were returned, the short period of the study.

#### 5. CONCLUSION

This study investigates the career preference of interns. The key findings are that the most preferred career choices are Surgery, Pediatrics, and Obstetrics and Gynecology with Surgery being the most preferred. Internal medicine, Pathology, Family medicine and community

health are the least preferred. Natural interest and job satisfaction are the overriding factors that determine specialty choice. It is recommended that unpopular specialties should be given incentive so as to encourage doctors to choose them. Insights into the reasons underlying career choice in a country will improve medical planning. For a developing country like Nigeria, these will help in ensuring that least preferred specialties are taken into account and planned for so as to have a balanced health care delivery system.

## CONSENT

It is not applicable.

## ETHICAL APPROVAL

It is not applicable.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Bojuwoye BJ, Katibi IH, Araoye MO. Factors influencing specialty preference among final year medical students of University of Ilorin. *Nig. Med. J.* 1997; 32(1):20-23.
2. Eke BA, Ojo BA, Elachi IC, Yongu WT, Soo C, Ugwu VI, et al. Surgery as a career choice among medical undergraduate in a developing country. *BJMMR.* 2017;19(9): 1-6.
3. Saleh SA, Mohamed AK. Factors affecting the choice of health specialty by medical graduates. *Family and Community Med.* 2006;13(3):119-123.
4. Lamyaa Z, Abou Zaid, Nihal M, Nabil, Sara O, Al-Fadil, Abdulaziz Alatmi, Abdullah A, Saeed. Career choice and its influencing factors: Perception of senior medical student. *J Contemp Med Edu.* 2014;2(3): 168-173.  
Available:[www.scopemed.org](http://www.scopemed.org). DOI:10.5455/jcme.20140911043239
5. Nicodemus KM. Personality type and job satisfaction. In *Physicians' Pathways to Non-traditional Careers and Leadership Opportunities*: RD Urman and JM Ehrenfeld (Eds.), Springer Publishing Limited. 2012;11-17.  
DOI: 10.1007/978-1-4614-0551-1\_2
6. Swanson AG. Specialty choice. *Academic Medicine.* 1989;64:583-627.
7. Ohaeri JV, Akinyinka OO, Asutu MC. The specialty choice of clinical year students at Ibadan Medical School. *Afr J Med Sci.* 1992;21:101-108.
8. Asuzu MC. Postgraduate medicine specialization and career preference among Nigerian medical students *Nig. Med. J.* 1987;17:185-188.
9. Edmund Ndudi Ossai, Kenechi Anderson Uwakwe, Uchenna Chidi Anyanwagu, Ntata Charles Ibiok, Benedict Ndubueze Azuogu, Ngozi Ekeke. Specialty preferences among final year medical students in medical Schools of southeast Nigeria: Need for career guidance. *BMC Medical Education.* 2016;16:259.
10. Ojo BA, Abdulraheem IS, Izegebu MC. The choice of morbid anatomy as a career by medical under-graduates in a developing country. *Nig QT J Hosp. Med.* 2005;15(2): 64-69.
11. Odusanya OO, Nwawolo CC. Career aspirations of house officers in Lagos, Nigeria. *Med Edu.* 2001;35(5):482-487.
12. Madu A, Ubesic A, Madu K, Nonyelu C, Ibegbunan O. Medical specialist preferences and reasons among fresh Nigerian interns. *Ann Med Health Sci Res.* 2014;4(suppl.3):S223-7.  
DOI: 10.4103/2141-9248-141
13. Nwachaka PM, Mbugua ET. Specialty preferences among medical students in a Kenyan University. *Pan Afr Med J.* 2010; 5-18.
14. Burch VC, Mckinley D, van Wyk J, Kiguli-Walube S, Cameron D, Cilliers EJ, Longombe AO, et al. Career intentions of medical students trained in six Sub-Saharan Countries. *Educ Health.* 2011; 24-8.
15. Egbi OG, Unuigbo H. 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.
16. Adeleye OA. Anticipated specialty and influencing factors among final year medical students in a Nigerian University. *J. Med. Sci.* 2010;26(3):510-14.
17. Gibis B, Heinz A, Jacob R, Muller CH. The career expectations of medical students: findings of a nationwide survey in Germany. *Dtsch Arzteb Int.* 2012;109(18): 327-32.

18. Ko HH, Tim KL, Yvette L, Bruce F, Elena V, Eric Y. Factors influencing career choices made by medical students, residents and practicing physicians. BC Med J. 2007;49(9):482-9.
19. Morra DJ, Regehr G, Ginsbury S. Medical students, money and career selection: Students perception of financial factors and reservation in family medicine. Fam Med. 2009;41:105-10.
20. Dikici MF, Yaris F, Topsever P, Tuncay Muge F, Gurel FS, Cubukcu M, et al. Factors affecting choice of specialty among first year medical students of four universities in different regions of Turkey. Croat Med J. 2008;49:415-20.

© 2017 Eke et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

*Peer-review history:*

*The peer review history for this paper can be accessed here:  
<http://sciencedomain.org/review-history/20282>*